# Sustainability Report 2021

Consolidated voluntary non-financial statement pursuant to Italian Legislative Decree No. 254/2016

Certified B Corporation

NOVAMONT

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“This Sustainability Report is the result of the efforts and collaboration of many people who work for our Group, who we wish to thank for providing the data and information that form the core of this Report in good time.”

This document was drawn up by the ECOPEC function, which produced the guidelines for the document and followed its development throughout the work phases, in collaboration with the Corporate Communication and Strategic Planning functions.


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# Letter to the stakeholders

## Catia Bastioli

### Chief Executive Officer

In 2021 Novamont continued its growth, both geographically and in terms of its size. Today it is a company that, from its first Italian laboratory, is exporting the success of its territorial regeneration model to other countries, testing its resilience and adaptability. Novamont is increasingly recognised as an influential company on account of its systemic approach, which combines business development with regional growth. It is an interdisciplinary, systemic innovation process that has evolved over the years; Novamont's team continues to be trained on it every day, learning on the ground with humility, determination and a service-minded approach. That approach has allowed the company to grow, despite an ever more complex environment and a series of crises that are occurring at an increasing rate, the most recent being the pandemic, followed by the conflict in Ukraine. The instability and uncertainty of these unprecedented emergencies risks crimping systemic development, encouraging a "silo" approach which is focused on the short term and is at the very root of the crises we are witnessing. The systemic development that has been carefully nurtured and applied in practice and that lives up to its promises is a testament to how unique Novamont is. Over the years, the company realised that there was no blueprint to follow and that it would have to forge its own path, based on interdisciplinary knowledge and the hybridisation of knowledge and skills, harnessing its inventiveness and know-how for a common goal, balancing short-term and long-term interests and adapting them to the environment so that it can grow the business while regenerating local areas. Yet we are conscious of the fact that not only are there new problems and unprecedented challenges to be faced, but opportunities to be seized and new energies to be channelled. To seize those opportunities, we must have foresight, vision and the ability to challenge the status quo. Those

challenges are linked to an unparalleled degradation of ecosystems due to human action, and a development model based on unlimited growth on a planet with finite resources. In 2021, *Earth Overshoot Day*, the date when humanity has exhausted the resources that the planet can produce in a year, was 29 July, compared with 22 August 2020 and 10 December 1972. Humanity is now using "nature 1.75 times as fast as the planet's ecosystems can regenerate", and further acceleration is expected over the next few years. This explains the reason for the scarcity of raw materials. This could also be a huge problem in the years ahead, with advancing climate change, growing demand and problems caused by the devastation of natural capital, and in particular the soil, a non-renewable resource essential for human life and for the development of a healthy circular bioeconomy. To change course, we need to stop looking at complex phenomena, typical of nature and society, with the linear approach of manmade, "complicated" systems, understanding the difference between complicated and complex. Complexity occurs when the different elements that make up the whole are inseparable. A chemical plant is a complicated system, but it is not a complex system; in fact, given the input data, we can guarantee the output, provided that the individual operations are carried out properly and each element can be separated from the others. This cannot happen in a living organism, for example. Natural systems are mainly non-linear, where the response to a given input can be unpredictable. The acceleration of human construction in the Anthropocene, the result of a linear model focused on the present, on profit as the only variable and on a culture of consumption and waste, ignoring the links between development and nature, is forcing us to change direction and take the theories of complex systems seriously. Novamont's circular bioeconomy model – which we have been implementing for years and which has proven to be sustainable – is distinctive in that it has sought to build in complexity ever since we first embarked on our lone quest in 1996. In this context, and in view of Novamont's development, we must ensure that we do not lose sight of our roots and think carefully about our model, fully comprehending its scope and tailoring it to our needs. We must avoid the temptation to simplify it. As Umberto Eco wrote in Foucault's Pendulum, "for every complex problem there's a simple solution, and it's wrong". That's why it's important to foster a culture of complexity at the company level, and even more so at the social level. This will enable us to develop critical skills and oppose anyone who puts personal, short-term interests before the interests of the community. The risk of underestimating complexity can also occur due to ignorance and opportunism. We live in a profit-making era which has overlooked the variables of social cohesion, the environment, the harmful effects of linear growth and the scarcity of resources. The Novamont project and its circular bioeconomy model are focused on the interconnection between sectors, on territorial regeneration centred around soil health, on the creation of systemic projects and on learning on the ground in a process of continuous innovation, measuring the different variables so that we can adapt as we go along. This could teach us about complexity and help us make better decisions. The challenge now is to broaden our horizons, acting wisely in the short term so as not to jeopardise our future. Thanks to our distinctive approach, depth of expertise and integrated value chain, which has been built up over time, as well as our ability to work as a team, we have been able again this year to meet some fundamental challenges at Novamont. Despite the scarcity of resources, and particularly the raw materials crisis, so far we have been able to harness much of the knowledge and levers available to us, connecting them and applying our inventiveness in the interests of development, acquisition and production. And from what we started out with, we have been able to modify our processes and products. We have managed not to close plants, to supply raw materials to our partners and many others, and to increase the circularity of our business model, where more than 70% of 2021 revenues were generated by circular products and activities. Despite the complex scenario, we have maintained our strong propensity for research and development, with €50 million of investment in industrial and research activities and a dedicated team representing around 20% of our workforce. We have also forged partnerships with more than 460 companies, research centres, universities, non-profit organisations and local government in order to work together on innovation projects. In terms of sustainability, we have continued our commitment to using renewable resources: these account for around 58% of the raw materials used and 99.8% of electricity, reducing the energy intensity by 24% relative to 2017. Our new Mater-Bi plant at Patrica is now online, bringing the production capacity of bioplastics to 200 ktons. We have also implemented significant process changes along the way, linked to the production of Origo-Bi polyesters. These changes have enabled us to expand the range, build plant capacity, and ensure greater stability and quality of production. Because Terni and Patrica are closely linked, we have been able to meet the growing market demand, increasing our production and achieving much higher volumes than expected. This process has taken place without wasting resources or time, future-proofing our business with a series of patent filings covering process and product development. The Bottrighe plant, which is the only one of its kind, has also introduced changes in its process. These have led to an increase in the production of 1,4 bio-BDO, at a time when fossil BDO is scarce and difficult to source, and when prices have risen more than threefold in a year. A second THF recovery line at the Patrica plant now means that additional value can be recovered from the process residues of 1,4 BDO production. Lastly, the availability of azelaic acid from the Matrìca plant and the long-term contracts with several long-standing suppliers of raw materials have allowed Novamont to supply its Mater-Bi plants and make regular deliveries to its partners. Novamont's investments and distinctive expertise, which have grown over the years, are intended to support partners and customers and entrench our regional development model. We must continue to invest in strengthening every link in our integrated value chain, converting the excellent results of research and engineering into further opportunities. In this respect, it is worth mentioning the completion of the Bottrighe pilot plant to test waste biomass as a raw material, and the 2,5 furandicarboxylic acid pilot plant (FDCA) in Terni, changes in the long-chain diacid process, and developments in the chemical recycling process of our products. In terms of applications, significant results have been achieved in products for barrier and transparent *packaging*, with the development of innovative products that guarantee a similar performance to traditional plastic, but which are 100% recyclable. In addition, developments in the sector of expandable soles for fully recyclable shoes, as a raw material in Novamont's plants, are also hugely significant. In this case, the development is particularly momentous because it opens up new possibilities for Origo-Bi, where biodegradability is now an additional property to recyclability, avoiding the release of persistent microplastics into the environment while the product is in use. The continuous improvement and development of our plants, including their debottlenecking, increased energy efficiency and the

conversion of waste into products, will continue to drive cost efficiencies and ever higher environmental performance. We can leverage this as a differentiating factor, in the hope that *carbon tax* and other measures related to the Taxonomy will underscore the value of what we are doing. In 2021, we also saw significant penetration of new markets that have not yet been consolidated. Considerable progress has also been made in numerous Eastern European countries and in Spain, where the applications are biodegradable *carrier bags* and fruit and vegetable bags, respectively, even though the environmental performance of the various products compared with fossil resources is not being exploited. Important market research initiatives have also been undertaken, particularly in France and the F&V sector, to understand the rationale behind some French supermarkets' decisions to abandon fruit and vegetable bags made from compostable material in favour of paper bags. These initiatives have yielded valuable information which will inform our actions going forward. In summary, the unprecedented rise in the price of raw materials at levels not seen since the industrial revolution and in record time, in view of the new markets that are opening up and our existing contracts, is testing Novamont's ability to pass on the increases to the market. For that reason, the 2021 results were lower than in 2020 in terms of percentage return, even though turnover is significantly higher. The Group also expanded in 2021 by building an increasingly integrated upstream and downstream value chain, in line with the Company's strategies. The acquisition of BioBag International, a leading group in the development, production and commercialisation of certified compostable and biodegradable applications, has given us access to an independent distribution network in geographical regions where we had less of a presence, in northeast Europe, North America and Australia. In September 2021, to coincide with the G20 agriculture ministers' meeting, and in association with our long-time partner Coldiretti, we launched the company Mater-Agro, our vehicle for a new model of participatory innovation between agriculture and industry, helping farmers maintain good crop yields through sustainable, regenerative agronomic solutions. This is a major achievement and represents a new start, thanks to the credibility that Novamont has acquired in the agricultural sector over the years, the results of its research, the field experiments carried out in Italy and elsewhere on the subject of dryland crops, with a series of experimental projects (not least the European First2Run flagship project), the development of Mater-Bi applications for agricultural use, such as mulching, to name but a few, as well as the opportunities for new challenges in the field of bioherbicide formulations and biolubricants. The idea is that Novamont can help overcome the current barriers – whether cultural, regulatory, technical or due to the availability of mechanical means – by adapting solutions for different regions and agricultural sectors over a shorter timescale.

Systemic sustainability has always been in Novamont's DNA, hence in 2020 we became a B Corp certified Benefit Company, formalising the commitment to promote a development model that goes beyond profit alone. Being named "*B Corp Best for the World*" in 2021, in recognition of the fact that Novamont is ranked first in Italy and Europe and second in the world for its environmental impacts in the manufacturing sector, is a testament to the achievements of our 30-year history. In addition, in 2021 Novamont reconfirmed its support for the United Nations Global Compact, pledging to apply its fundamental principles throughout its business. Although the circular bioeconomy is a fundamental strategic lever for the ecological transition, there are still barriers to its full implementation in Italy and Europe and a series of contradictions that must be overcome. In 2021, the ceaseless efforts of Novamont and the companies related to it in different regions helped avoid various unintended penalties caused by the lack of a systemic regulatory approach, with the bioeconomy being treated as a sector with a specific Ateco (statistical classification) code. This includes the issue of high-quality digestate from the Bottrighe fermentation plant, the ground-breaking production of biomethane from fermentation waste cells, and the implementation of the SUP Directive in Italy, for which the European Union has not yet given a positive opinion. There is also the long-awaited European Soil Strategy, which was still to be published in 2021. Conversely, it is worth highlighting the significant legislative progress in Spain and in countries as far east as Belarus, as well as in several African countries in the context of international cooperation. Over the years, in a bid to facilitate the transition from a waste economy to a systemic, inclusive economy, Novamont has promoted a series of initiatives aimed at schools, citizens, our partners and our staff. In 2021, among the many projects set up, "Dialoghi con la scienza" ("Dialogue with science") is particularly noteworthy. This initiative was curated by the evolutionary philosopher Telmo Pievani and covered the Anthropocene, *fake news*, climate change, the circular economy and innovative thinking. In late 2021, a *Change & Integration* programme was launched to help our organisation evolve, enhancing its innovative potential and the effectiveness of its actions. The idea behind it is that, just as people learn as long as they live, so organisations live as long as they learn, based on a "*learning by doing*" approach. In the light of this experience, we now have a clear ambition: to focus more on the uniqueness of the people trained by Novamont to manage complexity in the field, who in 2021 proved their significant capacity for growth and their ability to make an effective contribution. The challenge for the entire Novamont team is knowing how to manage complexity by developing their know-how and making Novamont a more welcoming and satisfying place, both for us and for our partners and customers, who must remain the focus of our attention.

# Notes on the methodology

*Purpose of the Sustainability Report*

This document is the 14th Sustainability Report (the "Report") of companies in the Novamont Group (the "Group" or "Novamont"), formed of Novamont S.p.A. and its fully consolidated subsidiaries, Mater-Biopolymer S.r.l., Mater-Biotech S.p.A., Novamont North America Inc., Novamont France S.a.s., Novamont Gmbh, Novamont Iberia S.l.u, and, from this reporting year, Mater-Agro S.r.l. and companies in the BioBag Group, a global leader in the development, production and commercialisation of certified compostable and biodegradable applications: BioBag International AS, BioBag Norge AS, Dagöplast AS, BBI Sverige AB, BioBag Americas Inc, BioBag Finland OY, BioBag Zenzo AS, BioBag Canada Inc., BioBag Austria GmbH, BioBag Plastics Ltd, BioBag UK Ltd, BioBag World Australia Pty Ltd and BioBag Polska Sp. z o.o.

The Sustainability Report is the means by which the Group informs internal and external stakeholders of the commitments, strategies, management approach and business performance, presented from three different angles: economic, environmental and social.

*The process of non-financial reporting for the Novamont Group*

Novamont has extensive experience of non-financial reporting. It has published an annual Sustainability Report since 2008, as part of its process of continuous improvement, which is in line with the most recent developments in non-financial reporting regulations.

In particular, Novamont decided voluntarily to apply the provisions of Italian Legislative Decree No. 254 of 30 December 2016 (the "Decree" or "Legislative Decree No. 254/16") on disclosure of non-financial information, implementing European Directive 2014/95/EU. Consequently, the Sustainability Report is a Consolidated Voluntary Statement of a non-financial nature ("NFS"), produced in accordance with Articles 3, 4 and 7 of the Decree. The NFS contains information on topics concerning the environment, society, personnel, respect for human rights and the fight against corruption. This helps provide an understanding of Novamont's activities, progress, results and the impact of its business. In addition, to ensure that the contents of the document comply with the requirements of the *UN Global Compact* (UNGC), which Novamont decided to join in 2020, a correlation table between the UNGC Principles and the GRI Standards has been inserted in the chapter "*GRI Content Index and UN Global Compact*".

*Approval*

The Report was approved by the Board of Directors of Novamont S.p.A. on 27 May 2022.

*Base year*

The data and information contained in this document refer to the 2021 financial year (from 1 January to 31 December). To ensure the comparability of the data over time and to assess business performance, a comparison was made with the data for the 2019 and 2020 financial years disclosed in the 2020 Sustainability Report (published in June 2021).

*Reporting scope*

The scope of the economic, environmental and corporate data of this Report is the same as for Novamont Group's 2021 Consolidated Financial Statements.

Environmental information on water consumption, waste production and materials used does not include the companies Novamont North America Inc., Novamont France S.a.s., Novamont Gmbh, Novamont Iberia S.l.u., BioBag International AS, BioBag Norge AS, BBI Sverige AB, BioBag Americas Inc, BioBag Finland OY, BioBag Zenzo AS, BioBag Canada Inc., BioBag Austria GmbH, BioBag Plastics Ltd, BioBag UK[1] Ltd, BioBag World Australia Pty Ltd and BioBag Polska Sp. z o.o., due to difficulties in obtaining primary data. However, since the latter are exclusively small offices, the significance of the above data is considered marginal.

On 16 September 2021, Novamont and Coldiretti launched Mater-Agro S.r.l., a new company completely dedicated to farmers, set up to promote a model of participatory innovation between agriculture and industry. The subsidiary will become fully operational from January 2022; for this reason, the company's corporate data will be provided from the next reporting year.

Any other changes in this scope are expressly indicated in the document. These exclusions in no way prejudice a complete understanding of the Group's business, its progress, its results or any impacts generated.

*Nature of the data*

To provide a correct representation of performance and guarantee the reliability of the data, the use of estimates has been limited as much as possible; where present, estimates are based on the best methods available and are flagged as such. In addition, any restatements of previously published comparative data are clearly indicated in the text.

1. The companies BioBag Canada Inc., BioBag Austria GmbH and BioBag UK have neither offices nor employees.

| | |
|---|---|
| *Reference standards* | The Sustainability Report was written in accordance with the GRI *Sustainability Reporting Standards* published in 2016 by the *Global Reporting Initiative* (GRI), in accordance with the "Core" option. With reference to the themes GRI 303 – Water and Effluents, and GRI 403 – Occupational Health and Safety, the updated versions of 2018 were adopted, while for the theme GRI 306 – Waste, the updated version of 2020 was adopted. For the preparation of this document, the Reporting Principles provided by GRI 101 – Foundation were considered for defining report content (Stakeholder Inclusiveness, Sustainability Context, Materiality and Completeness) and quality (Accuracy, Balance, Clarity, Comparability, Reliability and Timeliness). |
| *Definition of the content and structure of the Report* | The reported content was established on the basis of the materiality analysis. This was updated in 2021 for this document, and made it possible to identify the sustainability topics that were most relevant for the Group and its stakeholders (material topics).<br><br>Each chapter in the Sustainability Report deals with each of the nine material topics identified in the materiality analysis. In particular, each chapter begins with a disclosure on the management approach, which describes the policies guiding the organisation, the specific actions, the assigned responsibilities and the complaint, consultation and discussion mechanisms.<br><br>In the section "Materiality analysis and stakeholder engagement", the table "Material topics: scope and correlation among GRI Standards, SDGs and the main areas under Italian Legislative Decree No. 254/2016" indicates, for each material topic, the scope (i.e. those generated and influenced by the impacts relating to the material topic), and the relationship with the GRI Standards, the SDGs and the areas under Italian Legislative Decree No. 254/2016.<br><br>Compared with previous years, this Report has undergone the following updates:<br><br>• an initial reporting exercise was carried out on activities potentially considered eco-sustainable under the Taxonomy ("*eligible*" activities) according to the information required under the European Taxonomy Regulation (Regulation (EU) 2020/852);<br><br>• the indicators GRI 407-1, 408-1 and 409-1 relating to freedom of association and collective bargaining, child labour and forced or compulsory labour were excluded. However, the topics related to those indicators are widely monitored and managed internally by the company, including through specific projects to assess the sustainability performance of the Group's suppliers. Therefore, those aspects are reported qualitatively within this NFS.<br><br>In the "GRI Content Index and UN Global Compact" section, it is possible to see a breakdown of the information reported according to the performance indicators defined by the GRI. Any omissions are suitably indicated, where applicable. |

| | |
|---|---|
| *Assurance* | The Report underwent a *limited assurance engagement* by PricewaterhouseCoopers S.p.A., who, at the end of their work, issued a report on the conformity of the information provided in the Sustainability Report produced by the Novamont Group. |
| *Glossary* | For a complete understanding of the document, a "Glossary" has been included as an appendix: this contains definitions of the terms most frequently used by Novamont. These terms are underlined in the Report. |
| *Contacts* | For any information about the Sustainability Report, please email csr@novamont.com. |

# Materiality analysis and stakeholder engagement

The starting point for producing the Sustainability Report is the materiality analysis, a process that seeks to identify and prioritise the material topics.


**The material topics are aspects capable of reflecting the significant economic, environmental and social impacts of Novamont that can substantially affect the assessments and decisions of stakeholders. In accordance with the GRI Standards, the process of defining the material topics consists of the following *steps*:**

**1**
**IDENTIFICATION OF TOPICS**

The topics that are potentially relevant for Novamont and its stakeholders are mapped out.

This work is regularly updated to take account of changes in the reference context and the main trends in the sector.

**2**
**ASSIGNING PRIORITIES**

The importance of the topics both for Novamont and its stakeholders is assessed through a process of communication.

The importance was ranked on a scale of 1 to 5, where 1 is “Not very important” and 5 is “Very important”.

**3**
**IDENTIFICATION OF MATERIALITY**

Materiality is the level at which topics become important enough to have to be reported.

The materiality threshold was set at a score of 3.

This process leads to the identification of material topics, represented in the top right quadrant of a two-dimensional matrix which shows the relevance of the topic for the Novamont Group on the x-axis, and the relevance for the stakeholders on the y-axis.

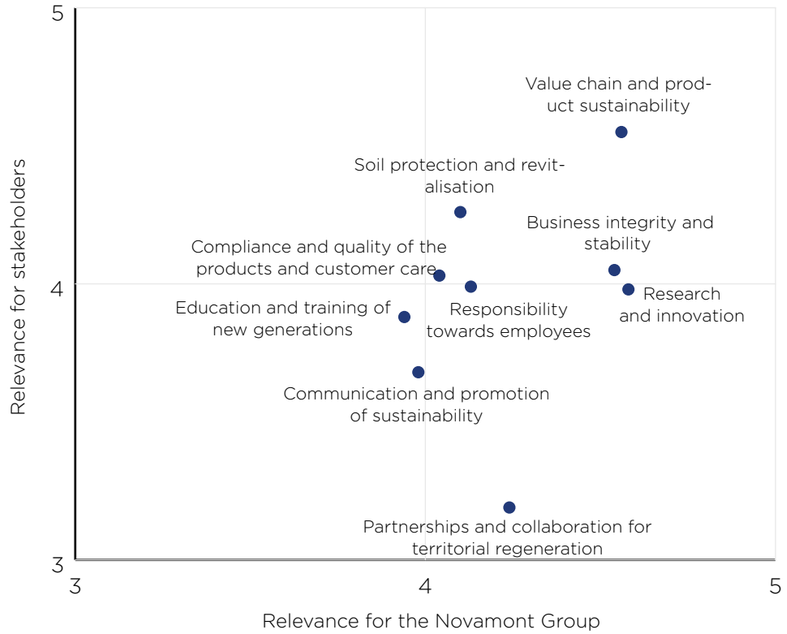
To be able to describe the Group’s approach to sustainability effectively, the material topics are adapted to the reference context as it evolves. They are therefore reviewed periodically: during 2021, the nomenclature of the topics and their definitions were reviewed with the aim of bringing them into line with the company’s approach.

The Novamont Group pays the utmost attention to the topics of research and innovation and value chain and product sustainability, confirming how intrinsic to its

identity these aspects are. The topic of compliance and quality of the products and customer care is also important, given the close correlation between this and business integrity and stability, a key issue for the Group. Responsibility towards employees was also confirmed as one of the most important issues for the Group, especially with regard to health and safety, which was particularly significant in the reporting year due to the Covid-19 pandemic. For years, and in line with the policies of international organisations, the Novamont Group has been working on soil protection and revitalisation, not least through its partnerships and collaboration for territorial regeneration, a vital aspect for the Group. The importance of this topic is also confirmed for stakeholders, who have shown that they share the Group's vision.

The stakeholders pay most attention to value chain and product sustainability, followed by the topics of compliance, quality of the products and customer care, acknowledging that these aspects provide the foundation for positive development for the Group and for all stakeholder categories associated with it. The topic of business integrity and stability is also significant for stakeholders.

## Novamont Group materiality matrix




The following table shows, for each material topic, the scope (that is, where the impacts occur and Novamont's involvement in these impacts), the specific related GRI standards, and the correspondence with the SDGs and the main areas under Italian Legislative Decree No. 254/2016.

## Material topics: scope and correlation with GRI Standards, SDGs and areas under Legislative Decree No. 254/2016

| TOPIC-SPECIFIC GRI STANDARDS | BOUNDARY: WHERE THE IMPACTS OCCUR | BOUNDARY: NOVAMONT INVOLVEMENT | AREAS UNDER LEGISLATIVE DECREE No. 254/16 |
|---|---|---|---|
| MATERIAL TOPICS | | | |
| RESEARCH AND INNOVATION | | | |
| / | • Novamont Group<br>• Future generations<br>• Direct customers<br>• Indirect customers<br>• Capital providers | • Direct<br>• Linked to business relationships | / |
| BUSINESS INTEGRITY AND STABILITY | | | |
| • GRI 201 Economic Performance 2016<br>• GRI 205 Anti-corruption 2016<br>• GRI 206 Anti-competitive Behavior 2016<br>• GRI 307 Environmental Compliance 2016<br>• GRI 405 Diversity and Equal Opportunity 2016<br>• GRI 406 Non-discrimination 2016<br>• GRI 416 Customer Health and Safety 2016<br>• GRI 417 Marketing and Labeling 2016<br>• GRI 419 Socioeconomic Compliance 2016 | • Novamont Group<br>• Suppliers<br>• Direct customers<br>• Indirect customers<br>• Collaborators<br>• Capital providers | • Direct | • Respecting human rights<br>• Fighting active and passive corruption |

| TOPIC-SPECIFIC GRI STANDARDS | BOUNDARY: WHERE THE IMPACTS OCCUR | BOUNDARY: NOVAMONT INVOLVEMENT | AREAS UNDER LEGISLATIVE DECREE No. 254/16 |
|---|---|---|---|
| **VALUE CHAIN AND PRODUCT SUSTAINABILITY** | | | |
| • GRI 204 Procurement Practices 2016<br>• GRI 301 Materials 2016<br>• GRI 302 Energy 2016<br>• GRI 303 Water and Effluents 2018<br>• GRI 305 Emissions 2016<br>• GRI 306 Waste 2020<br>• GRI 412 Human Rights Assessment 2016 | • Novamont Group<br>• Suppliers<br>• Direct customers<br>• Waste management sector | • Direct<br>• Linked to business relationships | • Environmental topics<br>• Respecting human rights |
| **COMPLIANCE AND QUALITY OF THE PRODUCTS AND CUSTOMER CARE** | | | |
| • GRI 403 Occupational Health and Safety 2018<br>• GRI 416 Consumer Health and Safety 2016<br>• GRI 417 Marketing and Labeling 2016 | • Novamont Group<br>• National and international governments and bodies<br>• Suppliers<br>• Direct customers<br>• Indirect customers | • Direct<br>• Indirect<br>• Linked to business relationships | • Social issues |
| **SOIL PROTECTION AND REVITALISATION** | | | |
| / | • Novamont Group<br>• Farming world<br>• Waste management sector<br>• Communities and society | • Direct<br>• Linked to business relationships | • Environmental topics |

| TOPIC-SPECIFIC GRI STANDARDS | BOUNDARY: WHERE THE IMPACTS OCCUR | BOUNDARY: NOVAMONT INVOLVEMENT | AREAS UNDER LEGISLATIVE DECREE No. 254/16 |
|---|---|---|---|
| **RESPONSIBILITY TOWARDS COLLABORATORS** | | | |
| • GRI 401 Employment 2016<br>• GRI 403 Occupational Health and Safety 2018<br>• GRI 404 Training and Education 2016<br>• GRI 405 Diversity and Equal Opportunity 2016 | • Novamont Group<br>• Suppliers<br>• Collaborators | • Direct<br>• Linked to business relationships | • Topics relating to personnel<br>• Respecting human rights |
| **COMMUNICATION AND PROMOTION OF SUSTAINABILITY** | | | |
| / | • Novamont Group<br>• Communities and society | • Direct | • Social issues |
| **EDUCATION AND TRAINING OF NEW GENERATIONS** | | | |
| / | • Novamont Group<br>• Media and the press | • Direct | • Social issues |
| **PARTNERSHIPS AND COLLABORATION FOR TERRITORIAL REGENERATION** | | | |
| / | • Novamont Group<br>• Associations and NGOs | • Linked to business relationships | / |

Many players contribute directly or indirectly to our success and, in their roles, can influence progress and decisions.

Stakeholder engagement is an essential element of our sustainability strategy. We have identified our stakeholders by involving company management and periodically update this process to ensure that it always reflects our situation. Through a continuous process of feedback and discussion, organised through various channels and methods, our Group is more aware of the expectations and interests of our stakeholders, and how well we are meeting those expectations. For this reason, each year we draw up an **Engagement Plan** which is different from the previous years, so as to provide our stakeholders with a variety of communication channels and allow everyone to express their views. The engagement methods used in the reporting year are described below, with the key topics and requests that emerged during those activities for each stakeholder category.

## Stakeholders of the Novamont Group [2]

**CAPITAL PROVIDERS**
Anyone who provides the Novamont Group with capital

**COLLABORATORS**
Anyone who works for or on behalf of Novamont, including their representatives

**SUPPLIERS**
Anyone who supplies the Novamont Group with raw materials, materials or services

**DIRECT CUSTOMERS**
Anyone who purchases Novamont products

**INDIRECT CUSTOMERS**
Anyone who purchases products made from Novamont products

**ASSOCIATIONS AND NGOS**
Private, non-profit associations and organisations

**MEDIA AND THE PRESS**
International, national and local media

**NATIONAL AND INTERNATIONAL GOVERNMENTS AND BODIES**
The group of national and international institutions and agencies

**FARMING WORLD**
National and international farming bodies, associations and organisations

**FUTURE GENERATIONS**
The world of schools, universities and young people

**WASTE MANAGEMENT SECTOR**
The bodies, associations and organisations that deal with waste management, particularly the organic fraction

**COMMUNITIES AND SOCIETY**
The social context of the territories in which Novamont operates, together with the wider community

2. The process of identifying and mapping our main stakeholders started in 2014 and is confirmed for this Report.

| STAKEHOLDER | ENGAGEMENT METHOD | KEY TOPICS RAISED |
|---|---|---|
| Capital providers | Analysis of the RobecoSAM questionnaire for the *"CHM Chemicals" industry* | The economic dimension is emphasised, particularly with regard to sound *business* management through the identification and management of business risks. Within the company, huge importance is placed on the health and safety of employees and their professional and personal development. The formulation of strategies for the climate and for managing the sustainability of products are some of the aspects that make the largest contribution to the environmental dimension. |
| Collaborators | Presentation of the NFS at Ecomondo | Business integrity and stability is a priority and there is considerable interest in issues related to health and safety. |
| | Presentation of the NFS to the company's BoD | Management has found that the disclosures made in the NFS correspond to what is generally perceived in the management of the business. |
| Direct customers | Interviews | From the interviews carried out, it emerged that the priority for customers are *Compliance and quality of the products and customer care*, as a direct consequence of their close relationship with the Group, and the development of partnerships and collaborations, which help steer the redistribution of value increasingly towards territorial regeneration. *Education and training of new generations* are also a priority for customers, who recognise that Novamont has the authority to carry out this type of activity. |
| Indirect customers | | |
| Associations and NGOs | Documentary analysis of the available external sources of the main consumer associations | The topic of value chain and product sustainability is a priority for the associations analysed, confirming the increasing importance that sustainability has for the consumers they represent. Added to this is the knowledge that to foster a culture of sustainability, the appropriate communication and awareness-raising is necessary, another topic that is extremely relevant for this stakeholder category. |
| Media and the press | Daily analysis of press coverage | Priority is given to the topic of *Soil protection and revitalisation*, partly as a tool for development, economy recovery and employment. It also confirms the high level of interest in value chain and product sustainability, especially from the point of view of promoting the circular economy and developing the bioeconomy. |

| STAKEHOLDER | ENGAGEMENT METHOD | KEY TOPICS RAISED |
|---|---|---|
| Suppliers | Analysis of the results of assessments carried out with the EcoVadis platform | The most relevant topics are *Compliance and the quality of products* and *Business integrity and stability*, both aspects of historical importance in the relationship between the Group and its suppliers. |
| National and international governments and bodies | Monitoring and analysing the regulatory landscape | National and international governments and bodies are expressing their views with a flurry of legislative activity to guide us towards sustainable development. Particularly noteworthy are the emergence of legislation on *Soil protection and revitalisation* and the focus on value chain and product sustainability, aspects that are now paramount. |
| Farming world | Multi-stakeholder forum on circularity at Ecomondo | Novamont's approach to the circular economy was shared with stakeholders in a discussion that focused on the main challenges and opportunities linked to this topic, to be addressed in close collaboration with all stakeholders. |
| *Waste management* sector | | |
| Future generations | Activities described in detail in the chapter "Communication and promotion of sustainability" – Analysis of the satisfaction questionnaires carried out for the Festa Ambiente activity | The activities focused on the topics of *Soil protection and revitalisation, Value chain and product sustainability, Education and training of new generations and Communication and promotion of sustainability*. This demonstrates how important it is to create knowledge and awareness among younger generations of the global challenges linked to climate change. |
| Communities and society | Daily analysis of press coverage | The press review shows that the topics of *Soil protection and revitalisation and Value chain and product sustainability* are priorities, with particular emphasis on aspects related to the circular economy and the development of sustainable products. |

# Novamont Group

Chapter
0

The Novamont Group is an international leader in the production of bioplastics and in the development of bioproducts and biochemicals obtained by integrating chemistry, the environment and agriculture.

As a certified B Corp (Benefit Corporation), we act responsibly, sustainably and transparently towards people, communities, territories, the environment, cultural and social activities and goods, organisations, associations and other stakeholders, pursuing goals in the public interest.

**4**
PRODUCTION SITES
(INCLUDING 1 PROCESSING SITE)

**3**
R&D CENTRES

**3**
ACTIVE INNOVATION HUBS

**632**
EMPLOYEES

**€414**
MILLION IN TURNOVER[1]

1. This figure includes the items "Revenue from contracts with customers" and "Other revenue and income" reported in the Group's 2021 Consolidated Financial Statements.

# 2021 Highlights

## RESEARCH AND INNOVATION

**3.5%**[2]
of turnover invested in Research and Development

**~20%**
of employees involved in Research and Development activities

**€50 m** in industrial and R&D investments

**~1,400**
active patents and patent applications in 2021

**> 460**
partnerships with companies, research centres, universities, non-profit organisations and local government in the context of research, development and innovation projects

## BUSINESS INTEGRITY AND STABILITY

**€414 m**
Economic value generated

**€100 m**
in green finance obtained for Novamont's sustainable growth

## COMPLIANCE AND QUALITY OF THE PRODUCTS AND CUSTOMER CARE

**80%**
of customers involved in the THF business say they are satisfied or very satisfied with Novamont

Maintenance of ISO 9001, ISO 14001 and ISO 45001 certification following audits carried out both remotely and in person

## VALUE CHAIN AND PRODUCT SUSTAINABILITY

**58%**
raw materials of renewable origin

**71%**
share of regenerative turnover

**-24%**
reduction in energy intensity compared with 2017

Launch of the **EcoVadis project** for the sustainability performance assessment of suppliers of raw materials

**99.8%** electricity and **100%** of heating obtained from certified renewable sources

Novamont receives the **Platinum medal** in the EcoVadis assessment

## SOIL PROTECTION AND REVITALISATION

First national launch of the ***Mission Board for Soil Health and Food***

New Mater-Bi mulching film available **with 60% renewable content and phytosanitary products based on pelargonic acid of plant origin**[3]

**Re Soil Foundation** creation of a **scientific technical committee** and development of a **strategic instrument** for planning social objectives and projects. The foundation has involved more than 1,900 participants in training and outreach activities to raise awareness about issues related to soil health

Novamont and Coldiretti launch **Mater-Agro**, the company set up to promote a new model of participatory innovation between agriculture and industry by rolling out sustainable agronomic solutions

2. The percentage has decreased compared with 2020 due to the significant increase in turnover. Investments (in absolute terms) in R&D have not decreased compared with 2020.

3. Authorisation obtained in 2021 pursuant to Article 53 of Regulation (EC) No 1107/2009.

## RESPONSIBILITY TOWARDS EMPLOYEES

**632**

employees (+32% vs 2020), of whom:

**97%**
full-time

**97%**
a permanent contract

**0.7**
rate of work-related injuries[4]

**> 9,000**
hours of training

Launch of a **counselling service** for Group employees

## COMMUNICATION AND PROMOTION OF SUSTAINABILITY

Participation in **more than 130 national and international events**

(including SUD – Progetti per ripartire, Coldiretti International Forum on Agriculture and Food, Plant Based Summit, Ecomondo, Bioplastex)

Contribution to the drafting of numerous **studies and scientific articles** (including publications by Fondazione Symbola and Enel, Edizioni Ambiente) and **interviews with** national newspapers

Launch of the projects **Dialoghi con la Scienza and Tech.Emotion**

## EDUCATION AND TRAINING OF NEW GENERATIONS

**Scuola@Novamont** continuation of the initiative #laformazionenonsiferma! to supplement the school curriculum through distance learning tools

**BIOCIRCE Master's Degree** completion of the fourth edition

**Discovering Mater-Bi** launch of the virtual game "Mission 2050 – a brief journey into the future to combat climate change today"

Support for the **Startupper School Academy** initiative to promote entrepreneurship in schools

## PARTNERSHIP AND COLLABORATION FOR TERRITORIAL REGENERATION

**Cluster SPRING**

128 members in total

Collaborations continued with **multiutilities** and **major brands**

Completion of the process of acquiring the industrial complex at the **Terni chemical facility** owned by **Basell**

Continuation of **territorial regeneration projects**, developed with communities and local authorities throughout Italy (Turin, Pantelleria) and abroad (Serbia and Mozambique)

4. These are minor injuries.

# Who we are

Novamont is an Italian company and a world leader in the bioplastics sector and in the development of bioproducts and *biochemicals*. These products, owing to their compostability and biodegradability in different environments, can contribute to reducing non-recoverable waste and protecting ecosystems, particularly the soil. The roots of our company lie in the Montedison School of Material Science, where a number of researchers began to develop the ambitious project of integrating chemistry, the environment and agriculture, or “Living chemistry for a better quality of life”.





## VISION

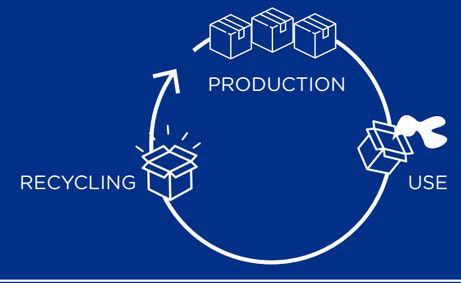
We want to facilitate the **transition from a product-based economy to a system-based economy**. This cultural leap towards economic, environmental and social sustainability involves the whole of society. It starts with the development of each region and collaboration with various partners.

FROM A PRODUCT-BASED ECONOMY...


## MISSION

To develop materials and products from renewable sources by **integrating chemistry, the environment and agriculture**, by setting up biorefineries that are integrated into the surrounding area and by providing application solutions that have a low environmental impact and ensure the efficient use of resources throughout their life cycle, with systemic social, economic and environmental benefits.

...TO A SYSTEM-BASED ECONOMY




## DEVELOPMENT MODEL

We have always pursued the principles that are now enshrined in the concept of the bioeconomy, and our products, which are renewable and recyclable, epitomise the circular economy model. This is why we can say that we promote a **circular bioeconomy** model. This development model, which looks at the bioeconomy as a factor in territorial regeneration, is based on three main pillars:

### REINDUSTRIALISATION OF DISUSED SITES

**Reindustrialisation** of sites that are no longer competitive, using world-beating **proprietary technologies** to create interconnected biorefineries integrated with the local area

### INTEGRATED AGRICULTURAL VALUE CHAIN

Building **agricultural value chains** with a **low environmental impact**, by **developing marginal land** integrated with the local area and connected to **biorefineries**

### PRODUCTS AS SOLUTIONS

Products from the value chain designed and developed to provide **unique, sustainable solutions** for specific environmental and social problems closely related to **water and soil** quality

## INNOVATION AT THE HEART OF OUR MODEL

Scientific research is the driving force behind technological innovation: without it, circular bioeconomy models could not be developed. This is why we need skills, knowledge-sharing and a strong systemic vision.

## The key activities of our innovation model:

**ECOLOGY OF PRODUCTS AND SYSTEMS**
study and assessment of environmental impacts (LCA, LCM, CSR), biodegradation, compostability and ecotoxicological analysis of plastic materials in the environment. Standardisation and certification activities

**RESEARCH AND INNOVATION/DEVELOPMENT OF NEW BUSINESS APPLICATIONS**
development of multidisciplinary research and development platforms (materials science, polymer synthesis, organic chemistry, biotechnologies; physical chemistry, analytical chemistry, formulations, physical-mechanical and rheological behaviour of materials, transformation technologies, process development, IT, IP, microbiology, LCA, ecology of systems and products, agronomy, plant genetics, pilots, renewable energy and organic, chemical and mechanical recycling, etc.) and creation of intellectual property comprising products, processes, applications and technologies along the value chain, from bioplastics and biochemicals to biomass and biowaste

**ENGINEERING**
a wide and growing range of upstream, low-impact technologies and facilities integrated throughout the bioplastics value chain; efficiency in the use of resources

**TRAINING**
continuous development of diversified skills and internal training of qualified staff with a strong systemic vision

**OPEN INNOVATION**
creation of a network of strategic partnerships with stakeholders throughout the value chain, prioritising projects with farmers, biowaste infrastructure, local communities and environmentalists

# Our story

It was in the Montedison School of Material Science that the project to integrate chemistry, the environment and agriculture began to develop. Numerous steps forward have been made towards building an integrated value chain for bioplastics and biochemicals. Today, we are not only recognised internationally as leaders in the sector, but as a genuine example of what implementing the circular bioeconomy can achieve.

## 1990

Foundation of NOVAMONT
FERTEC Research Centre

## 1991

Fertec is incorporated into Novamont S.p.A.
First demo plant in Terni

## 1996

Acquisition of Novamont
by associated investors and Banca Commerciale Italiana

## 1997

1st increase of Mater-Bi production capacityat the Terni plant

## 2001

Novamont reaches turnover break-even point

## 2006

Start of biopolyester production in Terni
(discontinuous process)

## 2009

2nd increase of Mater-Bi production capacity
at the Terni plant

## 2011

Conversion of a PET line at the Patrica plant
1st continuous biopolyester line

Matrìca founded, a JV with ENI-Versalis in Porto Torres

## 2012

3rd increase in Mater-Bi production capacity at the Terni plant
Acquisition of a disused lysine production plant in Bottrighe
to be transformed into a flagship plant for the production of Bio-BDO, and agreement with Genomatica: Mater-Biotech is founded
Acquisition of the biotechnology and R&D centre in Piana di Monte Verna

## 2014

Mater-Biopolymer is founded
with the acquisition of 78% of M&G in Patrica

## 2015

Agreement with Coldiretti for the development of the agricultural value chain
Production of the first chemical intermediates from renewable resources in Matrìca

## 2016

Inauguration of Mater-Biotech

## 2017

Acquisition
of 100% of Mater-Biopolymer

## 2018

4th increase in Mater-Bi production capacity at the Terni Plant
Origo-Bi production capacity doubled at the Patrica plant

## 2019

Agreement with Coldiretti for the development of Italian-made sunflower oil intended for the production of biolubricants, bioplastics and bioherbicidesStart of Mater-Bi productionat the Patrica plant
Start of construction of the demo plant for the production of furandicarboxylic acid in Terni

## 2020

Acquisition of the legal form of
Benefit Corporation
B Corp certification
obtained

## 2021

Acquisition of BioBag International,
world leader in the production of compostable and biodegradable products
Mater-Agro,
a company 90% owned by Novamont and 10% by Coldiretti, is established to bring together agriculture, research and industry

# The sites and the commercial network

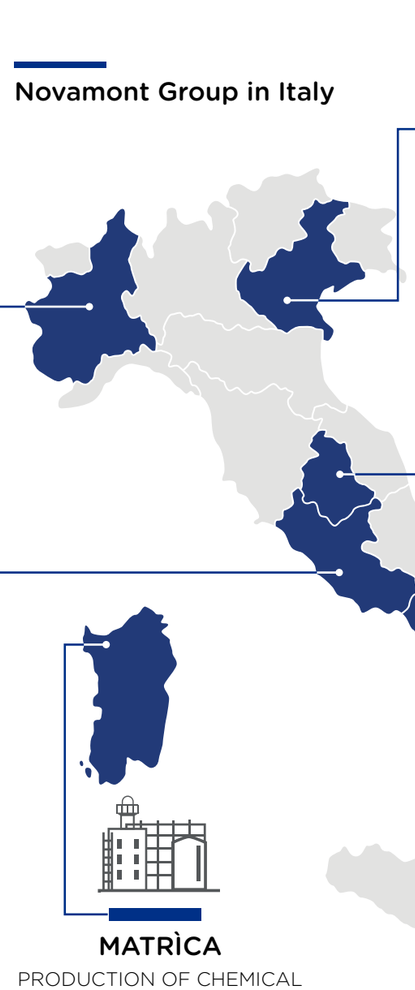
Our roots lie deep **in Italian territory**. In Italy, Novamont has its headquarters in Novara, three production sites in Terni, Adria and Patrica, and three research centres in Novara, Terni and Piana di Monte Verna (PMV). We are present in foreign markets through our branches in France, Germany, Spain and North America, a vast network of distributors and a representative office in Brussels.

The company is also part of a joint venture: Matrìca S.p.A., established in 2011 between Novamont and Versalis at the petrochemical facility in Porto Torres, for the production of chemical intermediates from renewable sources.

In 2021, Novamont and Coldiretti launched Mater-Agro S.r.l., the company set up to promote a new model of participatory innovation between agriculture and industry by rolling out sustainable agronomic solutions[5].

2021 also saw the acquisition of the BioBag Group, a leading Norwegian company in low-impact solutions for packaging and separate collection of organic waste, with offices in north-eastern Europe, North America and Australia. Production is based in Estonia, with more than 30 production lines at a 15,000 m² plant.

## Novamont Group in Italy



**NOVAMONT S.P.A**
ADMINISTRATION AND RESEARCH CENTRE
Novara, Piedmont

**MATER-AGRO**
DISTRIBUTION OF BIOPRODUCTS FOR AGRICULTURAL USE NOVARA, PIEDMONT

**MATER-BIOPOLYMER**
PRODUCTION OF ORIGO-BI BIOPOLYESTERS, MATER-BI, THF
Patrica (FR), Lazio

**MATÌCA**
PRODUCTION OF CHEMICAL INTERMEDIATES FROM RENEWABLE SOURCES
Porto Torres (SS), Sardinia

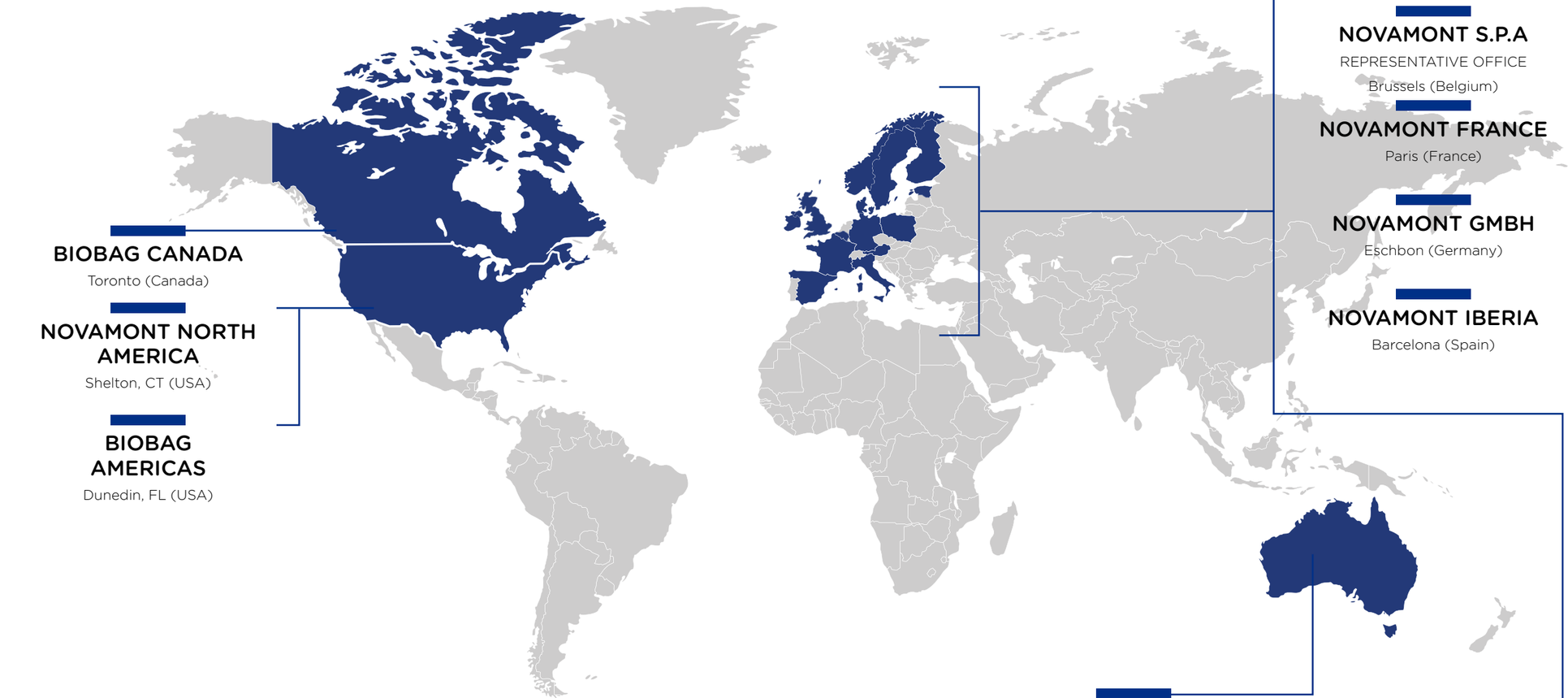
**MATER-BIOTECH**
BIO-BDO PRODUCTION
Adria (RO), Veneto

**NOVAMONT S.P.A**
PRODUCTION OF MATER-BI, ORIGO-BI, MATROL-BI AND NEW MONOMERS
Terni, Umbria

**NOVAMONT SPA**
RESEARCH CENTRE FOR THE DEVELOPMENT OF INDUSTRIAL BIOTECHNOLOGIES
Piana di Monteverna (CE) - Campania

5. More information about Mater-Agro can be found on page 163 in Chapter 5 “Soil protection and revitalisation”.

## The Novamont Group worldwide



**BIOBAG CANADA**
Toronto (Canada)

**NOVAMONT NORTH AMERICA**
Shelton, CT (USA)

**BIOBAG AMERICAS**
Dunedin, FL (USA)

**NOVAMONT S.P.A**
REPRESENTATIVE OFFICE
Brussels (Belgium)

**NOVAMONT FRANCE**
Paris (France)

**NOVAMONT GMBH**
Eschbon (Germany)

**NOVAMONT IBERIA**
Barcelona (Spain)

**BIOBAG WORLD AUSTRALIA**
Netley (Australia)

**BIOBAG INTERNATIONAL**
Oslo, Askim (Norway)

**DAGÖPLAST**
Hiiumaa (Estonia)

**BIOBAG SVERIGE**
Torsby (Sweden)

**BIOBAG NORGE**
Askim (Norway)

**BIOBAG ZENZO**
Hilleroed (Denmark)

**BIOBAG AUSTRIA**
Linz (Austria)

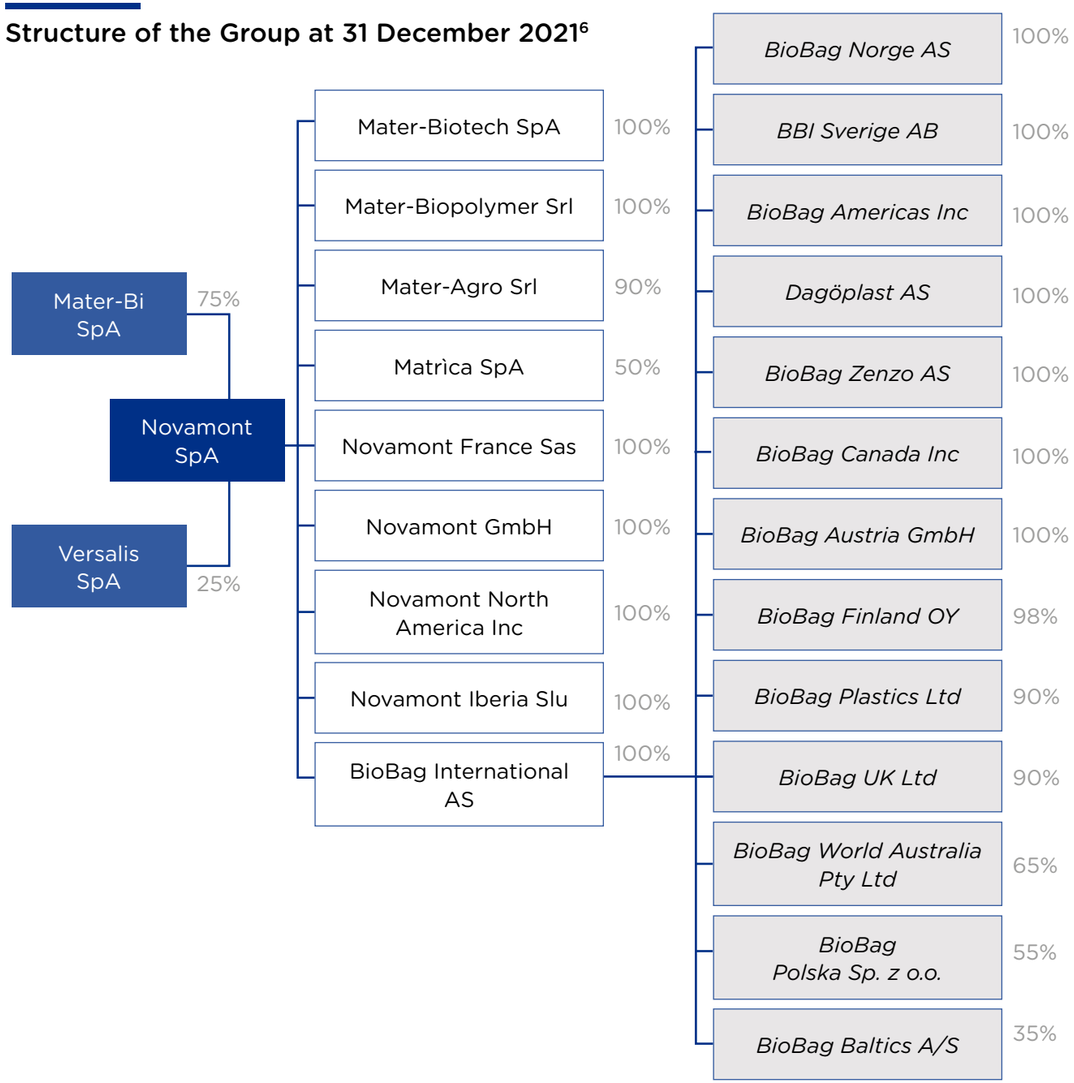
**BIOBAG FINLAND**
Vantaa (Finland)

**BIOBAG UK**
Belfast (United Kingdom)

**BIOBAG PLASTICS**
Co Wicklow (Ireland)

**BIOBAG POLSKA**
Wroclaw (Poland)

## Structure of the Group at 31 December 2021[6]




6. This document does not contain information or data on the companies Matrìca S.p.A. and BioBag Baltics A/S. These companies are excluded from the reporting scope since they are not fully consolidated in the Novamont Group's Consolidated Financial Statements.




## NOVAMONT ACQUIRES BIOBAG AND STRENGTHENS MARKET LEADERSHIP AND GLOBAL PRESENCE

In January 2021, Novamont announced that it had acquired the BioBag Group, a world-leading Norwegian company in the development, production and commercialisation of a wide range of certified bio-based, biodegradable and compostable products. The Group is also present in the market with post-consumer recycled (PCR) products, marketed under the RecyPolly brand, and products of renewable origin, marketed under the GreenPolly brand.

The acquisition will enable Novamont to benefit from BioBag's highly specialised independent distribution network in geographic regions where Novamont is less present. Together, the two companies will be able to offer the market a more comprehensive range of solutions and build even stronger alliances with key stakeholders, from large retailers to local communities. Joint efforts will also be stepped up on innovative projects that improve the separate collection of organic waste and composting systems, especially in North America, Scandinavian countries, Eastern Europe and Australia.





There are three reasons for the acquisition:

Strong cultural compatibility developed over two decades of partnership, which has led to a harmonious vision and shared values, as well as the integration of teams around common projects aimed at creating a circular bioeconomy model focused on soil health and territorial regeneration.

A highly complementary value chain:

a. Novamont is mainly focused upstream and has developed the Mater-Bi value chain, which ranges from agricultural raw materials to biomonomers, and from bioplastics to low-impact formulations. Close collaboration with large retailers and local communities interested in innovative, low-impact solutions has reduced the use of traditional plastic and the accumulation of microplastics in the environment.

b. BioBag is focused downstream. The Group is a pioneer in the development and distribution – in Scandinavian countries initially – of a wide range of compostable applications and specialises in support services for those applications. BioBag has also developed an e-commerce platform, which represents a major new distribution channel for the Group's current and future applications.

This is a more robust and comprehensive platform for serving partners and customers. BioBag is a marketing and distribution company for low-impact applications. It is and will increasingly be at the service of Novamont partners throughout the value chain, helping to maximise opportunities for Novamont's product development and geographic expansion. BioBag also brings to the market different and complementary applications to Mater-Bi, thereby expanding the joint offering and providing maximum support for retail and other sectors.

The transaction represents an important step towards consolidating the integrated bioplastics value chain of the Novamont Group, and lays the foundations for the further expansion of the Italian B Corp in north-eastern Europe, North America and Australia.

# Products and areas of application

## Mater-Bi

Mater-Bi is our family of **biodegradable and compostable bioplastics**[7], developed from **renewable raw materials of plant origin** and, when an equivalent of natural origin is not yet available, from fully biodegradable fossil raw materials.

Thanks to these characteristics, Mater-Bi **optimises the management of organic waste**, **reduces the environmental impact** and contributes to the **development of virtuous systems**, with significant advantages throughout the production/use/end-of-life cycle.

Using solutions made from Mater-Bi bioplastic means not using resources destined to run out for products with a short useful life. This reduces the production of undifferentiated waste and the impacts associated with it (disposal in landfill, soil, water and air pollution, greenhouse gas emissions). It also encourages the recovery of resources, which, once they have undergone industrial composting, are turned into an excellent fertiliser that can be used to combat soil desertification, thereby completing the natural cycle in which nothing is waste, but everything goes back to being a resource.

7. Additional information is provided on pages 91-94 in Chapter 3 "Value chain and product sustain-



Mater-Bi, which is sold in granule form, is an **intermediate product** and so does not have its own use phase, but is processed using the most common conversion technologies for traditional plastics to create an array of final products.

## Conversion technologies

BLOWN FILM
Biodegradable and compostable film for specific applications

EXTRUSION
Woven nets for food products, rigid or semi-rigid containers and other items

THERMO-FORMING
Tubs, plant pots and other rigid containers

EXTRUSION AND LAMINATION COATING
Common substrates, such as paper, card, plastic, aluminium, fabric

INJECTION MOULDING
Cutlery, pens, gadgets, toys, plant pots, clips for agriculture

## Application sectors

AGRICULTURE
Mulching films
Clips
Pheromones

PACKAGING
Food packaging

LARGE-SCALE DISTRIBUTION
Carrier bags
Bags for fruit and vegetables

SEPARATE COLLECTION
Bags for organic waste

FOOD SERVICE
Cutlery
Plates
Cups

OTHER APPLICATIONS
Coffee capsules
Labels
etc.

## Celus-Bi

Celus-Bi is our **family of ingredients for the cosmetic and personal care sector**. It is the result of a collaboration between Novamont and ROELMI HPC, an Italian company that operates in the health and personal care market. The products in the Celus-Bi line are obtained primarily from **renewable raw materials**. They were developed to be **biodegradable**, in accordance with OECD guidelines, and thus prevent the accumulation of microplastics in the ground and in water. The Celus-Bi family includes:

Thanks to their biodegradability, Celus-Bi products contribute to the protection of soil and water.

### CELUS-BI ESTERS

Intended for the formulation of body care products and make-up (e.g. mascara, creams, foundation)

### CELUS-BI POWDERS

Biodegradable sensory ingredients intended for the formulation of Rinse-off (e.g. cleansers, exfoliating creams, toothpaste, shampoo, etc.) and *Leave-on* cosmetic products (e.g. sun cream, foundation, lipsticks, eyeshadow, etc.) and for body care products.

## Matrol-Bi

Matrol-Bi is our **family of rapidly biodegradable** biolubricants. They were formulated with special **oils of natural plant or synthetic origin**, and are characterised by their **high resistance to oxidation**. Owing to these properties, Matrol-Bi fluids are a safe choice for any systems used in ecologically sensitive areas and which might break or leak, releasing fluid into the environment and causing pollution. Matrol-Bi fluids are also characterised by **low volatility and flammability**, which mean healthier working environments that are safer in terms of fire hazard. The product portfolio includes formulations that carry the EU Ecolabel[8]. The Matrol-Bi line is primarily made up of:

The Matrol-Bi product line is a solution able to meet the strictest performance requirements, while fully respecting the environment and the health of the user.

### HYDRAULIC FLUIDS

High performance products that are biodegradable and non-toxic, used for a wide range of applications, such as the hydraulic systems on earth-moving equipment used in agriculture, refuse collection vehicles, hydraulic moving systems present in hydroelectric power stations, and on boats, for transporting goods and/or people, and more generally, in any machine that has a hydraulic control unit.

### DIELECTRIC FLUIDS

Insulating fluids used in distribution and power transformers.  Matrol-Bi dielectric fluids were developed to provide a biodegradable alternative to traditional, naphthenic-based products.  They can also be used to replace mineral dielectric oils in old transformers to extend their service life, improving their environmental profile while reducing the fire risk.

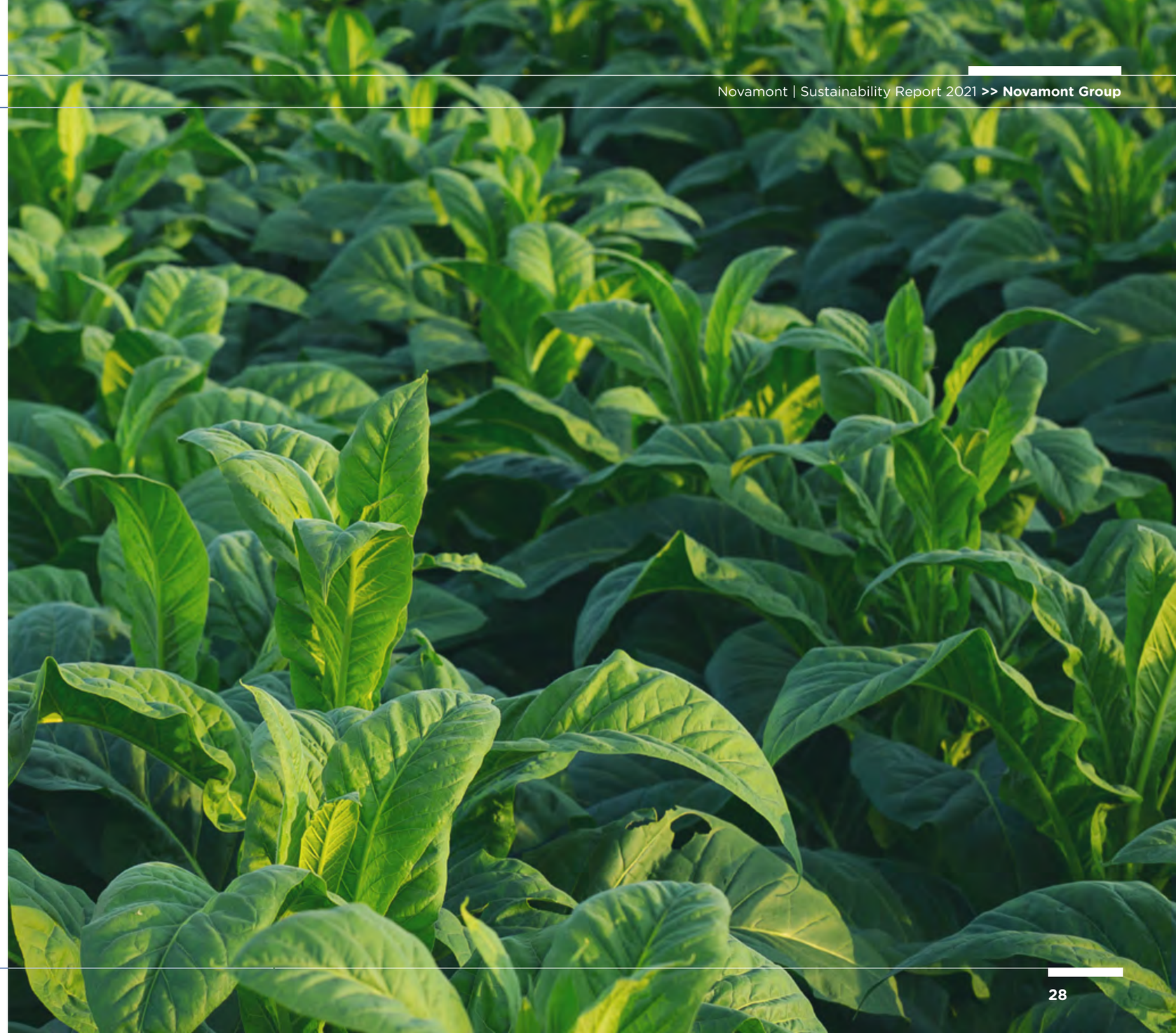
8. Additional information about the Ecolabel is provided on page 101 in Chapter 3 "Value chain and product sustainability".

## Ager-Bi

Ager-Bi is the brand name for a family of contact-acting Phytosanitary products based on plant-derived pelargonic acid. During 2021, in view of the positive results of the tests carried out in previous years, two licences were obtained for emergency use under Article 53 of Regulation (EC) No 1107/2009.

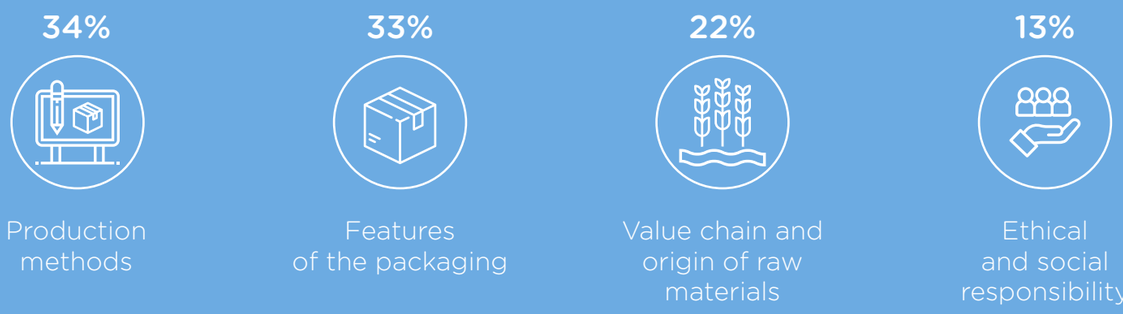
The first licence was for the product Ager-Bi, a contact-acting plant growth regulator for the selective control of primary and secondary axillary tobacco shoots. The licence, together with the invaluable support of the Italian Tobacco Growers Association, allowed the product to be used on several hundred hectares of crops in the Veneto and Umbria regions, much to the satisfaction of farmers who recognise its efficacy. Not only does Ager-Bi provide optimal shoot control, but it reduces the application of plant protection products and in the process resolves major social issues (odour) linked to the use of traditional crop treatments near population centres. More importantly, it does all this without adding to the costs for growers.

The second licence was for the product Ager-Bi Super Dry, a pre-harvest desiccant for peanuts and alfalfa. The product has yielded excellent results when used on peanuts, providing farmers with a valid support tool to ensure optimal harvest quality. Coldiretti, Noberasco and Società Italiana Sementi are behind an initiative to develop the Italian peanut sector in order to produce healthy, sustainable nuts that are 100% Italian in origin.



## INNOVATION IN FOOD PACKAGING: NOVAMONT'S MILESTONES IN 2021

Sustainable packaging, especially food packaging, is one of the main drivers of consumer trends and purchasing behaviour, increasingly focused on reducing the environmental impact of lifestyle choices. According to the latest edition of the **Mass Consumption Packaging Observatory** created by Nomisma[9], for Italian consumers, packaging ranks second among the four macro-aspects that help to define the sustainability of a food product:




In 2021, we were also involved, along with our Italian and international supply chain partners, in the development and launch of ready-to-go solutions for food packaging. These innovations represent a significant milestone for our Group. They are the result of the concerted effort made in recent years in the bioplastics and *biochemicals* sector in Italy, as well as being a concrete example of what the application of a circular bioeconomy model can achieve.

9. www.nomisma.it/osservatorio-packaging-del-largo-consumo-sostenibilita-e-packaging-nel-new-normal/



**AGNESI PASTA COMPOSTABLE PACKAGING**
**January 2021**

In late January, the Colussi Group launched new packaging for Agnesi pasta, consisting of a 100% compostable wrapper that can be disposed of as organic waste.

The traditional plastic packaging has been replaced by a compostable, multi-material laminate containing Mater-Bi.

The innovative compostable packaging represents a joint effort by a pool of Italian companies: Novamont, Saes, Sacchital, TicinoPlast and Ima, with a scientific contribution from the University of Gastronomic Sciences in Pollenzo.

**CITRUS CLING FILM**
**February 2021**

CITRUS, a company based in Cesena that distributes fruit and vegetables, is the first to market broccoli packaged using compostable cling film and thermal labels. Developed in partnership with GPT-Gruppo Poligrafico Tiberino, this innovative packaging solution was used for the first edition of "I broccoli della ricerca" ("Broccoli for research"), an initiative of CITRUS L'Orto Italiano in support of the Umberto Veronesi Foundation for scientific research into male cancer.

CITRUS broccoli is therefore sustainable up to the post-consumer stage. This is due to the compostable Mater-Bi bioplastic packaging which, in addition to increasing the shelf life of the vegetable, allows it to be biologically recycled in its entirety (the food waste and packaging are both compostable).

**NEW COMPOSTABLE HIGH-BARRIER PAPER-BASED PACKAGING WITH ICAM**
**October 2021**

Icam has chosen **new** Mater-Bi paper-based high-barrier compostable packaging for its Vanini Uganda organic chocolate.

Developed by Novamont in collaboration with Saes, Sacchital, Ticinoplast and Ima, the structure of the chocolate packaging consists of a barrier film in Mater-Bi, treated with COATHINK technology designed by Saes and backed with paper. This is an alternative to small, multi-material packaging, which is currently impossible to recycle.

# Sustainability management

The crisis caused by the Covid-19 pandemic and by climate change constitutes an unprecedented worldwide emergency, generating social and economic impacts that still cannot be quantified and laying bare the fragility of our current development model, which is now considered obsolete when it comes to managing socio-environmental problems. However, the enormous uncertainty of the current macroeconomic context is an opportunity for us to reflect on the primary importance of sustainable development.

To achieve genuine sustainable development, it is necessary to harmonise economic growth, social inclusion and environmental protection, by:

**decoupling** economic development from the consumption of finite resources, pollution and waste production

**effectively managing** problems that have an ethical and social impact, inside and outside the company



These aspects, together with the innovative business vision that has made Novamont a pioneer for over 30 years, are at the heart of a **corporate strategy that sees sustainability as its guiding principle**, that defines all business activities and that permeates the whole value chain. From the outset, we turned our attention to building a development model that integrates chemistry, the environment and agriculture and that facilitates the transition from a product-based economy to a system-based economy – themes that still characterise the Group's vision and mission to this day.

Guided by these principles, we promote a **circular approach to the bioeconomy** that is based on the efficient use of renewable resources and on territorial regeneration. We develop and manufacture products of plant origin that are biodegradable and compostable, conceived as solutions to specific problems closely connected to soil and water quality, pursuing the continuous innovation of our products, facilities and processes to achieve greater sustainability.

By applying proprietary technologies and redeveloping industrial sites that are no longer competitive or have fallen into disuse, we have created new value chains, new products and new jobs. Over the years, we have built and consolidated a collaboration platform that brings together the world of bioplastics, composters, farmers, large-scale distribution, local authorities and other key local stakeholders.

Lastly, promoting ethical and sustainable development principles throughout the supply chain (sphere of influence) by adopting a collaborative approach towards advocacy with suppliers allows us to accelerate the transition towards more responsible, sustainable business models, and is therefore one of the key elements of our Group.

## We are a certified B Corp Benefit Corporation

Mindful of what we can still do to promote a truly sustainable, inclusive economic model, in 2020 we adopted the legal form of Benefit Corporation, formalising in our articles of association our commitment to **goals of common benefit** for society, the local community and the environment we find ourselves in.

**The term Benefit Corporation refers to a new legal form that was introduced in the United States in 2010. This was subsequently adopted by Italy (the first country in the world outside the US) with the Italian law of 28 December 2015. Companies that become benefit corporations undertake to:**

- incorporate goals of common benefit, in addition to the objectives of profitability, within their articles of association
- measure all their impacts and publish them annually, in a transparent and complete manner, in an **impact report**[10] that describes the actions taken and the plans and commitments for the future

10. Novamont's 2021 Impact Report is available at www.novamont.com.

*"As a benefit corporation, Novamont pursues goals in the public interest, acting responsibly, sustainably and transparently towards people, communities, territories, the environment, cultural and social activities and goods, organisations, associations and other stakeholders."*

*(Extract from Novamont's articles of association)*

At the same time as becoming a Benefit Corporation, we decided to join the **B Corp** world, a global movement set up with the aim of promoting and disseminating a business model that goes beyond generating a profit for shareholders and that seeks to innovate and maximise the positive impact on society and on the environment, for all stakeholders.

To obtain B Corp certification, companies have to undergo a rigorous procedure of assessing the impacts generated by the business on the environment and on society, by completing the ***B Impact Assessment*** **(BIA)** developed by B Lab, a US independent non-profit organisation. Provided the company obtains a minimum score of 80 out of 200, it is awarded B Corp certification. This attests to the fact that the company acts responsibly, sustainably and transparently, pursuing a higher goal than mere profit. In its first year of assessment, Novamont achieved an excellent score of 104, thereby obtaining B Corp status and joining a global movement that now has more than 4,800 companies in 78 countries and 153 industries, united by a single goal: to transform the global economy to benefit all people, communities and the planet. B Corps meet the highest standards of verified social and environmental performance, public transparency and accountability to balance profit and purpose. The B Corp Certification does not simply evaluate a product or service, but assesses the overall positive impact of the company that stands behind it. Using the *B Impact Assessment*, B Lab evaluates how a company's operations and business model impact its workers, community, environment and customers.

With the inclusion of data from 2021, we obtained a new score of 132.2[11]. The increase in our corporate performance was the result of a continuous improvement plan, and specifically the benefit actions pursued to achieve specific goals in the public interest.

GOVERNANCE

WORKERS

COMMUNITIES

ENVIRONMENT

CUSTOMERS

132.2

OVERALL B IMPACT SCORE

11. By law, this result is not certified by a third party, but is the result of an internal self-assessment.



On obtaining the B Corp certification, we decided to adopt the BIA framework with the dual goal of conforming to the legal obligations of benefit corporations, reporting the impacts generated by the company, and obtaining an important tool in managing the Group's sustainability.

In 2021, we formulated a **dynamic Master Plan** comprising a set of actions (some of which were implemented during the year) to reduce our impact and enhance our sustainability profile in each of the five areas of the BIA, while building on the work carried out over the last 30 years, relaunching it at a deeper, more advanced level.

As part of the B Corp community, we joined *# UnlockTheChange*, the movement's national campaign coordinated by Nativa SB to raise awareness among businesses, institutions and citizens and "unlock" change, redefining in concrete terms a new business paradigm that is sustainable and regenerates society and the environment.

During 2021, we attended dedicated meetings of the B Corp network. These enabled us to stay up to date on projects for the entire community, to share ideas and to learn more about newly certified companies. We also helped to highlight the key themes of the community on the *#UnlockTheChange* website: the contribution from our CEO explains the Group's commitment to promoting a regenerative model. We also championed the values that underpin B Corps and the pillars of the *#UnlockTheChange* campaign on our web and social channels, focusing on issues such as interdependence, transparency, the common good, positive impact and stakeholder capitalism. Lastly, we used those channels to celebrate the prestigious "***Best For The World Environment***" award (see box on next page for more information), which the Group received in July. We also documented Novamont's approach to becoming a certified B Corporation, with a special section on the site describing our activities and achievements and featuring our Impact Report.

*"For us, being a Benefit Corporation and a B Corp means seeing business as a force for regeneration, rethinking the role of companies in society and looking beyond short-term profit-seeking, being transparent and delivering value to the local community"*

Catia Bastioli

## Sustainability Committee and Policy

The focus on these topics also led to the formalisation of a **Sustainability Policy**. The Policy, which was approved by the Board of Directors in June 2020, sets out the principles of Novamont's corporate culture and the commitments made towards responsible management of the impacts generated by the business on the environment, communities and people.

To manage sustainability topics in an increasingly structured and effective way, when we formalised the Policy, we also set up the **Sustainability Committee**. The Committee, which is made up of the CEO, plant directors and ten corporate functions, interacts with senior management and the Board of Directors in a proactive and advisory capacity. It also works synergistically with all Group functions and helps disseminate and integrate sustainability topics across all areas of the business and in its interactions with stakeholders. During 2021, the Sustainability Committee met four times to discuss the following aspects: management and mitigation of greenhouse gases; monitoring of the Group's sustainability performance; the B Corp improvement plan; supplier certification based on sustainability criteria.





## NOVAMONT NAMED "B CORP BEST FOR THE WORLD 2021"


In 2021, our Group was named "*B Corp Best for the World*™" in recognition of our exemplary environmental performance in the Environment impact category. For our category (companies with more than 250 employees), the score we obtained ranks among the top 5% achieved by B Corps worldwide. Novamont is the only company in the "industrial manufacturing" category. It had the highest score in Italy and Europe, and the second-highest score worldwide. The distinction of *Best for the World* was awarded by B Lab, the global, non-profit network that certifies B Corporations.

There are more than 800 B Corps from over 50 countries in the world named "Best for the World 2021"; alongside Novamont, they include 4G Capital, KeepCup, Natura, The Big Issue Group, TOMS, Too Good To Go and Patagonia.

# EU Taxonomy

To encourage the growth of sustainable investment and help achieve the objectives of the *European Green Deal*, the European Commission introduced – by Regulation (EU) 2020/852 and the related delegated acts – the **European Sustainable Finance Taxonomy**. This is a classification system that indicates whether an economic activity can be considered environmentally sustainable.

The application of the taxonomy imposes obligations both on non-financial and financial companies to report certain information in a standardised manner. The aim is to increase the transparency of reporting to investors, allowing them to direct their investments towards environmentally sustainable activities and protecting them from greenwashing.

The taxonomy is structured according to objectives, activities and criteria. In particular, **six environmental objectives** have been defined; for each one, the economic activities that can make a substantial contribution to at least one of them ("taxonomy-eligible" activities) have been identified. Clear technical screening criteria have been defined for each eligible activity to determine whether it is carried out in a manner aligned with the taxonomy ("taxonomy-aligned").

Environmentally sustainable economic activities are therefore defined as those activities that contribute substantially to the achievement of at least one of the six environmental objectives, provided that they do not cause significant harm ("Do No Significant Harm" – DNSH) to any of the other environmental objectives and that they are carried out in compliance with minimum safeguards.

12. The legislation has currently defined technical screening criteria only for the first two objectives. Financial and non-financial companies falling within the scope of the Regulation must therefore adapt to these.





## ENVIRONMENTAL OBJECTIVES DEFINED BY THE EU

1
Climate change mitigation

2
Climate change adaptation

3
The sustainable use and protection of water and marine resources

4
The transition to a circular economy

5
Pollution prevention and control

6
The protection and restoration of biodiversity and ecosystems

## REQUIREMENTS FOR ALIGNMENT UNDER THE TAXONOMY

1. Make a substantial contribution to at least one of the six objectives (according to the substantial contribution criteria)
2. Do no significant harm to other objectives (according to the DNSH criteria)
3. Respect the minimum safeguards (in relation to international legislation on workers' rights)
4. Comply with the technical screening criteria set by the European Commission

In this context, our Group has analysed its activities to identify those in line with the taxonomy's eligibility criteria.

In accordance with the regulatory requirements, we have therefore determined the share of turnover, capital expenditure (Capex) and operating expenditure (Opex) for the 2021 reporting year that are considered "*eligible*" according to the criteria defined by the Regulation and its interpretative documents, in relation to the objectives of climate change mitigation and adaptation.

Following the analysis of our economic activities, we have identified the turnover, Capex and Opex attributable to the activity "Manufacture of plastics in primary form" under Regulation (EU) 2021/2139.

The following table shows the products sold by the Group, the economic activity they belong to and their eligibility under Regulation (EU) 2021/2139:

| PRODUCTS SOLD BY THE GROUP | ECONOMIC ACTIVITY | ELIGIBLE FOR THE TAXONOMY (OBJECTIVE 1) |
|---|---|---|
| **Mater-Bi** (bioplastic in primary form) | Manufacture of plastics in primary form | Yes |
| **Origo-Bi** (biopolymer in primary form) | Manufacture of plastics in primary form | Yes |
| **Bio-BDO** (glycol – organic chemical compound) | Manufacture of chemicals | No – activity not yet included in the applicable Delegated Regulations |
| **THF** (cyclic ether – organic chemical compound) | Manufacture of chemicals | No – activity not yet included in the applicable Delegated Regulations |
| **Packaging** (BioBag Group) | Production of plastic packaging | No – activity not yet included in the applicable Delegated Regulations |
| **Mater-Bi mulching film** | N/A | No |
| **Matrol-Bi** (biolubricant) | N/A | No |
| **Ager-Bi** (Phytosanitary product based on pelargonic acid) | N/A | No |

Mulching film made from Mater-Bi, in addition to Matrol-Bi and Ager-Bi, are not currently associated with any of the economic activities present in the taxonomy. In addition, with regard to the production of bio-BDO, THF and plastic packaging produced by the BioBag Group, these activities are not included in Regulation (EU) 2021/2139. However, based on the documentation issued by the Sustainable Finance platform, they may fall under the activities covered by the other four environmental objectives.

Once the eligible activities were identified, the share of turnover, Capex and Opex at 31 December 2021, attributable to those activities, was calculated:

## Share of turnover, Capex and Opex at 31 December 2021

| *[thousands of €]* | TOTAL | % of activities eligible for the taxonomy | % of activities not eligible for the taxonomy |
|---|---|---|---|
| **Turnover** | **400,045** | 83% | 17% |
| **Capex** | **41,049** | 92% | 8% |
| **Opex** | **79,887** | 86% | 14% |

Specifically, a brief description of the calculation method for the three KPIs is given below:

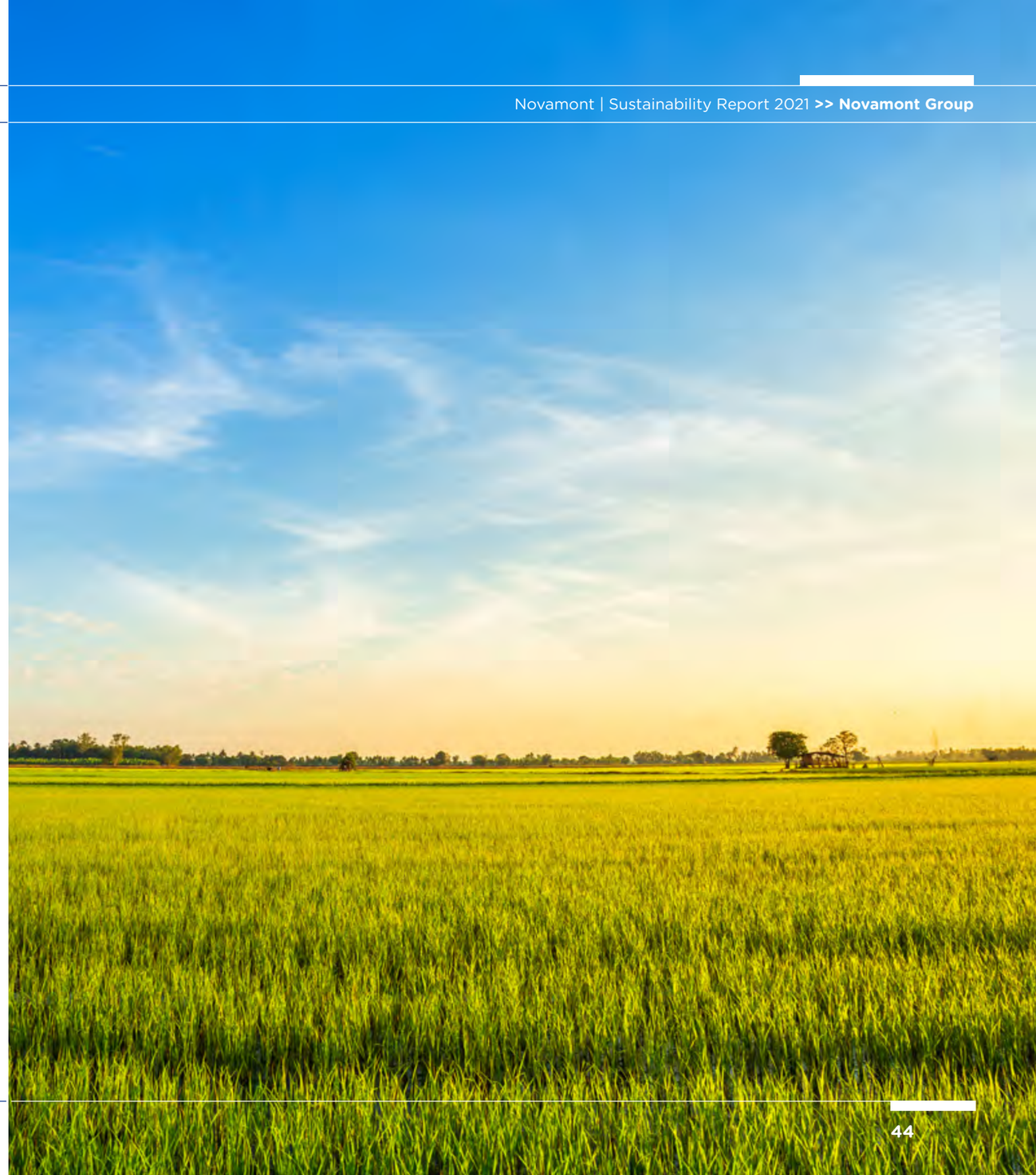
- Turnover: the proportion of taxonomy-eligible economic activities in terms of total turnover was calculated as the portion of net turnover earned from products and services associated with the taxonomy-eligible economic activities, divided by net turnover for the 2021 financial year. For more details of the accounting policies relating to consolidated net turnover, please see the explanatory notes to the Group's 2021 Consolidated Financial Statements.

- **Capital expenditure (Capex)**: the proportion of taxonomy-eligible economic activities in terms of capital expenditure is defined as eligible investments (numerator) divided by total investments (denominator). The numerator consists of the tangible and intangible investments relating to activities or processes associated with taxonomy-eligible economic activities, while the denominator consists of the total investments made during the year. For more details of the accounting principles relating to investments, please refer to the explanatory notes to the Group's 2021 Consolidated Financial Statements.

- **Operating expenditure (Opex)**: the proportion of taxonomy-eligible economic activities in terms of operating costs is defined as eligible costs (numerator) divided by total costs (denominator). The operating costs used as a reference for the definition of both the numerator and denominator of the ratio denoting the impact on the Consolidated Financial Statements of those relating to eligible activities were determined on the basis of the fixed cost control model adopted by management, which excludes purchases of raw materials, industrial utilities and other direct costs of the production process.

In calculating turnover, Capex and Opex, the items referred to in Delegated Regulation (EU) 2021/2178 were taken into account. The income statement and balance sheet data of the Novamont Group's eligible activities for the calculation of the impact on the Consolidated Financial Statements were extracted by the Group's companies from the general accounting and cost accounting systems used to prepare the statutory financial statements. These are prepared mainly in accordance with *International Financial Reporting Standards* (IFRS), *International Accounting Standards* (IAS) and the interpretations of the *International Financial Reporting Interpretations Committee* (IFRIC) and the *Standing Interpretations Committee* (SIC).

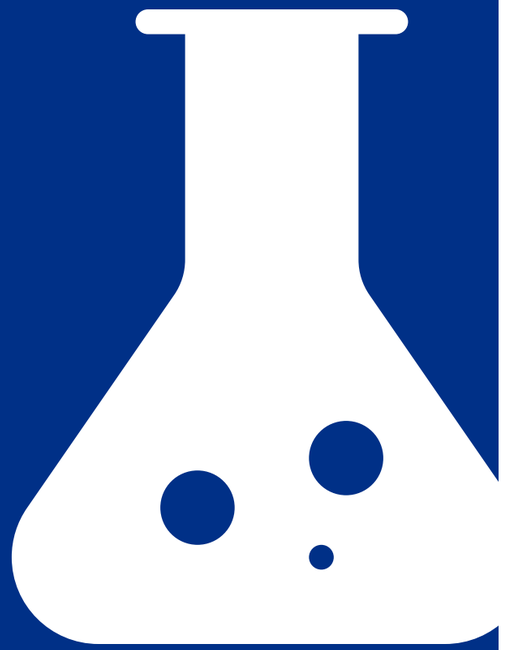
In conducting its analysis, the company adopted an approach based on its understanding and interpretation, based on current information, of the applicable regulatory requirements. Any subsequent changes in the interpretation of the regulatory framework could lead to substantial modifications of the assessment and calculation process for KPIs for the following year.



# Research and Innovation

The development of technologies for the production of bioplastics and biochemicals that constitute unique solutions to specific environmental and social problems, giving rise to synergies in the circular bioeconomy and accelerating the value creation process.

Chapter
1



Intellectual property

Research projects

Partnerships with universities and research projects

Start-ups

# Disclosure on Management Approach

## Management approach

The strategic positioning on innovative products with high added value and the increasingly competitive environment in which Novamont operates require a significant commitment in terms of the research and development of new products and applications. This commitment is based on a highly scientific and technological approach that has characterised Novamont since the beginning, resulting in its success and enabling it to maintain a competitive advantage in the market.

Every product formulation is created in pursuit of precise goals: to respond to market needs, to conform to the norms that regulate the bioplastics sector, but above all, to safeguard and regenerate the water and soil ecosystems. This translates into improving performance in terms of the quality and sustainability of the final applications. The resulting products are important not only because they are *bio-based*, biodegradable or compostable, but because they constitute the driving force of an integrated system that offers a wide range of opportunities for the community.

In 2020, Novamont issued its **Sustainability Policy**, which, on the topic of research and innovation, formalises the Group's commitment to:

- Promoting research and innovation, for turning waste and *by-products* from the value chain into new products;
- Adopting a management approach based on the principle of *Life Cycle Thinking* (LCT). Pursuing actions to mitigate and improve the environmental and social profile of its activities and products, by: (i) choosing or developing processes and systems that make it possible to reduce the consumption of energy and materials, (ii) using renewable energy sources, (iii) carefully designing products from an eco-design perspective throughout the life cycle, and (iv) purchasing the most eco-friendly products and raw materials (green purchasing);
- Fostering integrated knowledge networks through broad partnerships with companies, research centres, universities, associations, authorities and society, to accelerate the transition to more sustainable production and consumption models.

In pursuing those objectives, Novamont can count on the experience of numerous dedicated professionals involved in Research & Development (R&D) from a variety of disciplines (chemistry, biochemistry, biology, engineering, agronomy and biotechnologies). The R&D function plays a central role in guiding innovation in the Group; given the nature of its activities, it has to maintain a two-way dialogue with all the corporate functions.

In 2021, in a bid to strengthen and maximise innovation capacity within and outside the Group, the **Innovation Committee** was established. The Committee, chaired by the CEO, was created to support the innovation process, from initial brainstorming to the research and development of processes and applications, right through to the pre-commercial phase. It is responsible for stimulating ideas, choosing which projects to implement, deciding which paths to follow, accelerating the transition between the various steps and contributing to the assessment of risks and opportunities.

Novamont actively participates in national and international research and development projects in the area of the bioeconomy, establishing partnerships with businesses, associations, universities and research centres. This stimulates new knowledge flows, in synergy with other innovators, in a system of *open innovation*.

Over the years, all these investments have enabled us to develop a series of proprietary technologies to produce and improve the technical performance of bioplastics and *biochemicals*, by creating synergies among the various research areas (bioplastics, biotechnologies, agronomy, organic chemistry) and by developing experiments on various oleaginous dryland crops.

In a context of growing competition in the bioplastics sector, protecting our patent portfolio is essential to safeguarding our business. In particular, the intense research and development work done over the years has led to significant growth in our intellectual property, with the continuous development of original technologies.

As part of its organisation system, the Group has established a set of procedures intended to regulate how corporate R&D activities are carried out. In 2020, the Patent Box Management Process was updated. This defines how the R&D activities that converge to create intellectual property (a strategic asset for the Group) are traced. The procedure for **Operational management of the Research & Development and ECOPEC functions** defines the responsibilities and methods for managing R&D and biodegradation laboratory projects.

Other actions, programmes and initiatives implemented by the Group in relation to the material topic are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Research and Development
- Engineering
- Plastics Core Business General Management
- Agro
- New Business Development and Licences
- Product Ecology and Environmental Communication
- Intellectual Property and Legal Affairs
- Strategic Planning and Corporate Communications

These functions interface with the Group's subsidiaries, by actively collaborating with specific functions and the respective site management. In particular, the new company Mater-Agro plays a crucial role not only in the development and dissemination of innovative products for the agricultural sector, but also in the promotion of a new model of participatory innovation between agriculture and industry. It will also allow agronomic protocols to be designed to regenerate soils that are polluted, unstable and at risk of desertification.

## Complaint, consultation and discussion mechanisms

Further information on aspects relating to the material topic may be requested from the website www.novamont.com or by emailing info@novamont.com. Complaints may be made by contacting the Supervisory Board.

# Putting innovation first

**Novamont has always had a triple vocation as a manufacturing company, a training centre and a research centre.  And it is in this latter area that we continue to dedicate a considerable part of our human and financial resources. These have enabled us to become established as a leader in sustainable innovation, by developing innovative products and systems with a reduced environmental impact.**

**3.5%**[1] of turnover invested in Research and Development

The investments include the cost of personnel, the cost of instrument and equipment depreciation, the purchase of goods and services of a technological nature (e.g. materials used in the laboratories) and the cost of patents

**€35 million** in innovative investments

**~20%** of employees dedicated to Research & Development activities and involved in the following areas of research:

- Bioplastics
- Scouting technologies for special materials projects
- Agronomy
- Biotechnologies
- Organic chemistry
- Multi-disciplinary services

1. The percentage has decreased compared with 2020 due to the significant increase in turnover. Investments (in absolute terms) in R&D have not decreased compared with 2020.

# 3 R&D centres

and 3 Technology Innovation Hubs in Novara, Terni and Piana di Monte Verna with pilot and demo plants

**NOVARA**

Research centre

**PIANA DI MONTE VERNA**

Research centre for the development of industrial biotechnologies

**TERNI**

Centre for research and development of new technologies, agronomy and sustainability

**7,500** $m^2$ of laboratory space,

housing equipment and facilities ranging from laboratory-scale to innovative pilot plants

**~1,400** active patents and patent applications

in the sectors of natural and synthetic polymers and conversion processes for renewable raw materials

**5** Proprietary technologies

## Our technical expertise

- Plastics conversion technologies
- Agronomy
- Engineering
- Materials sciences
- Chemical-physical characterisation
- Microbiological biodegradability
- Physical chemistry
- Rheology
- Mechanical characterisation of materials
- Analytical chemistry
- Industrial biotechnology
- Polymer synthesis

# Research, Development and Innovation projects and partnerships

We actively participate in research and development projects, in collaboration with top Italian and international organisations in the public and private sectors, with the goal of creating strategic, interdisciplinary partnerships. This enables us to catalyse new initiatives and circular models, which can be replicated in other contexts, with extremely significant potential economic, environmental and social results.

After the approval of the European Parliament on 19 November 2021, the Council of the EU adopted the Regulation establishing the ***Circular Bio-based Europe Joint Undertaking (CBE JU)***, one of the ten institutionalised partnerships proposed by the Commission for areas where public-private collaboration is necessary to achieve the objectives and impacts of the *Horizon Europe* framework programme. Giulia Gregori, Group Head of Strategic Planning and Institutional Communication, is a member of the Governing Board.

The partnership between the European Union and the *Bio-based Industries Consortium* (BIC), worth around €2 billion, follows on from the public-private partnership (PPP) BBI JU (*Bio-based Industries Joint Undertaking*). Novamont was actively involved in the creation and development of that partnership, in a bid to boost the competitiveness of the circular bioeconomy in Europe.

Building on the strengths and success of the BBI JU, the CBE JU will seek to expand the reach of its predecessor and address the technological, regulatory and market challenges of the bio-based industry.

More specifically, the partnership proposes to develop further the sustainable supply and conversion of biomass into *bio-based* products through multi-scale biorefineries in all sectors and regions of Europe. The partnership will also support circular approaches such as the recovery of waste from agriculture and industrial processes, as well as urban waste, to manufacture new products, goods and materials. Lastly, the CBE JU will promote investment in research and innovation across all the scientific disciplines that support the bioeconomy, to help this sector become increasingly mainstream.

The innovation taking place throughout the value chain is the driving force behind the development of our model. It is aimed both at building new plants and demonstrators for innovative technologies, and at steadily improving the performance and environmental profile of the products and applications developed.

Through proprietary and integrated technologies, we develop products from renewable, biodegradable and compostable sources, for innovative applications that can always offer new solutions to specific environmental problems. In this sense, the synergies established with brand partners, transformers and brand owners are essential for making product innovation more sustainable and helping to disseminate best practice. At Novamont, we have always seen the relationship with our Mater-Bi brand licensees as a dynamic partnership based on the mutual exchange of knowledge, on technological support, and on the transfer of innovation and the results of the massive investments made over the past 30 years.

Various collaborations are under way to explore the optimal management of product end-of-life.

Collaborations with **public administrations**, **multiutility companies** and the waste treatment sector in general have been essential for us to define best practice in organic waste management, setting an example for the rest of Europe and giving rise to important research and innovation projects.

In 2021, for example, we signed a three-year collaboration agreement with the Italian multiutility company Iren in the field of integrated waste collection systems, with the aim of reducing non-recyclable waste at source and fully implementing the objectives of the circular bioeconomy. Together we have committed to developing specific projects for optimised management, recovery and recycling of compostable products and packaging, as well as the organic fraction of solid waste in Iren's treatment plants. Of particular importance will be the joint initiatives to promote the use of compost, a by-product from the organic fraction recycling process, and initiate a composting culture in association with the Re Soil Foundation[2].

Like Novamont, we are involved in numerous R&D projects funded by European, national and regional institutions. Below are some of the ongoing collaborations in this area in figures.

2. More information about the Foundation can be found on pages 161-162 in Chapter 5, "Soil protection and revitalisation".



In 2021, we were involved in projects focused on the themes of:

- Agricultural value chain
- Products from renewable sources
- Waste recovery
- Biotechnologies
- Biopolymer research
- Circular bioeconomy
- Food packaging
- Soil

As part of 460 partnerships with leading Italian and international companies in the field of the circular bioeconomy:

- **49%** Companies
- **17%** Research centres
- **14%** Universities
- **11%** Associations
- **3%** Government agencies Local authorities
- **3%** Farming world
- **2%** Multiutilities
- **1%** Foundations

- **30%** Italy
- **70%** Abroad

# Some of the projects carried out in 2021:

### CIRCULAR BIOCARBON

for recovering the organic fraction of municipal solid waste and sewage sludge in final products with high added value for the industrial sector and final consumers

www.circularbiocarbon.eu

### FRONTSH1P

for contributing to the green transition of the Polish region of Łódzkie from a linear to a circular economy model, based on decarbonisation and territorial regeneration through the development of circular systemic solutions for multiple sectors (such as wood packaging, food, water, waste)

www.frontsh1p.eu

### EMBRACED

for developing processes to recover and exploit the various fractions obtained from municipal solid waste, with particular reference to recovering the cellulose fraction of AHP waste (such as nappies and sanitary towels)

www.embraced.eu

### COMETA

for studying and validating low-impact, non-food cropping systems, suitable for being grown in marginal areas (at risk of erosion/desertification, under-used, polluted and/or poorly used) and being converted into bioproducts of interest to the agricultural and industrial sectors

www.novamont.com/cometa

### B-FERST

for improving the sustainability of cultivable land, by developing innovative bio-based fertilisers obtained by using organic waste in agriculture

www.bferst.eu

### VEHICLE

for developing processes to obtain second-generation sugars to use in the manufacture of bio-based products from lignocellulose biomass

www.vehicle-project.com

### EFFECTIVE

for demonstrating the sustainability of the production of polyamides and polyesters from renewable raw materials (e.g. sugars and vegetable oils) to obtain fibres and films

www.effective-project.eu

### CIRCPACK

for converting plastic packaging waste into new resources by developing the processes of the circular economy

www.circpack.eu

### BIOMOTIVE

for developing monomers and low-impact processes for the production of TPU (thermoplastic polyurethane) used in the automotive sector

www.biomotive.info

In carrying out our research and development work, which requires increasingly cross-cutting skills, we have developed a highly interdisciplinary, systemic approach involving universities and centres in various research sectors. For us, these collaborations ensure constant updating on technological innovations, the exchange of experience and knowledge, and the use of the most advanced technologies, attracting young talent interested in the Novamont world.

In particular, in the context of funded projects, we work with a broad network of stakeholders, some key examples of which are given below.

| NOVAMONT AND THE SCIENTIFIC COMMUNITY | | |
|---|---|---|
| POLITECNICO DI TORINO | UNIVERSITÀ POLITECNICA DELLE MARCHE | CIHEAM-IAMB – MEDITERRANEAN AGRONOMIC INSTITUTE OF BARI |
| UNITELMA SAPIENZA | UNIVERSITÄT HOHENHEIM | FUNDACIÓN AITIIP |
| UNIVERSITÀ DEGLI STUDI DI BOLOGNA | UNIVERSITAT CENTRAL DE CATALUNYA | FUNDACIÓN CIRCE |
| UNIVERSITÀ DEGLI STUDI DI PERUGIA | CIRCC | INSTITUTO TECNOLÓGICO DEL EMBALAJE, TRANSPORTE Y LOGÍSTICA |
| UNIVERSITÀ DEL PIEMONTE ORIENTALE | CNR | TECHNISCHE UNIVERSITÄT BERLIN |
| UNIVERSITÀ DI SASSARI | CREA | TECNALIA |
| UNIVERSITÀ DI TRIESTE | CENTRO RICERCHE FIAT (CRF) | CARTIF – TECHNOLOGY CENTRE |
| UNIVERSITÀ DI TORINO | ENEA | OTHER UNIVERSITIES AND CENTRES |

Novamont has long supported innovative circular bioeconomy projects, recognising the value of synergies between large companies and start-ups to accelerate innovation and generate new technologies.

In 2021, we also renewed our support for the "***BioInItaly Investment Forum – StartUp Initiative***", organised by Intesa Sanpaolo Innovation Center, Assobiotec-Federchimica and Spring, the national cluster for green chemistry. The 2021 edition was held in partnership with the Ellen MacArthur Foundation, Novamont, Stifel, LCA, Goodwin, Ayming, Human Technopole and Bird & Bird, with the endorsement of ICE/ITA – *Italian Trade Agency* and Invitalia.

*BioInItaly* is the leading initiative for innovation in biotechnologies and in the biomedical and pharmaceutical sectors in Italy. During the closing event, Novamont presented the "**StartUp Award for Best Innovation**" in the "Circular Bioeconomy" category. The winner of the award was *Regrowth*, with its proposal for a low-cost system (RFID) for tracking and monitoring the health of livestock.

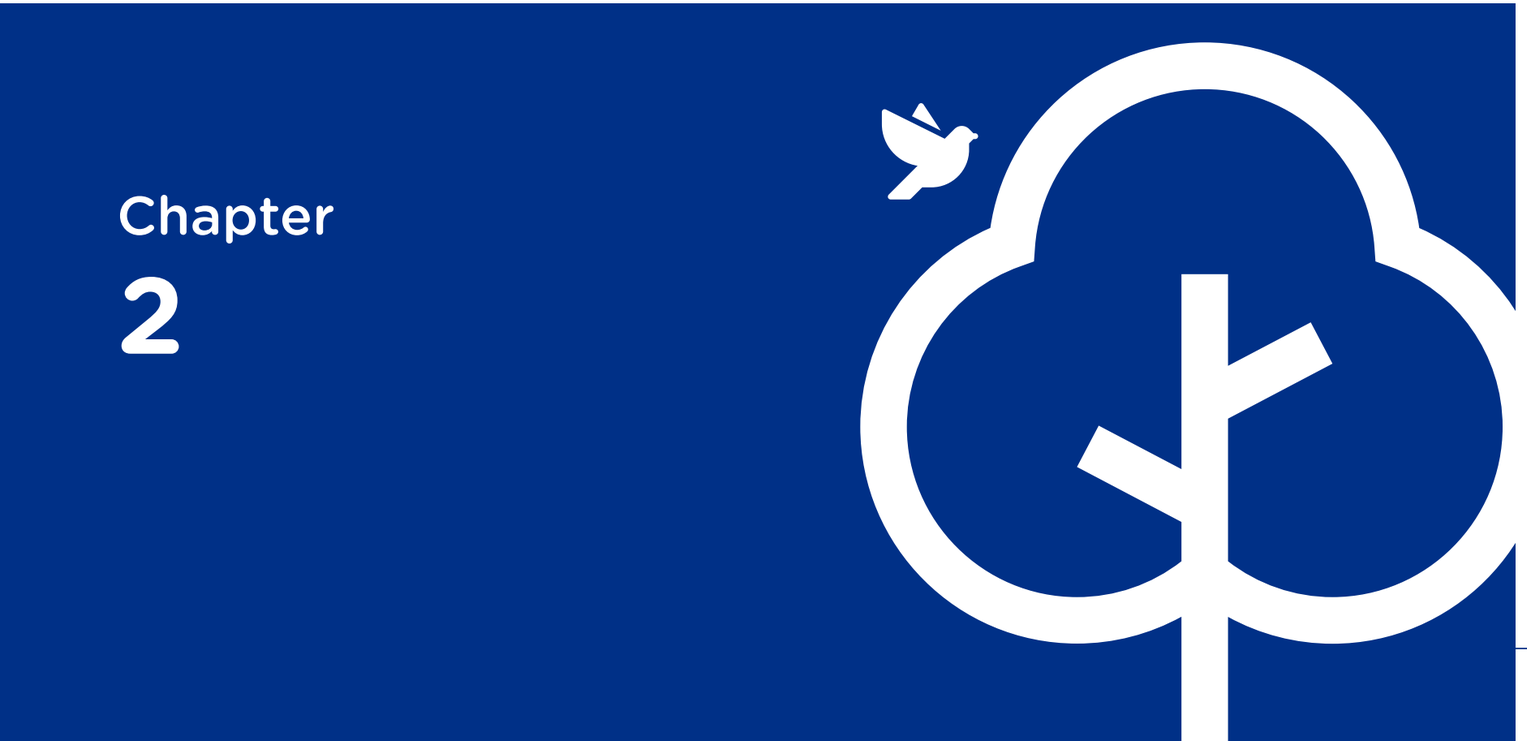
## NOVAMONT INNOVATION WINS AWARD FOR BEST PACKAGING 2021

In 2021, confirming the high innovation potential of the products developed, the Mater-Bi compostable packaging of the Colussi group (Misura and Agnesi) won the award for Best Packaging 2021 in the Transparency section, thanks to the collaboration between different companies in the packaging sector. The award went to Sacchital's Compoflex System, flexible bioplastic packaging (Mater-Bi) and FSC certified paper developed for Agnesi Pasta and products from the Colussi Misura line. The key feature of this is the compostability of the packaging (certified as OK Compost Industrial by TÜV Austria), combined with a high oxygen and moisture barrier obtained by lacquering. Since 2020, the Colussi Group has used this solution to replace 9.6 million traditional plastic packaging items, eliminating 76 tonnes of material.

# Business integrity and stability

Acting with transparency and integrity, by means of governance that is inspired by the highest standards in ethics and anti-corruption, to create economic value to be shared inside and outside the Group.

Chapter
2



Code of Ethics

Governance model

Anti-corruption

Non-financial risks

Economic value generated and distributed

# Disclosure on Management Approach

## Management approach

In 2020, Novamont issued its **Sustainability Policy** which, on the topic of business integrity and stability, formalises the Group's commitment to:

- Promoting the principle of equal opportunities and fighting discrimination;
- Fighting all forms of active and passive corruption.

Furthermore, in confirming its commitment to the management of quality, environmental impacts and health and safety in the workplace, in 2020 Novamont updated its **Policy for Quality, Environment and Health and Safety (QEHS)**, which provides that the Company and its subsidiaries must commit to:

- Respecting the laws and regulations that apply to their activities and products, and where applicable, the food safety standards and the customer's requirements; if there is no appropriate law or standard, Novamont adopts and applies standards and methods that reflect its commitment to conforming to the QEHS requirements, the best available techniques and the company's expectations;
- Developing, implementing, measuring, monitoring, revising and continuously improving its processes, to ensure conformity to the standards ISO 9001, ISO 14001 and ISO 45001, and to *Good Manufacturing Practices* (GMP);
- Demonstrating a clear commitment, on the part of management, to the continuous improvement of QEHS performance.

In pursuing the commitments stated within the Policy, the Italian companies of the Novamont Group decided to adopt an **Integrated Management System (IMS) for Quality, the Environment, Health and Safety**. To ensure that the QEHS Policy is effectively implemented, Novamont and its subsidiaries regularly review the effectiveness of the IMS through assessment and auditing processes.

To ensure that company business is conducted fairly and transparently, Novamont S.p.A. in 2008. And its subsidiaries Mater-Biotech S.p.A. and Mater-Biopolymer S.r.l. in 2017, adopted the recommendations of Italian Legislative Decree No. 231 of 8 June 2001, "Regulation of the administrative responsibility of corporate entities, companies and associations, even without legal liability" (Legislative Decree. 231/01). To that end, they adopted an **Organisation, Management and Control Model (OMM)** that prevents and counters any risk of committing the offences mentioned in the Decree. In particular, for each category of offence identified, and following a risk assessment, the OMM provides a description of the respective types of offence, the business activities that may be at risk, the principles of conduct to be respected, the protocols for monitoring those activities and the flow of information to the Supervisory Board. The offences to which Novamont and its subsidiaries Mater-Biotech and Mater-Biopolymer are potentially exposed mainly include infringements of the rules on health and safety at work, environmental offences, tax offences, offences against the Public Administration and corruption. In particular, various activities were identified as being exposed to corruption-related risks. As part of its organisation system, the Group therefore developed a set of procedures aimed at regulating how company activities are carried out and minimising the risk of committing the offences identified in the analysis of the risk assessment.

The version of the Novamont OMM in force as of 31 December 2021 was approved at the meeting of the Board of Directors on 21 May 2020[1]. Following an *assessment* carried out in 2020 in the field of administration and taxation, several protocols were introduced aimed at reducing the risk of committing tax offences and trafficking. In addition, with a view to monitoring, oversight and evaluation of the internal control system for tax risk, in 2021 Novamont launched a project that in 2022 will lead to the introduction of the *Tax Control Framework* and a *Fiscal Task Force*. The aim of the project is to increase synergy between internal control systems.

At the same time as approving the Organisation, Management and Control Models, the respective Boards of Directors of Novamont S.p.A., Mater-Biopolymer S.r.l. and Mater-Biotech S.p.A. appointed a **Supervisory Board**. This has the task of overseeing the operation of the Organisation, Management and Control Models and the Code of Ethics, and ensuring that they are complied with and kept up to date.

The members of the Supervisory Board are selected from those who meet the fit and proper requirements and who are independent and autonomous, accountable directly to the Board of Directors.

The companies are audited by their respective Supervisory Boards to ensure that the provisions contained in the OMM are properly implemented.

The Novamont Group opposes all forms of corruption, mindful of the adverse effects that corruption has on economic and social development. In addition, in view of the strategic importance of its business, the Novamont Group identifies measures to prevent corruption as an integral part of the Group's corporate social responsibility, in order to protect its organisation and all its stakeholders from any negative repercussions. Thus, the Group denounces and prohibits corruption without exception, and undertakes to respect all applicable anti-corruption laws. In this context, Novamont took inspiration from *best practices* and defined a system for preventing corruption, which includes the following components:

- analysis and assessment of the risk of committing acts of corruption;
- definition of principles, rules of conduct and procedures to protect the areas at risk of corruption;
- information and training activities for its employees;
- regular monitoring of the risks of corruption and the effectiveness and adequacy of the policy.

To demonstrate its commitment in this area, in 2020 Novamont adopted an **Anti-corruption Policy** that seeks to provide the Group's employees with rules to follow in order to strengthen anti-corruption control measures. In particular, the Policy establishes the

1. The Organisation, Management and Control Model is currently being updated to reflect major changes such as the Company's acquisition of the BioBag Group. The document also had to be revised in the light of several legislative measures which led to the introduction of the tax offences provided for by the PIF Directive and the addition of trafficking to the catalogue of offences pursuant to Legislative Decree 231/01.

obligation to adhere to anti-corruption laws, providing a definition of what can be interpreted as corruption and establishing the obligation to report the illegal practices that employees may be actively or passively involved in. This Policy is inspired by the principles of the Code of Ethics and, closely integrated with the Organisation, Management and Control Models required by Italian Legislative Decree 231/01 and with the *Compliance Programmes* (to be implemented by the foreign subsidiaries), is the most detailed tool in the fight against corruption.

In accordance with the legal provisions on compliance with Italian Legislative Decree 231/01, Novamont and its subsidiaries Mater-Biotech and Mater-Biopolymer have set up a system that allows employees to report – anonymously, if they wish – unlawful conduct or conduct that could constitute a breach of the Code of Ethics and the Organisation, Management and Control Models adopted by each company. In short, the associated implementing documentation, the **Whistleblowing Procedure**, **sets out:** i) ***how to submit a report,*** ii) **guidelines for whistleblowers,** iii) safeguards and any penalties for whistleblowers and the individuals they report.

As part of an increasingly integrated system between the various compliance systems, and in accordance with the principles of integrity and ethics, in 2019 the Novamont Group adopted an **Antitrust Manual**. The aim was to foster a culture of competition within the Group and prevent antitrust offences by adopting effective compliance programmes. The Manual is aimed at all Group employees in order to teach them the basics of competition law, so that they can independently identify and report potential violations. In addition, a process management system has been defined and integrated with business processes to mitigate the risk of committing antitrust offences. This system includes internal reporting procedures that allow antitrust issues to be reported. In the case of *whistleblowing*, the process guarantees the whistleblower anonymity.

The Novamont Group believes in having a compliance system that embraces the different areas of the company, on the one hand improving the company's competitiveness, ensuring its permanence on the market and thus protecting jobs and the interests of shareholders, and on the other hand avoiding sanctions in the event of the commission of an offence.

In addition, for a company to be able to face the major challenges of the future successfully, it is essential that it has a solid, common strategy, with a coherent mission and a clear model to strive towards. To transform all this into value, the organisational structure must be flexible, fast, interconnected and focused on the objectives, without losing sight of the overall vision. Mindful of this, Novamont has prepared a **Strategy Document** which sets out the strategies, initiatives and projects that Novamont plans to undertake in order to achieve the goals it has set itself. The **Procedure for approval and management of the Strategy Document** defines how the Group's Strategy Document should be drawn up, approved, circulated and enforced.

Other actions, programmes and initiatives implemented by the Group in relation to the material topic are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Group Operations General Management
- Intellectual Property and Legal Affairs
- Human Resources
- Strategic Planning and Corporate Communications
- Planning and Control, Information Systems

These functions interface with the Group's subsidiaries, actively collaborating with the various functions and with site management.

## Complaint, consultation and discussion mechanisms

For advice or to raise doubts about unethical or illegal behaviour and business integrity (including possible violations of the Organisation, Management and Control Model and/or the Code of Ethics), each employee can contact the Supervisory Board via the dedicated email address or Group Legal Affairs at Novamont S.p.A. Reports may also be made anonymously.

# The governance model

**Novamont S.p.A. has adopted a traditional governance model that seeks to ensure the proper functioning of the Company and the Group.**

The model is characterised by the presence of the following bodies: the Shareholders' Meeting, the Board of Directors (BoD), the Board of Statutory Auditors, the Supervisory Board (SB) and various Internal Committees. The statutory audit of the accounts is entrusted to an auditing company appointed by the Shareholders' Meeting.





## SHAREHOLDERS' MEETING

Appoints the members of the Board of Directors;
Approves the Consolidated Financial Statements

## BOARD OF DIRECTORS

Draws up corporate strategies, assesses the Group's economic, social and environmental performance, analyses risks and opportunities, assesses compliance with regulations and codes of conduct, and approves the Non-Financial Statement.

Composition as of 31 December 2021:

| 1 | 1 | 7 |
|---|---|---|
| **CHAIRMAN** | **CHIEF EXECUTIVE OFFICER** | **BOARD MEMBERS** |
| *Pauli Gunter* | *Catia Bastioli* | *Paolo Visioni, Roberto Berger, Antonio Tazartes, Marco Cerrina Feroni, Renato Peroni, Emanuele Vignoli, Marco De Simoni* |

meets at least three times a year

### SUPERVISORY BOARD

Ensures that the OMM is implemented and complied with, and sees that it is updated;

Reports to the Board of Directors at least once a year on the work carried out.

**3 MEMBERS**

### INTERNAL COMMITTEES

Permanent or temporary cross-functional *task forces* with decision-making and/or advisory powers.

They meet at regular intervals.

### BOARD OF STATUTORY AUDITORS

Ensures that the law and articles of association are complied with and that the principles of sound administration are followed.

**1 CHAIRMAN**
**2 STANDING AUDITORS**
**2 ALTERNATE AUDITORS**

The Company is run by a Board of Directors appointed by the Shareholders' Meeting. The Board currently has nine members, who will remain in office until the Shareholders' Meeting approving the 2023 financial statements and who may be re-elected. The Board of Directors has full powers in the ordinary and extraordinary administration of the Company. In accordance with the Articles of Association, it may delegate some or all of its powers to an executive committee, which is formed from its members or from individual Directors, appointing one or more Chief Executive Officers.

## Composition of the Board of Directors of Novamont S.p.A. as of 31 December 2021

# 9 members

of the Board of Directors

**1** executive — **8** non-executive

**1** independent — **8** non-independent

**2** aged 30-50 — **7** over 50

**1** woman — **8** men

**7** Italian nationals — **2** foreign nationals

# Non-financial risks

We have adopted the appropriate risk management model, which allows us, through their identification and classification, to produce a detailed map of the non-financial risks to which we could be exposed. The level of exposure of our companies to those potential risks is reviewed periodically, with the aim of minimising the possible repercussions on our business in the short and long term.

**To ensure full compliance with Legislative Decree 254/2016, in 2019 we produced an initial map of the non-financial risks in areas identified by the Decree. The risks stem from the Group's activities and from its products throughout the value chain. In the "Disclosure on Management Approach" section at the start of each chapter, we describe the approach to managing the material topics and, consequently, the potential associated risks.**

| POTENTIAL RISKS | POTENTIAL IMPACTS | MANAGEMENT APPROACH |
|---|---|---|
| **MATERIAL TOPIC** | | |
| **RESEARCH AND INNOVATION** | | |
| Lack of ability to innovate in order to develop the business | • Damage to the reputation of the Group and the brand<br>• Reduction in the Group's competitiveness and future ability to innovate | Pages 47-48 |
| Development of products that are not in line with market needs | | |
| Incorrect management of intellectual property and technological skills | | |
| **BUSINESS INTEGRITY AND STABILITY** | | |
| Identification of strategies unable to withstand legislative changes in the sector | • Limitations to carrying out the activities<br>• Damage to the reputation of the Group and the brand<br>• Reduction in the Group's competitiveness and future ability to innovate | Pages 65-68 |
| Non-compliance with standards (corruption, money laundering, competition, labour law) | | |
| Malfunctioning of production plants | | |
| Lack of availability and/or quality of raw materials for supplies | | |
| Failure to achieve the expected economic/ financial performance | | |
| **VALUE CHAIN AND PRODUCT SUSTAINABILITY** | | |
| Non-compliance with local, regional and national environmental standards | • Increase in the environmental impacts of the activities<br>• Limitations to carrying out the activities<br>• Damage to the reputation of the Group and the brand<br>• Compromised relations with local communities<br>• Increase in operating costs<br>• Sanctions | Pages 85-89 |
| Inefficient management of resources (e.g. energy, water) | | |
| Poor oversight of environmental and social issues in the supply chain | | |

| POTENTIAL RISKS | POTENTIAL IMPACTS | MANAGEMENT APPROACH |
|---|---|---|
| **MATERIAL TOPIC** | | |
| **COMPLIANCE AND QUALITY OF THE PRODUCTS AND CUSTOMER CARE** | | |
| Failure to intercept regulatory developments in the field of bioplastics, bioproducts and the chemicals sector | • Sanctions<br>• Missed business opportunities<br>• Increased environmental impacts of products during their life cycle<br>• Damage to the reputation of the Group and the brand<br>• Impacts on the health of the final consumer<br>• Compromised customer relations | Pages 125-126 |
| Non-conformity of products with biodegradability and compostability standards | | |
| Non-compliance with the regulations for materials in contact with foodstuffs | | |
| Non-compliance with the regulations of the chemical sector (e.g. REACH and CLP) for raw materials and finished products | | |
| Poor customer support at all stages of material management | | |
| **SOIL PROTECTION AND REVITALISATION** | | |
| Non-conformity of products with biodegradability in soil and compostability standards | • Negative impacts on the soil<br>• Damage to the reputation of the Group and the brand | Pages 153-154 |

| POTENTIAL RISKS | POTENTIAL IMPACTS | MANAGEMENT APPROACH |
|---|---|---|
| **MATERIAL TOPIC** | | |
| **RESPONSIBILITY TOWARDS COLLABORATORS** | | |
| Inability to attract talent<br>Loss of specialised personnel<br>Failure to adapt staff skills to business growth<br>Poor trade union relations<br>Failure to transpose or misinterpretation of legislation on workers' rights<br>Non-compliance with laws and/or regulations regarding the health and safety of workers in the different phases of product processing and concerning workplace conditions | • Lack of suitably trained personnel<br>• Dissatisfaction of employees with repercussions on productivity<br>• Accidents at work<br>• Damage to the reputation of the Group and the brand | Pages 167-170 |
| **COMMUNICATION AND PROMOTION OF SUSTAINABILITY** | | |
| Inadequacy of communication or conveying of incorrect messages in social or marketing campaigns<br>Failure to consider or satisfy stakeholders' expectations<br>Unfavourable perception of the sustainability of biodegradable and compostable products | • Damage to the reputation of the Group and the brand<br>• Loss of competitive advantage | Pages 189-190 |

| POTENTIAL RISKS | POTENTIAL IMPACTS | MANAGEMENT APPROACH |
|---|---|---|
| **MATERIAL TOPIC** | | |
| **EDUCATION AND TRAINING OF NEW GENERATIONS** | | |
| Identification of methods not sufficiently suitable or effective in raising awareness of environmental and social issues among new generations<br>Insufficient connection between theoretical training and the practical application of knowledge (connection between universities and companies, dialogue with the industry) | • Lack of civic responsibility<br>• Missed business and research opportunities<br>• Failure to develop professionals who are up to the challenges of sustainability and the circular bio-economy<br>• Reduction in the Group's competitiveness and future ability to innovate | Page 201 |
| **PARTNERSHIPS AND COLLABORATION FOR TERRITORIAL REGENERATION** | | |
| Participation in unlawful partnerships or associations that may restrict free and fair competition<br>Failure to notice or participate in national and international research calls<br>Inability to seize business opportunities arising from partnerships and collaborations<br>Absence of synergies, collaborations and specific skills along the value chain | • Damage to the reputation of the Group and the brand<br>• Loss of competitive advantage<br>• Missed business and research opportunities<br>• Decline in regional employment<br>• Fewer positive economic impacts for the region | Pages 219-220 |

# Our integrity

The values, principles and codes of conduct that have always informed our work have been consolidated over time and are expressed nowhere better than in our Code of Ethics.

This document, which is available in both Italian and English, presents the **system of values and commitments** that Novamont recognises and shares with its stakeholder, as well as the **set of rules of conduct** that govern the relationships between employees, customers, the public administration and suppliers, in the knowledge that ethics in corporate activities are a duty for all players involved in the Group. The document was adopted for the first time in 2004 and is constantly updated in the light of organisational and/or legislative developments.

Every employee is required to know the Code of Ethics, to contribute actively to its implementation and to report any shortfalls; thus, the Group undertakes to provide its employees (including new recruits) with **suitable training**. Employees and stakeholders are also kept informed with the publication of the OMM and the Code of Ethics on the company's website and noticeboard.

During 2021, training sessions were organised that illustrated and/or referenced the key concepts of Italian Legislative Decree 231/2001, the OMM and the Code of Ethics. The aim of the sessions was specifically to provide training/information on the principles of whistleblowing and the new Anti-Corruption Policy introduced in 2020. In addition, to comply with the legal obligations introduced by the European GDPR (*General Data Protection Regulation*), training sessions were held on privacy in May. Overall, 133 employees participated in the training projects.





## The principles defined in the Code of Ethics

- Impartiality
- Confidentiality
- Personal integrity
- Quality of products and services
- Honesty
- Transparency in shareholder relations
- Environmental protection
- Fair competition
- Equity of authority
- Development of human resources
- Segregation of duties to avoid conflicts of interest
- Community responsibility
- Diligence and accuracy in the performance of duties and contracts
- Abstention in the event of potential conflicts of interest
- Integrity and fairness in the management and any renegotiation of contracts
- Transparency and completeness of information

Novamont S.p.A. and its subsidiaries Mater-Biotech and Mater-Biopolymer have adopted their own Code of Ethics, while the subsidiaries Novamont France, Novamont GmbH, Novamont Iberia and Novamont North America act according to the principles of the Code of Ethics of Novamont S.p.A.

For the BioBag Group, BioBag International AS has produced a **Code of Conduct**, formulated to protect human rights and the freedom of each individual. The document, which applies to all BioBag Group subsidiaries, sets out the system of social norms and values (regarding child labour, discrimination, working conditions, health and safety, freedom of association and voluntary work) that must be respected by all employees and partners of the Group.

In addition, Novamont North America, BioBag International, BioBag Norway, Dagöplast, and BioBag Americas and BioBag Australia have adopted their own **employee handbook**, containing the objectives, values and standards of conduct that employees must follow, in line with the values and commitments expressed in the Code of Ethics and Code of Conduct. Lastly, BioBag Sweden, BioBag Finland, BioBag Zenzo and BioBag Poland operate in compliance with the regulations contained in the *Working Environment Act*, which governs relations between employers and employees in Norway.

At Novamont, we are mindful of the ethical aspects of our actions and galvanise our business to comply with applicable regulations. In addition, as a certified B Corp (Benefit Corporation), we seek to have a positive impact on the environment in which we operate and to cooperate with companies that share our vision.

Accordingly, in October we decided to share a formative moment with our business partners to illustrate the ethical and organisational principles that inspire us, as well as those regulations that we consider it particularly important for our stakeholders to comply with.

# Sanctions and legal action

In 2021, against the companies in the Group:

No events linked to **cases of corruption** were confirmed or contested.

No events linked to **cases of discrimination** were confirmed or contested.

No legal action was taken because of **anti-competitive or anti-trust conduct or monopolistic practices**.

No cases emerged of non-compliance with regulations and/or voluntary codes concerning the **information and labelling requirements of products and services**.

No cases emerged of non-compliance with regulations and/or voluntary codes concerning **marketing *communications***.

No cases emerged of non-compliance with regulations and/or voluntary codes concerning the **impacts of products and services on health and safety**.

No significant sanctions were imposed as a result of violations of **environmental** laws and/or regulations.

No significant sanctions were imposed as a result of violations of **social or economic laws** and/or regulations.

This Sustainability Report only mentions sanctions considered to be significant, i.e. amounts that exceed €50,000.

# Economic value generated and distributed

**The economic value generated and distributed (i.e. added value) reflects the wealth generated by our Group. In monetary terms, it represents the economic impact that Novamont's business has had and which is redistributed to the main stakeholder categories. It therefore provides a complete picture of the relationships between Novamont and the socioeconomic system it interacts with.**

The economic value generated and distributed to stakeholders is calculated on the basis of a reclassification of items in the profit and loss statement used in Novamont S.p.A.'s Consolidated Financial Statements as of 31 December 2021. In 2021, the economic value generated by our Group was €414 million, while the economic value distributed, equal to €368 million, was as follows:

- **Operating costs**: these mainly include costs incurred for purchasing raw materials, ancillary materials, consumables and goods and services;
- **Employee remuneration**: this includes all costs incurred in managing personnel (e.g. salaries and wages, social security contributions, severance pay, etc.);
- **Remuneration of lenders**: this includes interest and other financial charges;
- **Remuneration of the Public Administration (PA)**: this mainly includes income tax;
- **Remuneration of the community**: this includes the amount of donations, membership dues and sponsorships.

## Economic value generated and distributed by the Novamont Group (to 31 December)

| *[in thousands of €]* | 2021 | 2020 |
|---|---|---|
| **Economic value generated** | **413,981** | **286,763** |
| **Economic value distributed** | **368,158** | **260,842** |
| *Operating costs* | 318,154 | 196,371 |
| *Employee remuneration* | 43,080 | 34,430 |
| *Remuneration of lenders* | 4,428 | 3,755 |
| *Remuneration of the Public Administration* | 771 | 24,943 |
| *Remuneration of the community* | 1,725 | 1,343 |
| **Economic value withheld** | **45,823** | **25,921** |





## SACE AND A POOL OF LEADING BANKS SUPPORT NOVAMONT'S SUSTAINABLE GROWTH

In 2021, the Novamont Group secured a €100 million loan backed by SACE's 80% green guarantee and disbursed by Crédit Agricole Italia (also acting as agent bank), Banco BPM, Intesa Sanpaolo (IMI Corporate & Investment Banking Division) and UniCredit.

The injection of liquidity will be used to fund the Group's 2021-2025 business investment plan. The aim is to consolidate the Group's competitive position in Europe, North America and Asia by increasing its bioplastics production capacity. This will also help meet growing global demand.

The funding was also granted in view of the minimum threshold for the **Circular Flow Index** being exceeded, which measures the circularity of an organisation. The index is linked to the economic value generated by the Group, or "**regenerative revenue**", which represents the percentage of revenue linked to a company's circularity[2].

The law firm Dentons advised SACE, Crédit Agricole Italia (as agent of the finance parties and representative in relations with SACE) and the lending banks on the structuring of the loan and on the drafting and negotiation of the financial documentation.

"SACE's guarantee under the *Green New Deal* is a real acknowledgement of how committed Novamont has been over the years to developing an Italian bioplastics and *biochemicals* sector with regional integration, which led us to becoming a Certified B Corp. This funding will enable us to press ahead with our significant investment plan for the sector's regenerative development, measurable through parameters defined and linked to Novamont's entire output, in line with the strategies and policies of the ecological transition", explained CEO Catia Bastioli.

Because of the positive impact in terms of climate change mitigation, the actions funded will further the objectives of the *Green New Deal*, the scheme that promotes a circular, modern, sustainable and resilient Europe. In this context, SACE – a financial insurance company that supports national development – has a central role in implementing the *Green New Deal* in Italy. Under Italian Decree-Law 76/2020 enacted last July, the company can issue green guarantees on domestic projects able to facilitate the transition towards an economy with a lower environmental impact, integrate production cycles with low-emission technologies for the production of sustainable goods and services, and promote initiatives aimed at developing new, cleaner forms of transport.

2. More information on the KPI is available on page 122 of Chapter 3 "Value chain and product sustainability".

# Value chain and product sustainability

Chapter
3

The development of a responsible and sustainable production chain using raw materials of plant origin from sustainable agriculture, careful selection and management of suppliers (by promoting respect for human rights throughout the value chain and in relations with suppliers), appropriate management of energy and water resources and greenhouse gas emissions, while respecting the biodiversity of the territories the Group operates in. Formalising these commitments by conforming to certifications and standards, going beyond the regulatory requirements.

- Raw materials
- Renewable energy sources
- Compostability
- Waste recovery and recycling
- Responsible value chain

# Disclosure on Management Approach

## Management approach

In 2020, Novamont issued its **Sustainability Policy** which, on the topic of value chain and product sustainability, formalises the Group's commitment to:

- Ensuring that processes, products and workplaces do not endanger the health and safety of workers or the community, and minimising any pollution;
- Adopting a management approach based on the principle of Life Cycle Thinking (LCT). Pursuing actions to mitigate and improve the environmental and social profile of its activities and products, by: (i) choosing or developing processes and systems that make it possible to reduce the consumption of energy and materials, (ii) using renewable energy sources, (iii) carefully designing products from an eco-design perspective throughout the life cycle, and (iv) purchasing the most eco-friendly products and raw materials (green purchasing);
- Minimising greenhouse gas emissions, the use of water resources and their qualitative deterioration throughout the value chain;
- Helping to mitigate contamination of the soil and oceans;
- Helping to maximise efficiency in the management of organic waste in urban and metropolitan areas by encouraging biological recycling;
- Guaranteeing respect for human rights throughout the sector, including the supply chain.

Furthermore, in confirming its commitment to the management of quality, environmental impacts and health and safety in the workplace, in 2020 Novamont updated its **Policy for Quality, Environment and Health and Safety (QEHS)**. This states that the Company and its subsidiaries must undertake, among other things, to adhere to the principles of sustainable resource management, pollution prevention, environmental management, product safety and sustainability, if necessary by joining international voluntary programmes that champion those principles.

For the BioBag Group, BioBag International has issued its **Policy for Quality and the Environment**, which formalises its commitment to comply with the regulatory, legislative and other relevant requirements applicable to environmental matters. In 2021, the process began of integrating Novamont's quality, environment and health and safety requirements.

In pursuing the commitments stated, the Group's Italian companies decided to adopt an **Integrated Management System (IMS) for Quality, the Environment, Health and Safety**[1]. Regarding the material topic, the IMS provides for the control, monitoring and, if necessary, mitigation of environmental impacts. As part of its organisation system, the Group has therefore developed a set of procedures aimed at regulating how company activities are carried out and minimising the risk of committing the offences identified in the analysis of the risk assessment, including environmental offences. Procedures related to the material topic include:

- **Incident Management during freight transport**: this provides instructions for managing accidents during the transportation and/or delivery of finished products;
- **Raw Materials Validation**: this defines the raw materials validation process with the aim of reducing health and environment risks related to the conformity of Mater-Bi with the certification requirements;
- **Purchase Management**: this describes the methods, subjects and areas of responsibility related to purchases;
- **Acquisition, Monitoring and Control of Environmental Data**: this describes the method of acquisition, processing and use of environmental data from the Group's sites;
- **Supplier Qualification, Evaluation and Monitoring Procedure**: this defines the general criteria, responsibilities and operating methods adopted by the Group to manage and control the supplier qualification, evaluation and monitoring process.

To achieve increasingly high performance levels, in 2020 the Group also adopted the **B Impact Assessment (BIA)** framework as the main tool for managing sustainability, including environmental topics.

With regard to management of the **supply chain** – mainly composed of suppliers of raw materials, goods and services (consultancy and logistics services, supply of commercial goods and maintenance equipment, and provision of labour) and plant, machinery and industrial equipment – Novamont aims to develop lasting and trust-based relationships with suppliers who share the Group's values and who demonstrate the same commitment to acting responsibly and ethically in all aspects of the business. In particular, commercial relations are promoted exclusively with suppliers that can provide guarantees that they respect the fundamental human rights of their employees. As part of this commitment, Novamont requires its suppliers to comply fully with the Code of Ethics. In addition, by acquiring timely monitoring data on the supplier's performance, an **Evaluation Report** can be drawn up which allows Novamont, where significant discrepancies are recorded, to make decisions about the appropriate actions to be proposed to suppliers to improve their performance. For several key suppliers, an additional assessment is required to examine specific aspects of sustainability.

The Group is unaware of any situations where child labour or forced labour are used by companies that provide goods and services purchased by the Group. Moreover, all suppliers guarantee freedom of bargaining and association.

Spurred by its commitment to strengthening the approach in the management of sustainable purchases, in 2021 Novamont launched a **review of the Supplier Qualification, Evaluation and Monitoring Procedure**. The aim was to factor in criteria that assess not only aspects related to the quality and safety of supplies, but supplier behaviour, particularly with regard to environmental and ethical/social issues.

1. Further details on the IMS can be found on pages 129-130 in Chapter 4 "Compliance and quality of the products and customer care".

2. More information on the *framework* can be found on pages 34-35.

In 2021, the project intended to **evaluate and monitor the sustainability performance of the Group's raw material suppliers** continued on the EcoVadis platform. The initial results were presented to the Sustainability Committee and will be incorporated into the procurement process and the review of the Group's suppliers. Thanks to the positive results already achieved in the first year of the project (in terms of the supplier response rate and the scores achieved), the assessment of sustainability performance on the EcoVadis platform will continue in the following year. In addition to the suppliers already involved, it will include other strategic suppliers that were not involved in the first year of project testing.

The Group's **energy consumption** is mainly attributable to production processes and, to a lesser extent, to the lighting and air conditioning of buildings and the operation of pilot plants. Energy management – or the set of strategies, actions, procedures and instructions planned and implemented with the aim of saving energy in managing the business – is coordinated by the Energy Manager, a dedicated member of staff from Engineering.

The management of **greenhouse gas emissions**, whose end goal is achieving the complete decarbonisation of the business, is applied to all three categories of emissions from industrial activities: Scope 1, Scope 2 and Scope 3.

The main sources of **Scope 1** greenhouse gas emissions (or direct emissions) are those associated with the production of electricity and heat in the plants owned by the Group. Monitoring and reducing those emissions is a key objective. Novamont's target for the future is for its direct emissions from energy production to be as close to zero as possible. The solutions for achieving this goal include modernising and replacing plants with new high-efficiency plants that consume less energy and run on biofuel (where this can be supplied continuously in sufficient quantities and on acceptable technical and financial terms), based on best available techniques and actions to offset the residual emission allowances that cannot be reduced further (carbon offset).

**Scope 2 emissions** (indirect emissions) include emissions from the use of the electricity, heating and steam purchased. Since 2010, Novamont has purchased and used electricity from renewable sources, prioritising wind and solar power whose origin is traced and certified through Guarantees of Origin (GOs). The supply is formalised in the purchase agreement with the supplier of the energy utilities and covers all the Group's offices in Italy. The Dagöplast production site and other BioBag Group sites also run on renewable electricity, with total coverage of 98%. This drastically reduces the Group's indirect greenhouse gas emissions and, at the same time, supports the development of the market for sustainable renewable sources. For this reason, Scope 2 emissions are quantified and reported with the **location-based** and **market-based**[3]calculation methods.

Lastly, Scope 3 **emissions** (**indirect emissions**) include emission sources that are not under the direct control of the company, but whose emissions are indirectly due to the company's activity. These emissions make up the largest share and managing them is one of the key aspects of the Novamont model. More specifically, innovative and integrated agro-industrial supply chains are being developed. These are based on agricultural raw materials that make the most of the local area and are grown using regenerative agriculture protocols that can remove greenhouse gases by increasing Soil Organic Carbon (SOC). It also involves the development of new integrated processes capable of recovering waste from other supply chains (e.g. cellulose from sludge, sugars present in process waters, waste vegetable oils and biogenic $CO_2$). In future, switching to alternative feedstocks, making recovery processes more efficient and maximising the use of renewable sources will reduce the consumption of resources and thus the greenhouse gas emissions of our business model, as well as increasing the circularity of economic systems. To supplement this, where available and of similar quality to conventional products, Novamont purchases raw materials that have lower GHG emissions throughout their life cycle or that are carbon neutral. It is also stepping up advocacy with its suppliers on the importance of greenhouse gas management. In 2021, Novamont carried out a carbon footprint analysis of the entire Group (in accordance with ISO 14064-1). It followed this with a feasibility analysis of the possible decarbonisation scenarios that will feature in the company's strategic plan, in a way that is compatible with its economic sustainability.

When it comes to **water resources**, Novamont continually obtains and analyses consumption data from industrial plants and water networks. This enables it to identify any anomalies in consumption and to ensure compliance with the various existing regulations. For the Terni and Patrica plants and the Piana di Monte Verna research centre, water used in the production plants, laboratories and pilot plants is abstracted from the groundwater near the production areas. Water used for sanitation is taken directly from the water mains. At the Bottrighe plant, water is essentially used in cooling and is mainly abstracted from the river. Lastly, at the Dagöplast production site, water is used to cool the processing plants. At all production sites in Italy, periodic analyses are carried out to assess the quality of wastewater according to specific tabulated values (referred to in Legislative Decree No. 152/06, Annex 5, Table 3, discharge into surface water). These set out the statutory limits on discharging wastewater into the receiving body of water, which cannot be exceeded. The characterisation of wastewater is done through chemical analyses carried out by external laboratories and internal controls.

The Group chiefly produces **waste** in its production activities and in the management of its warehouses and offices. Non-hazardous waste accounts for the largest share of total waste. It primarily consists of packaging of the raw materials used in the production processes and sludge from the biodigester at the Bottrighe plant. Waste that is classified as hazardous is due to water containing solvents from the Patrica plant. Waste disposal is subject to the control and traceability requirements laid down by the relevant legislation.

Novamont recognises the importance of safeguarding the natural value and **biodiversity** of the areas surrounding the Group's plants. Therefore, to protect those sites, specific precautions are taken in accordance with local, national and international legislation. The Group's sites are not considered especially vulnerable and do not interact with protected natural areas. The only exception is Bottrighe, whose industrial facilities are located within the Po Regional Park, part of

3 - In the *location-based* approach, the Scope 2 emissions are calculated using the average emission factor associated with the national energy mix. In the *market-based* approach, however, the Scope 2 emissions are obtained by considering the emissions generated by the electricity production plants that supply Novamont. The origin of the electricity is disclosed in the contractual documents. The supply of energy from renewable sources is certified by Guarantees of Origin (GO).

the Natura 2000 network. For the Bottrighe site, Novamont carried out an integrated risk assessment for biodiversity in 2019 using the *Biodiversity Impact Risk* (BIR) methodology. By assessing the biodiversity status, the potential impacts generated by the company's activity and the degree of awareness of the value of biodiversity, this methodology has made it possible to identify areas for improvement for the most sensitive components directly controlled by the company (e.g. emissions to air and water, internal sensitivity to the issue, etc.).

Lastly, the Group adopts methodologies and practices to assess and **quantify the environmental loads and impacts, both direct and indirect**, associated with the activities of the organisation and the product life cycle – from the selection of raw materials to the final recycling – in a Life Cycle Thinking approach. These include the **LCA (Life Cycle Assessment)** methodology, an internationally standardised tool (ISO 14040 and ISO 14044) adopted by Novamont in 1998. This makes it possible to assess the flow sequence of environmental impacts and to mitigate them by improving the efficiency of the entire production process. Novamont also uses LCA methodology at the organisational level (Organizational Life Cycle Assessment).

Other actions, programmes and initiatives implemented by the Group are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Product Ecology and Environmental Communication
- Strategic Planning and Corporate Communications
- Quality, Environment and Safety
- Engineering (Energy Manager)
- Logistics and Purchasing
- Research and Development
- Group Operations General Management

These functions interface with the Group's subsidiaries, by actively collaborating with specific functions and the respective site management. Since 2020, they have operated with the coordination and support of the Sustainability Committee and internal working groups involved in the management of B Corp certification and pursuit of the common benefit.

## Complaint, consultation and discussion mechanisms

For aspects concerning the material topic, the Group provides the opportunity to request information and to make complaints through its website www.novamont.com or by emailing csr@novamont.com and info@novamont.com. Complaints may be made by contacting the Supervisory Board.

# Sustainable products

## Biodegradability, compostability and renewability

Mater-Bi is our family of renewable, biodegradable and compostable bioplastics. Knowing the difference between those terms, which are often mistakenly used as synonyms, is essential to fully understand the characteristics of our products and to ensure they are used correctly.



## WHAT IS COMPOSTABILITY?

This is the ability of biodegradable, organic materials (for example, plant cuttings, kitchen scraps, gardening waste, such as leaves and grass cuttings, some types of bioplastics, etc.) to be turned into compost in composting plants.

Composting is an **aerobic biological process** (that is, it takes place in the presence of oxygen) which is **controlled by humans** and which exploits the biodegradability of the initial organic materials, turning them into a final product that is rich in humic substances: compost. When composting is done individually, as a small-scale gardening activity, it is called "home composting". Widely used in agronomy and nursery gardening, compost is a product that is similar to topsoil: it is biologically stable, inert and odourless. It is an **excellent organic fertiliser**, since it is **rich in humic substances and microorganisms** that are useful to the soil. By adding organic matter, it improves the **soil structure and the bioavailability of nutrients** (phosphorus and nitrogen compounds).

## WHAT IS RENEWABILITY?

The term refers to renewable sources of energy or material, i.e. which can be regenerated in a relatively short period of time. *Bio-based products,* obtained from renewable plant sources, can be effectively incorporated into industrial cycles.

Maize crops, oleaginous crops and tree plantations for the production of cellulose are renewable sources, and the substances obtained from them (starches, oils, cellulose) are similarly renewable. The Amazon forest is not renewable because, with all its complexity and biodiversity, it took an extremely long time to form. If it were destroyed, it would not be possible to restore it to its original state. Given the raw materials used in its production, the renewable material content of Mater-Bi is, on average, around 40% for the materials used for film. In Italy, for its food bags application (e.g. fruit and vegetables), Novamont can provide solutions with a renewable content of more than 60% (so which are more than 50% renewable, which is the level currently required by the Italian law on carrier bags). In the materials used for moulded tableware, the content of renewable matter exceeds 60% in most cases, with the possibility of reaching 100% for some specific applications.

**Regardless of the percentage of renewable material, Mater-Bi is always 100% biodegradable and suitable for composting according to EN 13432.**

By imitating natural processes, **organic waste can also be decomposed by biodegradation**. All that is necessary is to identify the ideal environment in which the phenomenon can take place successfully, within short, "industrialisable" timescales that are compatible with the rate of production of the organic waste itself. Composting and anaerobic digestion plants create the ideal environments for biodegradation to take place, at consistent rates, and can be industrially run.

## ORGANIC WASTE CAN BE PROCESSED IN TWO WAYS:

### COMPOSTING

This process takes place at a high temperature, in the presence of oxygen, and produces compost.

### ANAEROBIC DIGESTION

The organic matter is broken down by microorganisms, in the absence of oxygen. It is turned into biogas, which can be used to produce energy, and into sludge, called digestate, which, when subjected to composting, produces compost.





# THE BIODEGRADABILITY OF MATER-BI IN DIFFERENT ENVIRONMENTS

### BIODEGRADATION BY COMPOSTING

Mater-Bi applications can be recovered by means of **biological recycling (composting and anaerobic digestion)** together with organic waste, in accordance with the standard EN 13432. Some Mater-Bi applications can occasionally be disposed of by means of **domestic composting**.

### BIODEGRADATION IN THE SOIL

Mater-Bi applications for agriculture are certified as **biodegradable in soil**: consequently, they do not have to be removed, because they biodegrade completely into the soil without any harmful effects. Mulching films made from Mater-Bi satisfy the European standard EN 17033.

The role of biodegradability has attracted considerable attention. It has been the subject of in-depth studies and research for those **professional applications destined to be introduced into the open environment** (for example, "socks", the netting used to farm mussels). There is also a lot of discussion about the accidental release of solid waste, which would otherwise be collected, separated out and sent for treatment. The **release of waste into the environment** implies an **ecological risk**. This must be assessed by considering the hazard posed by the waste – i.e. its potential to cause ecological damage – and by calculating the probability of the damage actually occurring. The longer a hazard factor remains in the environment, the greater the risk of damage. Therefore, by shortening the length of time that the waste remains in the environment, biodegradability reduces the ecological risk and is thus an intrinsic mitigating factor. Studies that we have carried out [4] in collaboration with research centres and universities have shown that the Mater-Bi grades examined exhibit an intrinsic biodegradability when exposed to the microorganisms present in environmental matrices (e.g. soil, marine sediment etc.) and behave in a way that is similar to cellulose materials.

4. Degli Innocenti, F.; Breton T. *Intrinsic Biodegradability of Plastics and Ecological Risk in the Case of Leakage.* ACS *Sustainable Chemistry & Engineering.* 2020, 8, 9239-9249.
Marco Barbale, Selene Chinaglia, Antonio Gazzilli, Alessandro Pischedda, Michele Pognani, Maurizio Tosin, Francesco Degli-Innocenti, *Hazard profiling of compostable shopping bags. Towards an ecological risk assessment of littering*, Polymer Degradation and Stability, Volume 188, 2021.

## Environmental and social benefits of our products

The renewability, biodegradability and compostability characteristics of our products bring with them a series of benefits that contribute to resolving specific environmental, social and economic problems.

### WASTE MANAGEMENT

The management and disposal of urban waste is one of the major environmental priorities of our times, and involves all social and territorial models. Storage in landfills, or disposal by incineration, are not sustainable solutions because of the emissions produced and the residues, which have high concentrations of pollutants. The best solution is still to avoid producing the waste; when this is not possible, the products should be designed from an *eco-design* perspective, enabling them to be reused or recycled once they reach the end of their useful life, thus contributing to more circular economic systems.

**Thanks to their compostability and biodegradability characteristics, Mater-Bi products are preferably sent for biological recycling**, since they are designed to be a solution to the disposal of applications that come into contact with organic matter. However, depending on the application, this method does not preclude **other forms of recovery, ranging from chemical and mechanical recycling to energy recovery**. Compostability offers an effective solution whenever organic waste is mixed with plastic waste – a situation that makes biological recycling of the organic waste and mechanical recycling of the plastic impossible. In these circumstances, the use of compostable materials like Mater-Bi facilitates the **biological recycling of this mixed waste**, where all the components are biodegradable and compostable. In addition, Mater-Bi carrier bags or fruit and vegetable bags can be reused: once they have been used initially, they can be repurposed to collect organic waste, instead of using a dedicated compostable bag. This virtuous practice is on the increase in Italy, as demonstrated by the industry analyses carried out by the Italian Consortium of Composters (CIC) in 2020. These showed that around 60% of the organic fraction **sent in compostable packaging** to biological recovery plants is contained in carrier bags, and 12% in fruit and vegetable bags. Thus, the Mater-Bi bag has proven to be an essential means of facilitating the separate collection of organic waste. In Europe, on average, 16% of the organic waste produced is recovered biologically.

The separate collection of organic waste is also crucial for **reducing greenhouse gas emissions**. Organic waste that is not recovered ends up in household waste, destined for landfill or incineration, generating methane and unrecoverable waste (ash), respectively

A significant boost to the spread of virtuous systems of the circular bioeconomy was provided by the creation, at the end of 2020, of **Biorepack**, the world's first national consortium for the biological recycling of packaging in biodegradable and compostable plastic, and the seventh consortium of **CONAI**, the Italian national packaging consortium. The consortium, made up of six of the leading bioplastics manufacturers and converting companies, including Novamont, will make it possible, with specific industrial treatments, to recover increasing amounts of packaging in biodegradable and compostable plastic and convert them into compost, thereby boosting Italy's recycling performance. Biorepack is the first European-wide system of responsibility extended to the manufacturer for managing the end of life of certified compostable packaging that conforms to the standard EN 13432. Biorepack, like other consortia, is required to balance its finances. To do this, it relies on Italy's environmental subsidy, which since 1 July 2021 has been €294 per tonne for compostable packaging.

## REDUCING DEPENDENCE ON FOSSIL FUELS

Oil is a limited resource, whose cost will predictably increase with the rise in global demand: the progressive replacement of products of fossil origin with *bio-based* products is a long-term need for our society. Mater-Bi is the result of a continuous effort to **apply new technologies and new industrial supply chains based on the circular use of renewable raw materials and energy**, decoupling economic growth from the consumption of finite resources.

## TACKLING SOIL DESERTIFICATION

As reported by the *Mission Soil Health and Food*, between 65% and 75% of European soil is not in good health, and 25% of European land is at a high, or very high, risk of desertification. Today, the costs linked to soil degradation in the EU amount to €50 billion per year. Caring for the soil is an indication of our ability to take care of ourselves and our development, and an indication of whether we have the foresight necessary to deal with the natural resources crisis. To counteract the increasing phenomenon of desertification, we need to start by promoting sustainable, regenerative agriculture that refocuses on the carbon cycle and, with innovative practices, enables us to restore one of the main elements of soil fertility: organic matter. The use of **high quality compost in agriculture** plays an essential role in **preserving the organic matter present in the soil, in halting biological deterioration and in reducing greenhouse gas emissions, thanks to the possibility of incorporating carbon into the soil (*carbon sink*)**..



## TACKLING MARINE POLLUTION

Marine pollution caused by plastic is made worse by the persistence of traditional plastics in natural environments, such as the soil and sea. This persistence means that, by the action of physical and chemical agents, the plastics are reduced to small particles, known as microplastics. In general, **biodegradable materials in a natural environment do not release microplastics**, as any particles released during the erosion phenomena are intrinsically and quickly biodegradable, and so do not persist in the environment. This characteristic must not be seen as an excuse for the uncontrolled release of waste into the environment, but as a mitigating factor of negative effects in the event of accidental dispersion.

The persistence of plastics in natural environments leads to the creation of microplastics, whose adverse effects on the ecosystem and food chain have only recently been studied, with worrying results.

# Our environmental certifications

**We are committed to growing the market for sustainable products, using environmental certifications, which contain transparent, detailed and verified information about the sustainability performance of our products. In this way, we help consumers make more informed choices.**

## eLABEL!

Mater-Bi was the first product to obtain eLabel!, the environmental trademark promoted by the *Kyoto Club*. eLabel! is a Type-1 environmental certification that **certifies the environmental and social performance of products with respect to objective and transparent parameters**: the renewable content of raw materials, their environmental and social sustainability, the greenhouse gas emissions and the recovery method.

## ISCC PLUS

ISCC PLUS is a scheme that **monitors and demonstrates the sustainability of products** by checking the **traceability requirements in the production chain**. For example, among the parameters considered, it verifies that any cultivation of biomass does not take place on land characterised by a high degree of biodiversity and a high carbon reserve, and that good farming practices and human rights are respected. In accordance with this voluntary certification scheme, we are able to demonstrate the sustainability of the Mater-Bi produced, starting with ISCC PLUS-certified maize starch.

## ECOLABEL

The EU Ecolabel is the European Union's label for ecological quality. It is awarded to products and services that, while guaranteeing high performance standards, have a **low environmental impact over their entire life cycle**. In particular, we obtained the EU Ecolabel for a hydraulic fluid in our line of Matrol-Bi biolubricants. For the label to be awarded to lubricants, specific criteria apply regarding the presence of prohibited or restricted substances, water toxicity, biodegradability and the potential for bioaccumulation, renewable ingredients, packaging and performance.

## MEZZI TECNICI AIAB

Mezzi Tecnici AIAB is the label developed by the AIAB (Italian Organic Agriculture Association) for the production of technical means allowed in organic farming. In addition to **complying with existing regulations on the technical means allowed in organic farming**, Mezzi Tecnici AIAB-certified products are **compatible with the environment** and meet strict **safety** requirements. In particular, the standard aims to guarantee the maximum content of renewable raw material, the use of non-GMO, renewable natural sources (i.e. the product must not contain traces of recombinant DNA, and the raw materials must be accompanied by appropriate non-GMO certificates), the complete biodegradability of the product in soil, and the absence of negative effects on the environment. At Novamont, we were the first to develop a grade of Mater-Bi to be used in the production of mulching films that are biodegradable in soil, in accordance with the guidelines.

# The sustainable value chain

## Characteristics of the supply chain

Responsible management of the supply chain is an essential component of our strategy. Thus, we undertake to guarantee the maximum quality of the products and services purchased, while respecting environmental and social criteria.

In 2021, the planning of purchases was particularly affected by the sudden and strong global economic recovery from the Covid-19 pandemic, which caused severe bottlenecks in the supply of all raw materials and held up deliveries.

Despite this, our Group has grown and was able to adapt quickly to the new scenario that emerged during the year (characterised by increasing logistical difficulties in sourcing raw materials from some geographical areas). It was also able to increase its purchase volumes of raw materials by 23% compared with 2020, focusing more resolutely on supplies from national and European producers.

For the Group's Italian sites, in 2021 the purchase turnover from suppliers operating locally – i.e. those with headquarters in Italy – accounted for 50% of total purchases.





The Group's supply chain, by type, in 2021

> 2,000 total suppliers

€394 m total annual expenditure

| 67% | 22% | 11% |
|---|---|---|
| RAW MATERIALS AND PACKAGING | GOODS AND SERVICES | INVESTMENTS |

>110 suppliers of raw materials originating from[5]:

| 89% | 7% | 4% |
|---|---|---|
| Europe | Asia | America |

5. Provenance is defined as the country in which the supplier's headquarters are located.

The topic of **sustainable purchasing** corresponds to the integration of Corporate Social Responsibility (CSR) principles in a company's procurement processes and decision-making. It also means promoting those principles throughout the supply chain, by adopting a collaborative approach with its suppliers to accelerate the process of continuous and widespread improvement throughout the value chain. With the aim of strengthening the oversight of our supply chain and establishing increasingly virtuous business relations with it, at the end of 2020 we launched an experimental project that saw the start of a structured process of evaluating and monitoring the CSR performance of our main suppliers, drawing on the support of EcoVadis, an independent international rating company that aims to improve the environmental and social practices of companies by leveraging the influence of global logistics chains.

The main tool of EcoVadis consists of a collaborative platform that allows companies to monitor the sustainability practices of their suppliers, manage their risks and request the implementation of corrective actions where necessary. The assessment methodology incorporates different international sustainability standards (Global Reporting Initiative, UN Global Compact, ISO 26000) and is based on 21 CSR criteria grouped into four categories: Ethics, Environment, Work Practices and Human Rights and Sustainable Purchases.

CSR scores vary on a scale from zero to 100, where below 25 corresponds to insufficient performance, or the absence of tangible policies or actions on sustainability (high risk), 25-44 represents an unstructured approach to sustainability (medium risk), over 45 indicates good management, and over 64 advanced performance, or a structured, proactive approach to sustainability and so an opportunity for business partners as well.

In 2021, as part of the experimental project, we involved a total of around 30 suppliers, of which 18 were relevant suppliers (selected on the basis of turnover volumes and continuity of supply), which corresponds to a representativeness of 70% in terms of the Group's total spend on raw materials. The results achieved in the first year of the trial were extremely positive: in particular, the average score achieved by the strategic suppliers who underwent the evaluation was 40% higher than the average of all the companies evaluated by EcoVadis. **In addition, of the four pillars on which the EcoVadis assessment is based, the section dedicated to the environment was the one on which suppliers performed best**.

The EcoVadis platform has proven to be an extremely simple and effective framework. It has allowed us not only to understand and manage CSR aspects throughout the entire value chain, but to develop structured sustainability programmes and to align the vision of our suppliers with the values and principles of our Group. The EcoVadis platform issues each supplier analysed with an evaluation report that highlights the strengths and areas for improvement in the management of sustainability issues, which the supplier can then use to follow up on actions to improve its performance. In view of these objectives, in 2021 we again decided to strengthen our approach to managing sustainable purchases. We initiated a review of our supplier qualification, evaluation and monitoring procedure, with the aim of including criteria that took into account not only aspects linked to the quality and safety of supplies, but environmental and ethical/social aspects relating to the suppliers themselves. With the outbreak of the pandemic and at a time of significant vulnerability for global supply chains, this issue has proven to be fundamental for strengthening the resilience of organisations and creating shared value.


At Novamont we have been using the EcoVadis platform since 2015, continually renewing the assessment of our sustainability practices at the request of our customers.

Following the update of the EcoVadis assessment in late 2021, we obtained a score of **83/100** (7 points higher than previously). The thematic area of "Sustainable Procurement" saw the most significant increase.

The new score confirms our Group's position in the top 1% of companies rated highest by EcoVadis in the sector "Manufacture of basic chemicals, fertilisers and nitrogen compounds, plastics and synthetic rubber in primary forms".

For this reason, again this year we received the prestigious **Platinum medal**, which is the highest rating that EcoVadis offers.

## Purchasing goods and raw materials

Almost all materials purchases are raw materials, an essential resource for our business. In 2021, the total weight of the materials used by the Group was 226,282 t, of which 130,408 t was renewable and 95,874 t non-renewable. The increase in material used compared with 2020 (181,770 t, of which 103,070 t renewable, and 78,700 t non-renewable) was due to growing production volumes and the increased renewability of our products.

With a view to sustainable procurement, also in 2021, we consolidated the purchasing of **carbon neutral-certified raw materials in accordance with the PAS 2060. This certifies that a quantity of greenhouse gas emissions has been offset equal to that emitted by the entire production cycle.** The purchase of this raw material offset the release into the atmosphere of about 15,978 t $CO_2$e ($CO_2$ equivalent), through international energy efficiency projects and projects for the use of third-party-verified renewable sources.

Materials used by the Group in 2021, by type

226,282 t

| 98.7% | 1.3% | 0.1% |
|---|---|---|
| RAW MATERIALS | PACKAGING MATERIALS | PROCESS MATERIALS |
| Starch, sugars, monomers, other | Wood, cardboard, plastic, other | Lubricants, other |

58% OF THE RAW MATERIALS USED BY THE GROUP COME FROM RENEWABLE SOURCES

# Sustainable production

## Energy consumption

In a bid to make a positive contribution to safeguarding and protecting the environment, we are constantly in search of more suitable solutions that ensure the responsible use of resources and better management of the Group's consumption.

The various solutions adopted at the Bottrighe plant (used to manufacture bio-BDO) include a **cogeneration plant** for the production of the electricity and thermal energy used in the manufacturing process. This has reached 90% overall efficiency, hence the energy efficiency certificates (white certificates) associated with it. The surplus electricity is sold to the national grid. The site also has a **biodigester**, a hi-tech plant that treats the excess biomass from the fermentation process, manufacturing by-products and sludge from the purification plant, and generates **biogas**. Since July 2020, this has been 100% converted into biomethane, as a result of the *upgrades* carried out on the biodigestion plant. The **biomethane** produced is fed directly into the gas network, contributing to the spread of renewable energy sources. The company passed the supervisory audit and confirmed its **advanced biofuel certification** for the biomethane produced, in accordance with the Italian Ministerial Decree of 14 November 2019. Regarding the bio-BDO purification unit, there is a **mechanical recompression system** for exploiting all the waste heat which would otherwise be lost.

The Mater-Biotech plant (Bottrighe) is the first industrial plant in the world able to produce **1,4 bio-butanediol** (1,4 bio-BDO) directly from sugars through a fermentation process. The 1,4 bio-BDO is used as a building block for the production of Novamont bioplastics: in particular, it is instrumental in producing the fourth generation of Mater-Bi, significantly increasing its content of renewable raw materials. 1,4 bio-BDO has less than half the carbon footprint of conventional BDO (produced from fossil fuels).

Lastly, a **combustor** used for the thermal oxidation of liquid and gaseous refluents from the polymerization process is in operation at the Terni plant, which would otherwise be sent to external disposal plants. From the combustion process, thermal energy used in the production process and for space heating is recovered.

At the Patrica plant, work continued on the construction of a **trigeneration plant**. This uses the methane combustion process for the production of electricity, steam and cooled water, and for heating diathermic oil. These are used in turn in the plant's production processes and in office heating. The construction work, which will be completed in 2022 with the commissioning of the plant, will lead to vastly optimised energy and environmental performance, reducing energy consumption by around 15%.

With a view to eliminating excessive and unnecessary consumption and achieving greater plant optimisation, the Piana di Monte Verna research centre has decided to replace its old refrigeration plant with a system comprising air-cooled refrigeration units fitted with inverters. In addition to complying with the new European regulations on fluorinated greenhouse gases (F-gas), this represents a high energy efficiency solution: the estimated energy saving compared with the previous situation is around 108 MWh (equivalent to 9% of the site's 2021 consumption).

Lastly, other energy efficiency measures carried out during the year included the replacement of traditional light fittings with LED light fittings at the Bottrighe and Novara sites.

During 2021, there was a 6% increase in energy consumption compared with 2020. This is in line with the increase in production volumes and is marginally due to the consumption associated with BioBag Group companies, particularly the Dagöplast production site.

The **energy intensity** indicator (which is obtained from the ratio between the total energy consumption of the Group's Italian sites[6] and the total amount of Mater-Bi and other biochemicals produced by the Group in the reference year) recorded a decrease of 24% relative to 2017.
This major achievement is the result of targeted energy efficiency measures, optimised production campaigns and increased production capacity at our sites compared with the past.

6. The indicator was calculated taking into account the Group's Italian sites, in order to allow a comparison with previous years.

For 2021, **99.8%** of the **electricity** purchased by the Group came from **Guarantee of Origin (GO)-certified renewable energy sources** (particularly wind, solar and hydropower). Furthermore, the ***Zero Emission Electricity*** certificate confirms that the purchase and cancellation of the GOs were done in a correct and traceable manner[7]. In this way, we avoided emissions of greenhouse gases and other pollutants.

In addition, all heating purchased by the Group (and associated with consumption at the Dagöplast site and sites in Sweden and Denmark for office heating) is produced from renewable sources, in particular wood chips and wood pellets.

7. This certification covers all the Group's Italian sites, while for the Dagöplast production site, it is the electricity supplier that directly issues the certificate.

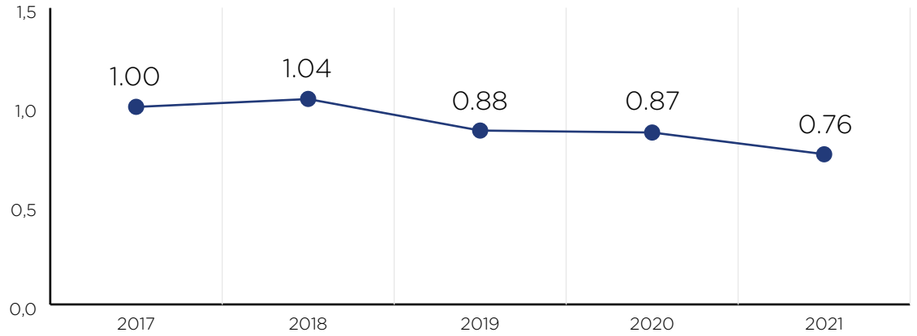
Energy consumption is mainly attributable to the use of methane (82% of total net energy consumption) to feed the Bottrighe cogeneration plant and generate heat (through boilers), mainly used in the Patrica and Terni production processes and to a lesser extent for space heating. A significant share of the Group's energy consumption (25%) is associated with electricity. This is predominantly used to power production plants, and to a lesser extent for the lighting and air conditioning of buildings. The Novara site purchases steam which is mainly used for space heating, and to a lesser extent for the operation of pilot plants.

## Total energy consumption within the Group, by geographical area [8]

| *[GJ]* | **2021** | 2020 | 2019 |
|---|---|---|---|
| **TOTAL** | **1,383,401** | **1,300,863** | **1,176,384** |
| EUROPE | 1,383,155 | 1,300,863 | 1,176,384 |
| ITALY | 1,361,299 | 1,300,863 | 1,176,384 |
| *Novara* | *1%* | *1%* | *1.2%* |
| *Terni* | *14.3%* | *14.2%* | *17.6%* |
| *PMV* | *0.5%* | *0.5%* | *0.8%* |
| *Bottrighe* | *46.3%* | *51.1%* | *50%* |
| *Patrica* | *37.9%* | *33.2%* | *30.5%* |
| AMERICA | 200 | - | - |
| OCEANIA | 47 | - | - |

8. For 2021, the trend in energy consumption is influenced by the extension of the reporting scope to BioBag Group companies and to Novamont's foreign sites.

## Standardised energy intensity of the Group's Italian sites[9]




## Total fuel consumption of the Group, by type

| *[GJ]* | **2021** | 2020 | 2019 |
|---|---|---|---|
| **NON-RENEWABLE** | | | |
| Methane | 1,135,526 | 1,053,347 | 881,503 |
| Liquid and gas refluents | 6,678 | 6,720 | 6,216 |
| **RENEWABLE** | | | |
| Biogas | - | 31,616 | 44,090 |

**Standards, assumptions and methods used for the calculation**
- methane consumption: direct measurements
- liquid and gas refluent consumption: based on process data
- biogas consumption: direct measurements

**Conversion factors**
- LHV Methane 2019-2021: 35.3 MJ/Sm$^3$
- LHV Biogas: 19.7 MJ/Sm$^3$

**Source**
- LHV methane 2019: tables of national standard parameters for monitoring and reporting greenhouse gases – ISPRA 2019
- LHV methane 2020: tables of national standard parameters for monitoring and reporting greenhouse gases – ISPRA 2020
- LHV methane 2021: tables of national standard parameters for monitoring and reporting greenhouse gases – ISPRA 2021

9. Data relating to energy intensity refer to the Novamont Italia Group for a correct comparison with previous years.

## Electrical energy, steam and heating of the Group

| *[GJ]* | **2021** | 2020 | 2019 |
|---|---|---|---|
| **ELECTRICITY** | | | |
| Purchased | 348,650 | 284,077 | 264,796 |
| *of which from renewable sources* | *99.8%* | *100%* | *100%* |
| Sold (surplus electricity from the Bottrighe cogenerator) | 44,108 | 60,142 | 29,912 |
| **HEATING** | | | |
| Purchased | 376 | - | - |
| *of which from renewable sources (wood chips and pellets)* | *100%* | - | - |
| Sold (biomethane) | 73,239 | 23,454 | - |
| **STEAM** | | | |
| Purchased | 9,518 | 8,699 | 9,692 |

**Standards, assumptions and methods used for the calculation**

- electricity consumption (Italian sites, Dagöplast and other BioBag sites): billed consumption
- electricity consumption (foreign sites and BioBag sites in Poland, Australia and Ireland): estimated from the specific consumption per employee at the Novara site (2019), considering only the electricity consumption for lighting, space heating and the data centre
- wood chip consumption: direct measurements
- steam consumption: direct measurements

**Conversion factors**

- Electricity: 3.6 MJ/kWh
- Steam 2021: 2.77 MJ/kg
- LHV biomethane: 33.5 MJ/Sm$^3$

**Source**

*Energy manager*



## NOVAMONT'S TERNI PLANT RECEIVES AWARD AS PART OF THE URBAN REGENERATION PROJECT

On 7 December, at the Confindustria Umbria headquarters in Terni, a press conference was held to launch the second phase of the Urban Re-Generation project. At the press conference, **Novamont's Terni plant** was named ***Best Performer* 2020** owing to the **excellent results achieved and the environmental sustainability projects developed** during the year. The award was presented to Plant Director Federico Cioci.

Sponsored by Confindustria Umbria and supported by the Fondazione Cassa di Risparmio di Terni e Narni, the project, launched in 2019, is designed to showcase the local area around Terni in terms of sustainable development, giving impetus to the creation of an industrial cluster for sustainability, the circular economy and urban regeneration.

## Emissions

Emissions of greenhouse gases into the atmosphere are primarily associated with the Group's energy consumption. They are divided into direct emissions (*Scope 1*) and indirect emissions (*Scope 2*). For *Scope 1* emissions, in 2021 the Group emitted a total of 64,360 t $CO_2e$, of which 63,837 t $Co2e_2e$ was from methane combustion and 523 t $CO_2e$ from combustion of liquid and gas refluents. This shows an upward trend compared with 2020 (59,446 t $CO_2e$), but is in line with the growth in production volumes. However, we would point out that the trends in *Scope 1* emissions are not strictly comparable over the years, since they are linked to the variable supply of raw materials which may be internal or external to the Group. Thus, these emissions can be included in the calculations of *Scope 1* and *Scope 3* emissions (upstream phase), respectively. **Biogenic emissions of $CO_2$** from biotechnological processes also amounted to 19,248 t $CO_2$ (17,018 t $CO_2$ in 2020).

**Standards, assumptions and methods used for the calculation**
• emissions from methane combustion: calculated by applying an emission factor. For the Bottrighe plant, these were supplied by Bureau Veritas
• emissions from the combustion of liquid and gas refluents: the chemical composition of the refluents and the related stoichiometric balance of the combustion were considered
• emissions from fermentation: stoichiometric balance

**Gases included for the calculation**
$CO_2$

Base year
2018

**Approach used to consolidate the data**
Operational control

**Emission factors**
• Methane (2021): 1.98 kg $CO_2/Sm^3$

**Source**
• Methane: tables of national standard parameters for monitoring and reporting greenhouse gases – ISPRA 2021

### Scope 2 emissions of the Group, by method

| *[t $CO_2e$]* | 2021 | |
|---|---|---|
| | *Location-based* | *Market-based* |
| **TOTAL** | **33,274** | **1,044** |
| Electricity | 32,295 | 69 |
| Heating | 3 | - |
| Steam | 975 | 975 |

**Standards, assumptions and methods used for the calculation**
• emissions from electricity, steam and heating: calculated by applying an emission factor
• *market-based* emissions from heating are zero, as the fuel is 100% plant biomass

**Gases included for the calculation**
$CO_2$, $CH_4$, $N_2O$, HFCs, PFCs, $SF_6$, $NF_3$

**Base year**
2018
**Approach used to consolidate the data**
**Operational control**

**Emission factors**
• *Location-based* electricity (2021): 0.297 kg $CO_2$ e/kWh (Italian sites)
• *Location-based* and *market-based* electricity (for non-renewables) foreign sites and BioBag sites: national electricity mix emission factor
• Steam (2021): 0.284 kg $CO_2e/kg$
• Heating (2021): 0.01 kg $CO_2e/kg$
Source
• Electricity: 2020 ISPRA Report 317/2020 "Atmospheric greenhouse gas emission factors in the national electricity sector and in the main European countries"
• Steam, heating and electricity (not Italy): Ecoinvent 3.7.1 (2021)
• GWP factors: *IPCC Fifth Assessment Report: Climate Change* (2013) (100 years).

Other significant emissions monitored for the Group's Italian offices are NOx from the combustion of methane used in the Bottrighe cogeneration plant and in boilers for steam production. The increase recorded compared with 2020 is in line with the increase in production volumes.

### NOx emissions of the Group, by geographical area

| | 2021 | 2020 | 2019 |
|---|---|---|---|
| **TOTAL** | **19,811 kg** | **18,726 kg** | **12,435 kg** |
| Novara | 0% | 0% | 0% |
| Terni | 6% | 10% | 10% |
| PMV | 0% | 1% | 0% |
| Bottrighe | 50% | 48% | 47% |
| Patrica | 44% | 41% | 43% |

Thanks to the purchase of 100% electricity from renewable wind sources, the energy self-produced by the cogeneration plant and the production of biomethane, we achieved a total of

## 55,619 TONNES OF AVOIDED $CO_2e$ IN 2021[10]

All these actions enable us to support, in concrete terms:

The reduction in emissions of greenhouse gases and other pollutants

The improvement in the environmental performance of all our products

The development of the market in renewable sources

In 2021, we launched a programme to offset Scope 1 (or direct) emissions associated with the combustion of natural gas used in Novamont's energy production plants and the combustion of Terni's process waste that cannot be reduced at the moment (residual emissions), through the purchase of certified carbon credits that support international projects to reduce $CO_2$ emissions.

In 2021, the purchase of certified carbon credits amounted to 60,000 t $CO2_2e$ (carried out to offset the Group's 2020 emissions), making it possible to support the "*Chongqing Chengkou County Bashan Hydropower Station Project*". Certified with the VCS standard, the project involves the construction of a hydroelectric plant at the main course of the Ren River near the city of Bashan, in the municipality of Chongqing, China.

The main aim of the project is to generate energy from clean renewable sources in Chongqing and contribute to the sustainable power generation of the Central China Grid. The hydropower station will have a total installed capacity of 140 MW with two sets of individual 70 MW turbine/generator units. The total reservoir area at full capacity is 5,720,000 $m^2$, resulting in a power density of 24.5 W/$m^2$.

10. This figure was calculated with respect to a theoretical scenario in which, in 2021, all the electricity was purchased from the national grid (Italy mix), the Bottrighe site did not have a cogeneration plant, and recovery of the biogas did not take place. The figure is divided thus: emissions avoided by using renewable electrical energy (wind power): 32,226 t $CO_2e$; emissions avoided by the cogeneration plant and the sale of electricity and biomethane: 23,393 t $CO_2$ e.





## Water resources

Water resources are a precious commodity that must be managed intelligently. For this reason, we are working to minimise our water consumption and encourage the reuse of this resource. At our production plants in Terni and Patrica, for example, a system is in operation that recovers purge water from the cooling towers, which is stored and then reused in the plants. The Group's sites are not considered especially vulnerable and do not interact with protected natural areas. The only exception is Bottrighe, whose industrial facilities are located within the Po Regional Park, part of the Natura 2000 network. The plant is primarily responsible for the Group's water abstraction and wastewater; however, about 97% of the amount abstracted is used as cooling water. The water is abstracted from the water table and from the Po River: in the latter case, the water is abstracted and returned to the same body of water, so as not to cause any impact in terms of scarcity of the water resource. During 2021, the Group's water consumption per kg of product remained constant. The increase in total volume of 18% compared with the previous year is therefore linked to the growth in production volumes. The total volume of water consumed was 14,515 Ml. Actions and investments are under way to substantially reduce this parameter at the Bottrighe site.

**The Group's abstracted water and wastewater, by source and destination**

| *[Megalitres – Ml]* | 2021 | 2020 | 2019 |
|---|---|---|---|
| **TOTAL ABSTRACTED WATER** | **14,515** | **12,274** | **10,726** |
| Surface water – Po River | 11,083 | 9,285 | 7,653 |
| Groundwater – Well | 3,399 | 2,959 | 3,049 |
| Water from third parties – Water mains | 38 | 30 | 24 |
| **TOTAL WATER DISCHARGES** | **14,713** | **12,330** | **10,721** |
| Surface water | 14,697 | 12,314 | 10,711 |
| Groundwater | 15 | 16 | 10 |

**Standards, assumptions and methods used for the calculation**

- Water consumption and abstraction solely concern the Group's Italian sites and the Dagŏplast plant, given their significance in terms of volumes
- The data on water abstraction are taken from billed consumption or from direct meter readings
- The data on water discharge volumes are taken from direct measurements and estimates
- For the identification of water stress areas, the mapping of the Baseline water stress provided by the *Water Risk Atlas Aqueduct* was considered. This measures the ratio between the total annual water abstracted and the total renewable annual supply available, taking account of the use upstream. On the basis of this indicator, all of the Group's sites lie within areas of water stress.
- All of the wastewater is freshwater, since the suspended matter content is less than 1,000 mg/l.

**Source**

*WRI Aqueduct 2014*

## Waste

Our policy aims to reduce and correctly manage waste; for this reason we set up initiatives that encourage, where possible, its recovery and a suitable disposal method for hazardous substances. In accordance with Italian and European legislation on waste, which seeks to prevent its production and to consider dumping in landfills as a "last resort", we help maximise the amount of waste sent for recycling, achieving a percentage of 93% in 2021. Furthermore, we try to encourage the purchase of raw materials that are transported inside tankers, thereby avoiding the use of packaging. Where possible, the same policy is also implemented to transport Mater-Bi. The overall quantity of waste produced rose by 22% compared with 2020. This increase was due to higher production volumes.

**Waste produced by the Group, by type and method of disposal**

| *[t]* | 2021 | | | 2020 | | | 2019 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Hazardous | Non-hazardous | TOTAL | Hazardous | Non-hazardous | TOTAL | Hazardous | Non-hazardous | TOTAL |
| TOTAL | 2,073 | 14,614 | 16,687 | 2,410 | 11,298 | 13,708 | 1,980 | 8,798 | 10,778 |
| R | 1,887 | 13,641 | 15,527 | 2,171 | 7,988 | 10,159 | 1,863 | 8,186 | 10,049 |
| D | 186 | 975 | 1,161 | 239 | 3,310 | 3,549 | 117 | 612 | 729 |

**Standards, assumptions and methods used for the calculation**
- In calculating the waste, only the Group's Italian sites and the Dagösplast plant were considered. With reference to the Group's other sites, which mostly consist of offices, the waste produced is not significant.
- The data was collected from waste disposal service providers
- Category D includes the types of disposal: D8, D9, D13, D14, D15
- Category R includes the types of recovery: R3, R5, R12, R13, R14
- For specific details of each type, see Annexes C and D in Part IV of Italian Legislative Decree No. 152/06

**Source**
Annexes C and D in Part IV of Legislative Decree No. 152/06, as amended

At Novamont, we are constantly engaged in the search for innovative industrial processes that are able to recover and transform the waste from our production, with a view to a circular economy. At our Patrica plant, this waste recovery approach has enabled us to create a process wastewater separation and purification system for the recovery of **tetrahydrofuran (THF)**, a chemical intermediate generated during the polymerisation reaction. Once distilled, THF is used in the chemical and pharmaceutical industries.





## REGENERATIVE TURNOVER

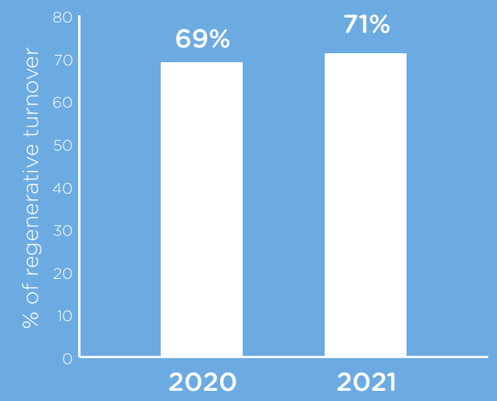
During 2021, we developed a metric at Novamont that would allow us to measure our contribution to the circular bioeconomy. In particular, our circular (or regenerative) material flows were linked to the economic value generated by the Group thanks to the implementation of a circularity indicator called "**regenerative turnover**". Regenerative turnover is defined as the product of the **Circular Flow Index (CFI)** multiplied by turnover[11]:

**Regenerative turnover = CFI * Turnover**

The Circular Flow Index quantifies the organisation's input and output regenerative material and energy flows. Input circular flows are represented, for example, by renewable raw materials (of plant origin) or recycled raw materials and energy from renewable sources or recovered from process waste; examples of output circular flows are the waste sent for recycling, recovery or regeneration, recovered by-products, and final products with compostability and certified biodegradability, i.e. that have at least one practical recovery option.

By contrast, linear flows (understood as non-regenerative flows) are composed of energy from fossil fuels, non-renewable raw materials and waste sent to landfills.

**Regenerative turnover represents, in essence, the percentage of turnover linked to the circularity of a company. The higher the regenerative turnover, the more able the company is to earn revenue from its products and circular activities – for example, from raw materials and renewable energy, from certified biodegradable and compostable products, and from recovered waste.**




In 2021, regenerative turnover (calculated for the Group's Italian sites only) stood at 71%, two percentage points higher than in 2020 (with a regenerative turnover of 69%). This demonstrates the growing commitment to maximising the circularity of our systems.

One of the targets we have set ourselves is for at least 50% of turnover to be regenerative.

This metric was selected from among the KPIs that allow us to describe our Group's performance within the framework of the common benefit commitments signed in the corporate statute (Benefit Corporation).

11. The Circular Flow Index and turnover are calculated for the reporting year

# Compliance and quality of the products and customer care

Chapter
4

Compliance with national and international laws, standards and regulations that govern the use of renewable, biodegradable and compostable products and that can influence the industry in which the Group operates.

Guarantee the satisfaction of the Group's customers by creating products that meet the highest quality and performance standards for the characteristic parameters and by offering active support to the customers themselves.

EN 13432

REACH

Legislative overview

Product safety

Customer satisfaction

# Disclosure on Management Approach

## Management approach

In 2020, Novamont issued its **Sustainability Policy** which, in relation to the subject of product conformity and quality, formalises the Group's commitment to ensuring that processes, products and workplaces do not endanger the health and safety of employees or the community, and to minimising any form of pollution.

The Group also updated its **Policy for Quality, the Environment and Safety (QEHS)** in 2020. Among the various commitments, the QEHS Policy establishes the importance of:

- Complying with the laws and regulations that apply to the Group's activities and products and, where applicable, food safety standards, as well as the customer's requirements; in the absence of a law or suitable standard, Novamont voluntarily adopts and applies standards and methods that reflect its commitment to meeting the requirements of its QEHS Policy and to putting into practice the best available techniques;
- Developing, implementing, measuring, monitoring, revising and continuously improving its processes, to ensure conformity to the standards ISO 9001, ISO 14001 and ISO 45001, and to Good Manufacturing Practices (GMP);
- Ensuring that workers, service providers and contract employees have the appropriate resources, information and training they need to carry out their work in a competent and safe manner, in such a way that achieving the system goals in terms of conformity of the products and services is guaranteed;
- Regularly examining the effectiveness of the QEHS integrated system by means of verification and auditing processes.

In pursuing the commitments stated within the QEHS Policy, Novamont decided to adopt an **Integrated Management System (IMS) for Quality, the Environment, Health and Safety**. Regarding the material topic, the IMS provides for the control, monitoring and, if necessary, mitigation of impacts on the environment and on the health and safety of workers, customers and consumers. Monitoring begins with a preventive analysis, identifying the hazards, assessing the risks and subsequently defining preventive and protective measures.

For the BioBag Group, BioBag International has issued a Quality and Environment Policy whose commitments are consistent with Novamont's policies. Harmonisation with Novamont's applicable quality, environment, health and safety requirements is under way.

As part of its organisation system, the Group has developed a set of procedures aimed at regulating how company activities are carried out and minimising the risk of non-compliance identified in the analysis of the risk assessment. Procedures related to the material topic include:

- **Raw Materials Validation Procedure**: this defines the validation process for a new raw material, taking into account its impact on the health of operators and the environment, as well as on the safety, conformity and quality of the finished product. The procedure refers to the assessments stipulated both by the regulations relating to chemical products (REACH (Regulation (EC) No 1907/2006) and CLP (Regulation (EC) No 1272/2008)) and by those relating to food contact materials, and to the assessments required under any other industry regulation or applicable standard.
- The **Hazard Classification Request Procedure and drafting of the safety data sheet for outgoing chemicals**: this requires verification of the hazard classification of outgoing products from the Novamont Group and the subsequent drafting of the associated hazard communication documents (information sheet, SDS, eSDS, label).

In compliance with these principles, the design of each new product always includes:

1. An assessment of the new raw materials, in terms of hazard classification and risk management, and in terms of the potential effects on their biodegradation (where this characteristic is applicable) and on the environment in general;

2. Verification of compliance with the regulations on materials intended to come into contact with food or other industry regulations, in accordance with the intended final use;

3. An assessment of the products made with new raw materials, on the basis of the regulations concerning chemicals and the required performance characteristics: biodegradation and disintegration by composting, suitability for contact with food, etc.;

4. The performance of conversion tests with customers, in order to optimise the operating conditions in the field to obtain the finished products.

The aforementioned design and development phases, for example in the development of a new grade of Mater-Bi, trigger a series of activities aimed at providing new products with the documentation necessary for them to be sold, including the drafting of the **safety data sheet or information sheet**, the **technical data sheet**, and the preparation of a **monitoring plan** designed to monitor the reproducibility of the characteristics of the product itself. For some products, the sharing of **information on sustainability** is also envisaged in accordance with international standards and *best practice*, including UNI EN 16848:2017 Bio-based products – Template for B2B reporting and communication of characteristics with a specific data sheet, and UNI EN 16935:2017 Bio-based products – Requirements for Business-to-Consumer communication and claims.

The activities of assessing and checking compliance with **Regulation (EU) No 10/2011** on **plastic materials and articles intended to come into contact with food** entail the following steps:

1. Conducting preliminary tests for fact-finding purposes on prototypes that represent the finished products, following legal protocols and industry standards (e.g. series UNI EN 1186:2003 Test methods for overall migration at high temperatures);

2. Drafting and sending the declaration of compliance for supplies intended to come into contact with food;

3. Preparing a monitoring plan (for parameters relevant for the purposes of suitability for contact with food) on fully operational industrial production lines;

4. **Providing specific support** to customers in terms of training on the topic of contact with food, assisting with the drawing up of testing plans and examining the results of tests conducted by customers.

Novamont not only certifies its own products, but also **actively assists its customers** in obtaining the certification of finished products. To that end, it provides training on the subject together with test reports (disintegration tests) obtained from its own internal laboratories during the product development phase, and occasionally reports of tests carried out at third-party organisations that facilitate customer certification.

The quality of Novamont's products and services is assessed annually using a **customer satisfaction survey**. The results of the analysis are used to identify improvements aimed at ensuring that customers are 100% satisfied. With regard to complaints in particular, Novamont has a specific **Customer Complaint and Report Management Procedure**, which describes how the organisation implements the process of managing complaints from external customers. The **Non-Compliance and Recommendations Management Procedure** defines the activities, responsibilities and key features that the non-compliance and recommendations management system must have.

In 2021, Novamont also updated its **Product Recall Plan**, the purpose of which is to protect public health by removing products that have been deemed unsafe from the market.

Lastly, the Group periodically monitors the **guidelines and policies, laws and standards, projects, initiatives and proposals** from international (European Commission), national (Ministry of the Environment, Ministry of Health, Ministry of Economic Development, Ministry of Agriculture) and regional authorities. Other actions, programmes and initiatives implemented by the Group are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Product Ecology and Environmental Communication
- Quality, Environment and Safety
- Institutional Relations and Associations
- Commercial
- Group Operations General Management
- Logistics and Purchasing
- Intellectual Property and Legal Affairs
- Group Finance and Control Administration Department

These functions interface with the Group's subsidiaries, by actively collaborating with specific functions and the respective site management. In addition, Novamont employs a qualified professional (***Business Operator – Food Contact Expert***) who ensures that the rules applicable to Food Contact Materials (FCMs) are known and correctly applied.

## Complaint, consultation and discussion mechanisms

The Novamont Group provides the opportunity to request information through its website www.novamont.com or by emailing info@novamont.com. Complaints may also be made to Novamont's Customer Service, who will forward them to Group companies and to the function responsible.

# Corporate management systems

We are committed to managing all our processes diligently and responsibly. To that end, the Group's Italian companies have an Integrated Management System (IMS) for Quality, the Environment, Health and Safety.

The IMS, which applies to all employee categories, encompasses the set of procedures, processes and resources necessary to develop, implement, monitor and review goals and targets to mitigate possible risk factors linked to quality, the environment and safety, with a view to continuous improvement. To promote this commitment, the Group's Italian sites are for certified for the standards ISO 9001:2015, ISO 14001:2015 and ISO 45001, which define the requirements for implementing a management system (for quality, the environment and the health and safety of workers, respectively) within an organisation.

The audit activities to maintain the ISO 9001, ISO 14001 and ISO 45001 certification continued in 2021. They took place both remotely and in person, thereby ensuring operational continuity during the pandemic.






For BioBag Group companies, BioBag International, BioBag Norge, Dagöplast and BBI Sverige are certified for ISO 9001:2015 and ISO 14001:2015. The other companies in the Norwegian Group are working to obtain certification or to align themselves with the procedures established for BioBag International and certified for ISO 9001:2015 and ISO 14001:2015.

# The regulation context

The regulatory environment significantly influences the market in which Novamont operates. Therefore, we closely monitor changes in the national and international legislative framework for the sector, which regulates the use of renewable, biodegradable and compostable products.

For years, the European Union has put environmental and social sustainability at the top of its political agenda in order to tackle the challenges posed by climate change. This has led to the development and implementation of numerous plans and strategies aimed at countering the impacts of the climate crisis and facilitating the transition towards a fairer, more sustainable society. Among the legislative initiatives recently issued by the Commission, the most relevant for Novamont are:

1

**Regulation (EU) 2020/852** on the establishment of a framework to facilitate sustainable investment;

2

**Directive (EU) 2019/904** of the European Parliament and of the Council on the reduction of the impact of certain plastic products on the environment, also known as the SUP (*Single Use Plastics*) Directive;

3

**Communication Notice** (2021/C 216/01), which provides guidance regarding the interpretation and implementation of the SUP Directive, through clarification of the main definitions contained in the Directive and examples of products to be considered within or outside its scope;

4

**Communication 2020/98 from the European Commission** on the action plan for the circular economy.

**Regulation (EU) 2020/852** (also known as the **Taxonomy** Regulation) has a fundamental role in achieving the objectives of the *Green Deal*, since it establishes the criteria for determining whether an economic activity qualifies as environmentally sustainable, in order to ascertain the level of environmental sustainability of an investment. The *framework* introduced by the Taxonomy Regulation should give more coherence and substance to the *Green Deal* and reduce the risk of *greenwashing*. In support of the Taxonomy Regulation, two other important regulations entered into force in 2021:

- **Commission Delegated Regulation (EU) 2021/2139**. This establishes the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation, and for determining whether that economic activity causes significant harm to any of the other environmental objectives;

- **Commission Delegated Regulation (EU) 2021/2178**. This specifies the content and format of information to be disclosed by undertakings that prepare a consolidated non-financial statement, even voluntarily, and that must disclose their environmentally sustainable economic activities, and specifies the methodology to comply with that disclosure obligation.

At Novamont we are actively monitoring the development of the Delegated Acts relating to the Taxonomy Regulation, and have already embarked on several alignment initiatives[1], such as:

- the methods of processing the information required by the Regulation;

- demonstrating compliance with the criteria defined for each objective (including in view of the publication of the criteria for the remaining four objectives);

- all the actions necessary to increase the proportion of activities aligned with the Taxonomy Regulation.

1. For more information, see pages 39-43.

The SUP Directive, another legislative initiative that has had a significant impact on our company, applies the precautionary principle to biodegradable plastics. It postponed the evaluation for the development of criteria and standards of biodegradability in the marine environment applicable to single-use plastic products to a forthcoming review of the Directive, scheduled for 2027. The transposition of the SUP Directive into Italian law, with **Legislative Decree No. 196 of 8 November 2021**, provides for the exclusion of compostable plastics from the restrictions. Compostable plastics that are EN 13432 certified, with a defined content of bio-based materials, can be sold if they meet specific conditions.

In Italy, products made from biodegradable and compostable material, certified according to the European standards UNI EN 13432 or UNI EN 14995, with a percentage of renewable raw material of at least 40% (or 60% from 1 January 2024), may be placed on the market in the following cases:

1. where it is not possible to use reusable alternatives to single-use plastic products intended to come into contact with food[2];
2. where the use is envisaged in controlled circuits that ordinarily transfer separated waste to the public waste collection service, such as canteens, healthcare facilities and care homes;
3. where such alternatives, considering the specific timeframe and location, do not offer sufficient guarantees in terms of hygiene and safety;
4. depending on the particular type of food or drink;
5. in circumstances where a large number of people are present;
6. where the environmental impact of the reusable product is worse than single-use biodegradable and compostable alternatives, on the basis of a life-cycle analysis by the manufacturer.

2. Listed in Part B of the Annex to the Directive.

In 2021, other important regulations came into force that encourage the achievement of the climate neutrality targets set by the *Green Deal*, in particular:

- **Regulation (EU) 2021/1119 of the European Parliament and of the Council**. The regulation, which entered into force in July 2021, establishes a framework for the irreversible and gradual reduction of anthropogenic greenhouse gas emissions and reaffirms the binding objective of climate neutrality in the EU by 2050, with a view to limiting the temperature rise under the Paris Agreement.

- The **Common Agricultural Policy** (CAP), a partnership between Europe and its farmers, the reform of which was formally adopted on 2 December 2021;

- **Communication (2021) 800 on sustainable carbon cycles**, directly related to carbon sequestration on agricultural land.

- **Directive (EU) 2018/2001** (RED II) on the promotion of the use of energy from renewable sources and its proposed review (July 2021), implemented in Italy with **Legislative Decree No. 199 of 8 November 2021**. The decree defines the instruments, mechanisms and incentives and the institutional, financial and legal framework necessary to achieve the goals of increasing the share of energy from renewable sources by 2030 and complete decarbonisation by 2050;

- The proposal for a **new Waste Shipment Regulation** (November 2021), which implements the obligations of the new Annex to the Basel Convention and supports local waste treatment (as opposed to shipment to other countries).

In addition, the pandemic and the ensuing economic crisis prompted the EU to formulate a strong and coordinated response to restart growth, investment and reforms in all Member States. This resulted in the ***Next Generation*** **EU (NGEU)** programme, launched in July 2020. The main component of the NGEU programme is the ***Recovery and Resilience Facility*****(RRF)**. This will run for six years, from 2021 to 2026, and has a total budget of €672.5 billion.

For Italy, the NGEU represents an unmissable development opportunity, and in 2021 the **National Recovery and Resilience Plan (NRRP)** was finalised, which is the reform and investment programme required under the NGEU. The plan is based on three strategic priorities, mirroring those adopted by the EU: **Digitalisation and innovation, ecological transition and social inclusion**. This measure is intended to repair the economic and social damage caused by the pandemic, help resolve the structural weaknesses of the Italian economy, and guide the country through the process of ecological and environmental transition. The NRRP is divided into 16 Components, grouped into six Missions, of which four are significant for Novamont:

**Digitalisation, Innovation, Competitiveness and Culture**: This allocates a total of more than €49 billion with the aim of promoting the country's digital transformation, supporting innovation in the production system and investing in two key sectors for Italy, tourism and culture.

**Green Revolution and Ecological Transition**: this allocates a total of €68.6 billion with the main objectives of improving the sustainability and resilience of the economy and ensuring a fair and inclusive environmental transition.

**Education and Research**: this allocates a total of €31.9 billion with the aim of strengthening the education system, digital and technical/scientific skills, research and technology transfer.

**Inclusion and Cohesion**: this has a total budget of €22.6 billion to boost labour market participation, including through training, to strengthen active labour market policies and to foster social inclusion.





# Product conformity

At Novamont, we pay the utmost attention to the conformity of our products during each design phase. For us, "conformity" means not only meeting the requirements of applicable laws and the performance criteria of materials, but ensuring the maximum protection of the environment and consumers.

## Conformity with compostability requirements

Mater-Bi is our family of biodegradable and compostable bioplastics[3], two essential properties that are tested in our laboratories using standardised methods. Biodegradability is determined by exposing the material to the enzymatic activity of microbial populations and measuring its conversion into carbon dioxide and water (mineralisation), compared with the conversion obtained in parallel with natural polymers that are definitely biodegradable (such as cellulose). However, to demonstrate the compostability of the material, measuring the mineralisation is not sufficient; it is also necessary to demonstrate the absence of ecotoxic effects on plants, macroorganisms and microorganisms in the soil, as well as the ability of a product made from the material to disintegrate (break up physically) under composting conditions. This allows us to determine the geometry of products compatible with the composting processes, and to guarantee the environmental safety of the compost obtained.

3. Additional information is provided on pages 91-94 in Chapter 3 "Value chain and product sustainability".


In Europe, the reference standard that determines the characteristics that a material must have for it to be defined as "compostable" is

**EN 13432 – Requirements for packaging recoverable through composting and biodegradation – Test scheme and evaluation criteria for the final acceptance of packaging.**

This standard was developed by the CEN (*Comité Européen de Normalisation*) under a mandate from the European Commission, following the European Directive on packaging and waste from packaging (94/62/EC). It contains the definitions of biodegradability, compostability and non-toxicity applied to the compostable materials used in packaging.

The standard **EN 14995 Plastics – Evaluation of compostability – Test scheme and specifications** has the same set of requirements, but applies to plastics in general, and not just to packaging.

In addition to industrial composting, various grades of Mater-Bi can also be composted at home, in domestic composters. Other forms of recycling are also possible, such as mechanical and chemical recycling, as well as energy recovery. For specific products, other end-of-life processes are possible, such as biodegradation in soil for mulching films.

Conformity with the EN 13432 standard is our priority in any process intended to create a new material, with the aim of always offering the possibility of organic recycling at the end of the product life cycle.

## Conformity with product safety requirements

**The safety of our products, both during the production/ processing phase and during use, largely depends on the raw materials used.**

For this reason, we adopt a **precautionary approach** that relies firmly on the application of the regulations on the production and management of chemical products – namely, REACH (Regulation (EC) No 1907/2006) and CLP (Regulation (EC) No 1272/2008) – and are always looking to select safe raw materials, seeking to minimise the use of substances that are hazardous to health and to the environment.

***Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)*** regulates the production, import and use of chemicals in Europe with the aim of improving the protection of human health and the environment from risks that may arise from activities related to the production, handling, transformation, use and dispersion of substances in the environment.

***Regulation (EC) No 1272/2008 on classification, labelling and packaging (CLP)*** aligns previous EU legislation with the GHS[4]. It also provides criteria for the classification and labelling of chemicals to ensure a high level of protection of health and the environment, as well as the free movement of substances and mixtures.

**Regulation (EU) No 10/2011** lays down specific rules for the manufacture and placing on the market of plastic materials and articles intended to come into contact with food, in order to ensure their safe use.

4. Globally Harmonized System of Classification and Labelling of Chemicals.



For materials intended to come into **contact with food** (such as cutlery, plates and cups), in addition to complying with industry regulations, Novamont is actively involved in developing the finished product, together with the customer, by working together to identify suitable testing strategies to maximise the product's safety.

Some substances that are particularly critical because they are intrinsically dangerous, or because there is controversy over their safety, are not used in the production of Mater-Bi. These include: plasticisers from the phthalates family, chlorinated, brominated, fluorinated and perfluorinated substances, by-products of animal origin, substances described as allergens by the regulations on food labelling, including latex, such as endocrine disruptors like bisphenol A (BPA) and SVHC (Substances of Very High Concern) that are included in the *candidate list* provided in the REACH regulation.

Each stage in the life cycle of our products is studied to identify the impact on health and safety:

Development of a new product concept

Research and development

Certification

Manufacture and production

Marketing and promotion

Storage, distribution and supply

Use and service

Disposal, reuse and recycling

By following a procedure that begins with pilot tests and ends with industrial tests, we undertake to guarantee:

Operator safety

Conformity with Regulation (EU) No 1907/2006 (REACH)

Conformity with the laws that govern the sector of food contact materials

Conformity with the classification and labelling of substances and mixtures (CLP and GHS)

According to regulations that are applied internationally, such as GHS, Mater-Bi is not a hazardous material and can be processed in complete safety from the point of view of both the worker and the environment.





## Compostability certification

**Depending on the application and the country of reference, each of our products fully satisfies the above-mentioned national and European standards and laws on conformity.**

The compostability of our products is certified by several international third-party organisations, which periodically carry out tests and monitoring. In general, there is no obligation to certify conformity with composting standards. However, in some countries, for specific applications (for example, carrier bags and bags for fruit and vegetables), laws are in force that require the certification of conformity to those standards. All grades intended for applications that entail disposal by industrial composting have at least one of the four certifications described in the following table[5].

| LOGO | DESCRIPTION | CERTIFIER | STANDARD |
|---|---|---|---|
| | Industrial compostability in Italy. This allows compostable items to be clearly identified | CERTIQUALITY (Italy) | EN 13432 + Certification scheme developed by CIC |
| | Industrial compostability recognised in Europe | TÜV AUSTRIA (Belgium) | EN 13432 EN 14995 |
| | In the United States, this guarantees compostability in industrial composting plants | BPI (USA) | ASTM D6400 |
| | Industrial compostability recognised in Europe and in Australia | DIN CERTCO (Germany) | EN 13432 AS 4736 |

EN 13432 Requirements for packaging recoverable through composting and biodegradation – Test scheme and evaluation criteria for the final acceptance of packaging

EN 14995 Plastics – Evaluation of compostability – Test scheme and specifications

ASTM 6400 Standard Specification for Compostable Plastics

AS 4736 Biodegradable Plastic-Biodegradable Plastics Suitable for Composting and other Microbial Treatment

5. The complete list of Mater-Bi certifications can be found on the website www.novamont.com/eng/mater-bi-certifications.

99.6% of the Mater-Bi sold in 2021 was certified for compostability. The remainder consists of Mater-Bi grades that do not need to meet this requirement in order to be used.


# Customer satisfaction

Our products' conformity to European regulations and laws is only the first essential step towards achieving our true goal: the confidence and satisfaction of our customers.

**We know that the quality of our products and associated services is measured not only with respect to norms and standards, but by what our customers think. This is why we use a customer satisfaction measurement system, which includes various monitoring tools covering three main areas.**

SATISFACTION

Assessment of the level of approval

COMPLAINTS

Analysis of complaints and reports

CUSTOMER LOYALTY

Adherence to brand specifications

**The results of these surveys enable us to identify any areas in which to make improvements, and what actions to take.**

## Satisfaction

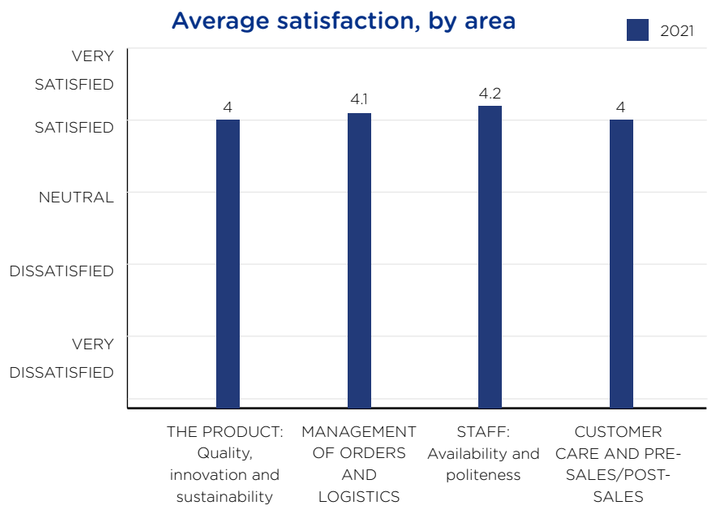
We commissioned a third party to conduct the customer satisfaction survey for 2021, focusing primarily on our THF[6] business which, since it started in 2018, has seen steady growth both in terms of volumes and the number of customers involved. Customers were able to choose the method (interview or a questionnaire they could complete themselves).

Satisfaction was measured for the specific areas we are most focused on:

- Safety
- Innovation
- Environmental performance of the product
- Novamont's ability to be an ideal business partner and not just a supplier

80% of the customers interviewed said they were satisfied or very satisfied with the Novamont Group.

The response rate was 90% and the individual responses were aggregated into four main sectors, for which the average satisfaction was calculated.



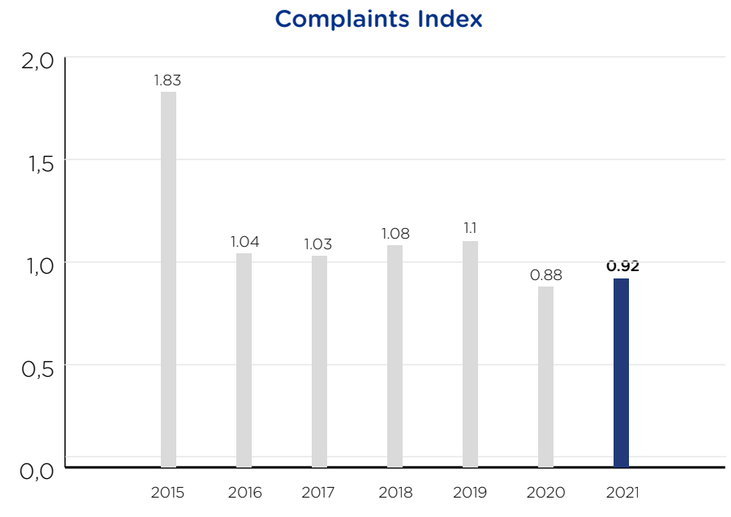

The results of the survey confirm the general level of satisfaction. In particular, product management, which includes the delivery of the product and the accompanying documentation, is again confirmed as one of Novamont's strengths, followed by the availability and competence of staff. The survey enabled us to identify areas for improvement, particularly in relation to the importance that customers assigned to certain criteria, for which the management developed the corresponding strategies.

6. More information about THF can be found on page 121 in Chapter 3 "Value chain and product sustainability".



## Complaints

For years, we have used a synthetic indicator to measure the incidence of customers' complaints and reports, called the **Complaints Index (CI)**[7]. The graph below shows the trend for Novamont's CI in the period 2015-2021, from which we can see steady improvement over the years. The positive handling of events with margins of uncertainty, such as the launch of products in new markets, has meant that the incidence of complaints has essentially remained constant.




$$CI = \frac{\text{Nr. Complaints + Nr. Reports}}{t_{\text{product sold}}} \times 1{,}000$$

## Customer loyalty

We want our customers to see us as partners; the relationship with many of them is governed by an agreement on compliance with product processing regulations. This ensures that the final product meets high quality standards.

In 2021, 43% of the Mater-Bi placed on the market went to customers who are licensees of the trademark. During the same year, the ratio between the licensing agreements signed and those terminated remained positive, while the number of partners rose by a further 17% compared with the previous year.

7. The index is independent of the actual acceptance of responsibility by Novamont.

# Soil protection and revitalisation

Chapter
5

The development of multidisciplinary projects with the world of agriculture and research, for the maintenance and strengthening of soil fertility, revitalising rural areas and creating low-impact products, capable of completing the carbon cycle and restoring soil organic matter. The contribution to more awareness at the territorial and institutional level about the importance of healthy soil.

Soil fertility

Sustainable agriculture

Awareness of the importance of soil

# Disclosure on Management Approach

## Management approach

From raw materials of plant origin to product end-of-life, Novamont's products interact closely with the soil, a non-renewable resource that plays a central role in maintaining life on Earth, but whose functionality is under severe threat.

In 2020, Novamont issued its **Sustainability Policy** which, on the topic of soil protection and revitalisation, formalises the Group's commitment to:

- Contributing to the development and spread of raw materials of plant origin, grown using sustainable farming practices that put the health of the soil first, enhance the fertility of the land and restore its organic matter;
- Helping to maximise efficiency in the management of organic waste in urban and metropolitan areas, by encouraging biological recycling.

In applying those principles, Novamont promotes an approach to agriculture based **on the top-down exploitation of local raw materials**, which can be grown on marginal land, maintaining biodiversity and paying close attention to the fertility of the soil. To give more impetus to safeguarding the soil, Novamont has adopted various solutions aimed at promoting the correct management of the organic fraction, using compostable products and biodegradable solutions designed especially for agriculture (mulching films, clips, pheromone dispensers) which do not generate persistent microplastics. The Group also conducts experimental projects that involve public administrations, mass catering and waste management companies, together with other authorities and associations, to create virtuous systems and a culture of sustainability. The end goal of these solutions is to obtain **high-quality compost**, an essential element for preserving organic matter in soil, and at the same time develop the sector for the biological recovery of the organic fraction, boosting employment and having positive impacts on circularity. Lastly, Novamont promotes specific initiatives and events that aim to spread awareness and knowledge about soil.

More information about the actions, programmes and initiatives implemented by the Group in relation to the material topic are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Strategic Planning and Corporate Communications
- Research and Development
- Product Ecology and Environmental Communication
- Quality, Environment and Safety
- Agro

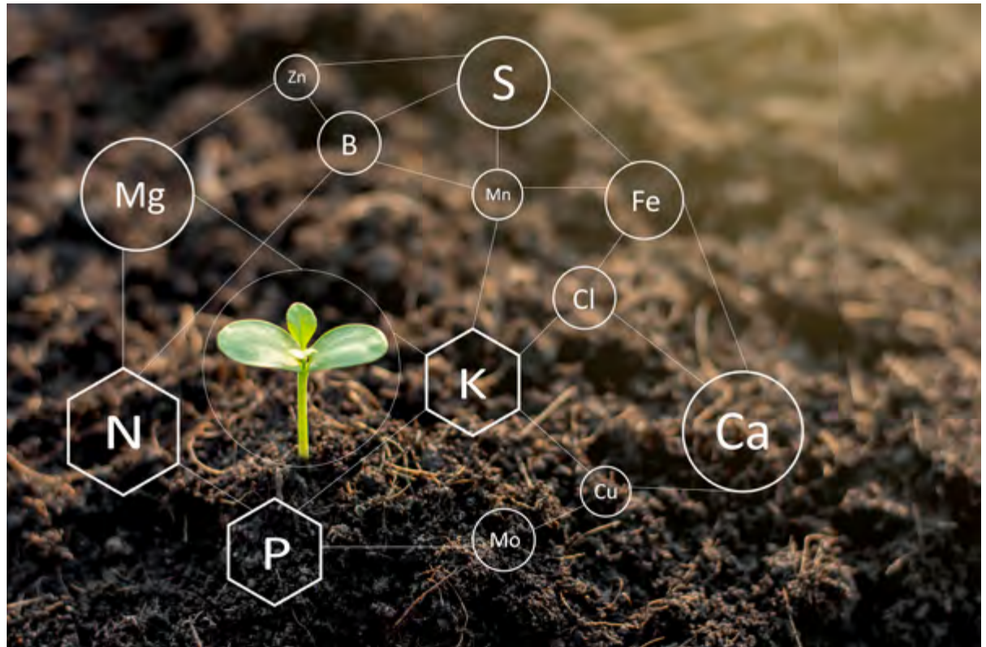
These functions interface with the Group's subsidiaries, by actively collaborating with specific functions and the respective site management. In particular, the new company Mater-Agro plays a crucial role not only in the development and dissemination of innovative products for the agricultural sector, but also in the promotion of a new model of participatory innovation between agriculture and industry. It will also allow agronomic protocols to be designed to regenerate polluted, unstable soils at risk of desertification.

## Complaint, consultation and discussion mechanisms

For aspects concerning the material topic, the Group provides the opportunity to request information through its websites www.novamont.com and www.materbi.com, or by emailing info@novamont.com.

# The importance of soil

The bioeconomy, organised within a circular framework, can be a strategic tool when seeking to regenerate territories, starting by maintaining and enhancing soil fertility, by restoring the organic matter, by building a new relationship between towns and agriculture, and by developing industrial facilities able to process waste and sustainable products that do not accumulate in the environment.




**Soil is a non-renewable resource that is of vital importance in ensuring food production and plant growth, regulating water flows to groundwater and rivers, removing contaminants, reducing flood risk, regulating energy flows to/from the atmosphere and maintaining local biodiversity. Furthermore, thanks to its ability to capture carbon from the atmosphere (carbon sink), soil makes an essential contribution in the fight against climate change.**

Soil health plays a key role for life, not only of plants, but of all living organisms on Earth. Despite this, non-sustainable farming practices, chemical pollution and the accumulation of non-biodegradable substances and products have led to a progressive **deterioration and loss of organic matter from the soil**, with a subsequent reduction in its fertility. Furthermore, the progressive expansion of urban areas has led to a marked acceleration of the process of **soil sealing**, a phenomenon that has a huge impact on the soil, as it completely destroys or compromises its functionality. Combating the intensification of these phenomena is becoming a priority, if we are to help fight climate change and increase food security.

In the face of this need, a number of solutions emerge that combine environmental protection with economic and social development.

First and foremost, **storing organic carbon in the soil** by increasing its organic matter can contribute to halting these phenomena. The **correct collection of the organic fraction** and use of **compostable solutions** help reduce the contamination of organic waste and produce high-quality compost[1], an essential element for preserving organic matter.

In our **research and development** activities, we seek to identify **native crops** that can be grown on marginal, unirrigated land, to exploit local specific characteristics while maintaining biodiversity. In 2021, agronomic testing also continued on oleaginous dryland crops (such as *trinaseed* cardoon), which are of potential industrial interest and which can grow on marginal, dry land, at risk of erosion and/or desertification, as well as in contaminated soil.

At the same time, in our **production**, we maximise the use of all production components, which from "waste" become co-products, or the starting point of new value chains.

By following this approach, we activate **innovative agro-industrial value chains** that reflect the local area, in collaboration with farmers and their associations, such as **Coldiretti**[2], the main farming entrepreneurs' organisation in Italy and Europe.

1. Additional information is provided on page 93 in Chapter 3 "Value chain and product sustainability".
2. More information on this collaboration can be found on page 227 in Chapter 9 "Partnerships and collaboration for territorial regeneration".

## Our applications for the farming world act on various levels, benefiting a number of environmental aspects:

Mulching film

Clips

Pheromones

Because they are biodegradable in soil, mulching films, clips and pheromone dispensers made from Mater-Bi do not release residues into the soil, thereby maintaining its fertility.

Biolubricants

Biodegradable biolubricants for farm machinery minimise the risks associated with their dispersion in the ecosystem and consume less energy.

Phytosanitary products

Pelargonic acid-based phytosanitary products, which biodegrade rapidly in soil and do not dissolve easily in water, are a sustainable alternative to traditional products for some specific applications.



## ORGANIC FARMING: MATER-BI MULCHING FILMS THAT ARE 60% RENEWABLE

On 21 May, to mark the "Pest management in organic farming" day, organised by the Parma farm Stuard, various techniques were presented that can be used for commercial tomatoes and horticultural crops. The solutions proposed included the new Mater-Bi mulching films, which for the first time are 60% derived from renewable raw material.

Usable in different environmental conditions and on crops with different cycles with excellent agronomic results, the Mater-Bi film, thanks to its biodegradability in soil, does not need to be recovered and disposed of at the end of the crop cycle, but can be left in the soil where it is biodegraded by microorganisms. This helps reduce the production of plastic waste and protects the soil from plastic pollution.

An audience of around 100 people, made up of professionals, agronomists, farmers and equipment manufacturers, attended the presentation of the new mulching films and took part in the visit to the experimental field where the films are being trialled on an organic commercial tomato crop. During the day, a roll-out test of the Mater-Bi film was also carried out with Forigo's new Modula Jet seed drill. This allowed a highly innovative commercial tomato sowing technique to be developed.

The experimental field is covered by the agreement signed in 2019 between Federbio and Assobioplastiche – the association that represents companies active in the production of biodegradable polymers and finished products – for the implementation of biodegradable mulching films in organic farming. Under the terms of the agreement, the use of mulching films with certified biodegradability and renewability is one of the main technical innovations useful for the conversion of large areas and crops to organic farming.

The films must comply with the European standard EN 17033[3] and from 2021, must be made from at least 60% renewable raw materials.

For organic farming, Europe is also moving towards reducing the use of traditional plastic films: on 23 March 2021, the European Commission issued an Action Plan that recognises the role of biodegradable, compostable and *bio-based* materials as a potential means of impact mitigation. It is currently preparing the definition of the criteria and principles for the use of such materials.

**For over 20 years, Novamont has been working on the development of products that help preserve fertility, functionality and soil health, for low-impact agriculture. As a demonstration of this ongoing commitment, within the space of a year it has increased the percentage of renewable raw material in the Mater-Bi used to make the mulching films from 50% to 60%.**

3. Compliance with the EN 17033 standard "Plastics – Biodegradable mulching films for use in agriculture and horticulture – Requirements and test methods" ensures that the biodegradable mulching film has no negative impact on the environment. This is verified through test methods and by meeting certain requirements.

# Together for the protection of the soil

We are actively involved in raising awareness, both at the territorial and institutional level, about soil, soil issues and possible solutions.

## "*A soil deal for Europe*", the Mission dedicated to soil

With the aim of resolving some of the greatest challenges our world has to face and which are at the heart of the transition taking place across Europe, in 2020 the European Commission unveiled the five main "missions" for the ***Horizon Europe 2021-2027*** research and innovation programme.

The mission areas (Adaptation to Climate Change including Societal Transformation; Cancer; Healthy Oceans, Seas, Coastal and Inland Waters; Climate-Neutral and Smart Cities; Soil Health and Food) were outlined with the support of five Mission Boards, established in 2019 by the European Commission and made up of independent experts from the world of innovation and research, representatives of politics and civil society, and representatives of trade organisations, who will contribute to achieving the goals defined in the missions.

Our CEO, Catia Bastioli, was asked to be a member of the "***Mission Board for Soil Health and Food***".

She has assisted the Commission with identifying solutions to the challenges of food security and soil quality, by helping to draw up the Mission's **Final Report**, "*Caring for soil is caring for life*", which was published in September 2020[4]. In October 2020, the Missions entered a preparatory phase to identify the objectives, approach, indicators and performance measures, which led to the development of Implementation Plans. Following an evaluation by the European Commission, the Missions were officially launched on 29 September 2021.

The Soil Mission, which is called "*A soil deal for Europe*"[5], aims to ensure that **by 2030, at least 75% of all soils in the EU will be safe for food production, people, nature and the climate**. The goal will be to create 100 living labs to test the innovation in the field, and lighthouses to trial best practices and steer the transition towards healthy soils.

*A soil deal for Europe*

funding an ambitious research and innovation programme with a strong social science component

100 living labs and lighthouses to jointly build knowledge, test solutions and demonstrate their value in real world conditions

developing a harmonised framework for soil monitoring in Europe

raising people's awareness of the vital importance of soils

4 - The final report of the Mission for Soil Health and Food can be downloaded at https://ec.europa.eu/info/publications/caring-soil-caring-life_en.

5 - More information can be found in the Implementation Plan https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/soil_mission_implementation_plan_final_for_publication.pdf

## Re Soil Foundation

The **Re Soil Foundation** was set up by the University of Bologna, Coldiretti, Novamont and Turin Polytechnic in 2020 to give a boost to real change, starting with soil protection and the key concept of territorial regeneration.

In 2021, the Re Soil Foundation **set up a technical/scientific committee** to increase the effectiveness and quality of its initiatives. During the year, the Foundation also published daily articles, editorials, news and soil case studies in Italian and English, producing a weekly newsletter in Italian and English that has a total of 3,500 subscribers and GRSOIL, a podcast about soil, to mark the World Earth, Environment and Soil Days.

**In 2021, the Foundation worked actively to promote training and awareness initiatives and improve knowledge about issues related to soil health, involving more than 1,900 participants.**

In collaboration with Unicoop Firenze, Legambiente and PNAT (a spin-off from the University of Florence), Re Soil has launched the Montopoli project: the first bio-sustainable forest in Italy which involves the reclamation of a disused industrial site covering 6 hectares, which will be converted into a sustainable forest in which 3,000 native trees will be planted and in which monitoring systems will be developed capable of measuring the project's environmental and social impact. It is estimated that the forest will be able to absorb 170 tonnes of $CO_2$ in 10 years. The project will include a nature trail through a continually changing forest.

### The goals of the Re Soil Foundation

1. Promoting soil protection in Italy and in Europe
2. Spreading knowledge, scientific content and information on the topic of soil health
3. Creating the conditions for developing territorial case studies and increasing their number
4. Promoting a *policy-shaping* process on the issue of soil protection



## Initiatives

### Caring for the soil is caring for life

24 November

The Re Soil Foundation was one of the sponsors of the Italian event organised by the Italian Ministry of Universities and Research, in association with the Agency for the Promotion of European Research (APRE) and Santa Chiara Lab-University of Siena, to present the *Mission Soil Health and Food*.

### *Bioeconomy Day* – A future school for the bioeconomy

27 May

Online event organised in association with APRE to mark the Bioeconomy Day. Three schools from three different regions presented the courses started by their students in the sector. The Italian Education Minister Barbara Floridia also attended the event.

### *Bioeconomy for territorial regeneration – A key tool to make more with less*

3 June

International event organised by the Foundation in recognition of *Green Week*, in association with the *European Circular Bioeconomy Policy Initiative* (ECBPI), Chimica Verde Bionet and Kyoto Club.

### *Bioeconomy for territorial regeneration*

1 October

Event organised by the Foundation as part of the *All4ClimateItaly2021* initiatives and in view of COP26.

### *International Beacon Conference – Caring for soil is caring for life: soil health policies and innovation*

28 October

To mark Ecomondo 2021, the annual trade fair for the green and circular economy, Re Soil held the second international conference on the topic of soil, in collaboration with Ecomondo's Technical/Scientific Committee, the *Mission for Soil Health and Food* and Coldiretti.

### *World Soil Day*

5 December

To commemorate *World Soil Day,* the Re Soil Foundation launched SOIL LAB, an educational kit for primary and lower secondary schools. The kit includes experiment sheets, brochures, posters and guides for teachers, aimed at raising awareness of soil issues and how to care for soil. The kit was downloaded more than 600 times in less than two months.

# MATER-AGRO, THE COMPANY SET UP BY NOVAMONT AND COLDIRETTI TO PROMOTE A NEW MODEL OF PARTICIPATORY INNOVATION BETWEEN AGRICULTURE AND INDUSTRY

On 16 September, during the G20 meeting of agriculture ministers in Florence, a presentation was given on Mater-Agro, the new company dedicated to farmers and set up by Novamont and Coldiretti.

The new company aims to promote a new model of participatory innovation between agriculture and industry, helping farmers maintain good crop yields through sustainable agronomic solutions: from pelargonic acid-based phytosanitary products to biolubricants, biodegradable mulching film and other applications in biodegradable bioplastic, and the development of dryland crops able to withstand the effects of climate change on temperatures and water availability.

Through Mater-Agro, protocols will be designed to regenerate contaminated, unstable soils at risk of desertification. An "experimental farm" will be set up that will teach farmers and researchers about transforming degraded areas into centres of innovation and development for efficient, sustainable crop management, as well as facing the new challenges of climate change.

To promote and distribute new products and services, the project relies on the network of Consorzi agrari d'Italia – Bonifiche Ferraresi. This initiative represents a unique and innovative experiment in terms of its form, the products developed, the sustainable agricultural practices and the integrated systems applied for the first time in Italy, cementing the long-standing partnership between Novamont and Coldiretti that began more than 10 years ago in the experimental fields of central Italy.

**Mater-Agro is the result of a common strategic vision. A unique and innovative experiment in terms of its form, the products developed, the sustainable agricultural practices and the integrated systems applied for the first time in Italy, supported by the first green chemical plants in Europe and one of the greenest agricultural sectors in the world, in a country rich in biodiversity and at the forefront of climate change.**

Biodegradable mulching films and ancillary applications

Pelargonic acid-based phytosanitary products

Biolubricants

Dryland farming sector

Experimental farm

# Responsibility towards employees

Chapter
6

Promoting practices and initiatives aimed at protecting the rights of the Group's employees and contractors (respecting equal opportunities and fighting all forms of discrimination), and at developing their skills, involving them and guaranteeing respect for regulations on health and safety in the workplace.

Equal opportunities

Non-discrimination

Training

Health and safety

Internal communication

# Disclosure on Management Approach

## Management approach

Novamont acknowledges the central role of its employees and the importance of establishing solid, transparent relationships with them based on mutual trust. Managing employment relations is therefore based on protecting workers' rights and maximising their contribution, with a view to enhancing the wealth of skills that each employee possesses.

In line with this approach, and in accordance with national and international standards, the Group's policies seek to prevent **any form of discrimination** based on age, gender, sexual orientation, state of health, race, nationality, political opinions and religious beliefs. Furthermore, Novamont undertakes to **protect the moral integrity** of its employees, by guaranteeing the right to working conditions that respect the dignity of the person and a safe and healthy workplace. No attitude or conduct that might harm a person or his or her convictions or preferences in any area is tolerated. Finally, **no form** of **irregular employment** or use of **child or forced labour is tolerated**[1].

In 2020, Novamont issued its **Sustainability Policy** which, on the topic of responsibility towards employees, formalises the Group's commitment to:

- Ensuring that processes, products and workplaces do not endanger the health and safety of workers or the community, and minimising any pollution;
- Promoting the principle of equal opportunities and fighting discrimination;
- Guaranteeing respect for human rights throughout the sector, including the supply chain.

Furthermore, in confirming its commitment to the management of quality, environmental impacts and health and safety in the workplace, in 2020 Novamont updated its **Policy for Quality, Environment and Health and Safety (QEHS)**, which provides that the Company and its subsidiaries must commit to:

- Ensuring that workers, service providers and contract employees have the appropriate resources, information and training they need to carry out their work in a competent and safe manner, in such a way that achieving the system goals in terms of conformity of the products and services is guaranteed;
- Ensuring that all workers take actions to prevent accidents and injuries by following the procedures for managing work-related risks;
- Identifying, reporting, recording and analysing accidents and unplanned events, in order to learn from them and to implement corrective and preventive actions.

For the BioBag Group, BioBag International has issued a **Quality and Environment Policy** whose commitments are consistent with Novamont's policies. Harmonisation with Novamont's applicable quality, environment, health and safety requirements is under way.

In pursuing the commitments stated in the QEHS Policy, the Italian companies of the Novamont Group decided to adopt an **Integrated Management System (IMS) for Quality, the Environment, Health and Safety**[2]. Regarding the material topic, the IMS provides for the control, monitoring and, if necessary, mitigation of negative impacts on the health and safety of workers. Monitoring begins with a preliminary analysis, with hazard identification, a risk assessment and subsequent definition of preventive and protective measures. These activities are carried out throughout all manufacturing stages in accordance with the **precautionary principle**. The risks may be reassessed in the light of events, organisational changes, physical changes and whenever it is necessary to modify one of the variables involved. Particular attention is paid to working at height or in confined spaces, to the use of equipment, to exposure to noise, and to the use of chemicals. In the latter case, from the initial phase of selecting the raw materials, each new component is selected considering the risks linked to its processing and to its presence in the finished products, both for the environment and for the health and safety of workers, as defined in the **Raw Materials Validation Procedure**. However, the activities carried out in the company do not carry a high risk of occupational illness. Each year, the results of the risk assessment and monitoring are reviewed using **performance indicators**. System goals and preventive and/or corrective actions are then defined on the basis of the performance trend. For the retrieval of accident data, the Group operates a monitoring system for its performance indicators in line with the UNI ISO 45001 management system.

In order to investigate work-related accidents and find effective solutions to prevent their recurrence, the Group has adopted guidelines that define how to carry out a Root Cause Investigation, with the involvement of workers' representatives, in addition to procedures for identifying what action should be taken to reduce the risks. Regular internal and external auditing procedures ensure that the IMS is of a high quality. At all of Novamont's Italian sites, a **qualified physician** is appointed to carry out the activities required by Italian Legislative Decree No. 81/08, while cooperating with the company in all related activities. Every year, the physician draws up a health monitoring plan, schedules regular, preventive checkups and inspects workplaces. He or she also takes part in regular meetings on the topic and helps draft the Risk Assessment Document. All these activities entail the involvement, consultation and participation of workers and their representatives.

The Group follows a careful and rigorous hiring process; all personnel are hired with regular employment contracts and the **Human Resources Selection, Induction and Training Procedure** defines the responsibilities and methods to ensure that the Selection, Induction and Training process takes place on the basis of equal opportunities and non-discrimination for everyone concerned.

With particular reference to training on quality, the environment and safety, a specific staff Training, Information and Education Procedure has been defined. This describes the requirements for certifying, educating and training personnel and ensuring that all workers have the necessary quality, safety and technical know-how to do their job efficiently and safely. The health and safety activities covered both compulsory training (in accordance with Italian Legislative Decree No. 81/08 and the State-Region Agreement of 21/12/2011), and training on

1. See the Novamont Code of Ethics for more details.

2. Further details on the IMS can be found on pages 129-130 in Chapter 4 "Compliance and quality of the products and customer care".

operating procedures and instructions to develop or maintain workers' skills, resulting in more efficient risk management. In order to satisfy specific risk management needs, training is given to external personnel.

Every year, the Group draws up a **Training Plan**: this is designed to identify both the company's training needs in terms of what is compulsory, and the specific needs that emerge from a discussion with the various company functions. For training activities, Novamont calls on external companies and highly qualified personnel, who give specific training sessions in the classroom and online.

Developing constructive dialogue with the trade unions is essential for creating a calm, collaborative work environment, which enables us to have a better understanding of our employees' needs. Over the years, Novamont has built up a fruitful **dialogue with the AU** (Amalgamated Union) – which is present at all of the Group's Italian sites – and with the trade union representatives. The Group thus guarantees trade union rights and the freedom of association of workers.

For the Group's Italian companies, all employees are covered by **collective bargaining agreements** in accordance with the national collective bargaining agreement for chemical industry employees, while all executives are covered by the national collective bargaining agreement for executives of manufacturing and service companies. In France, all employees are covered by the *Convention collective nationale des commerces de gros*. In Spain, all employees are covered by the *Convenio Colectivo de la Industria Quimica*. In Germany, employees are covered by non-collective bargaining agreements, since the size of this site does not warrant the application of collective bargaining laws. Finally, Novamont North America adheres to the Federal State Laws and to the laws of Connecticut, and the *Fair Labour Standards Act* (FLSA) is the federal reference law [3].

To achieve increasingly high performance levels, in 2020, the Group adopted the framework of the ***B Impact Assessment*** **(BIA)**[4], as the main tool for managing sustainability topics, including those connected with employee wellbeing.

Other actions, programmes and initiatives implemented by the Group are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Human Resources
- Quality, Environment and Safety
- Group Operations General Management
- Strategic Planning and Corporate Communications

These functions interface with the Group's subsidiaries, by actively collaborating with specific functions and the respective site management. Since 2020, they have operated with the coordination and support of the Sustainability Committee and internal working groups involved in the management of B Corp certification and pursuit of the common benefit.

Finally, in accordance with Italian Legislative Decree No. 81/08, every Italian site has a reference function for health and safety in the workplace (Prevention and Protection Service – PPS).

## Complaint, consultation and discussion mechanisms

For aspects concerning the health and safety of workers, complaints may be made (while respecting the worker's privacy) using a specific form, to be sent to the Supervisory Board at each Group site. Furthermore, occupational hazards or hazardous situations can be reported to the Prevention and Protection Service (verbally, on paper, or by email) by the workers themselves or by the relevant person in charge, or by RLSSA union representatives.

3. www.dol.gov/agencies/whd/flsa
4. More information on the *framework* can be found on pages 34-35.

# Workforce characteristics

Our employees are an essential resource: without them our success would not have been possible. It is important for us to maintain relations with them that are based on loyalty and mutual trust.

On 31 December 2021, our workforce consisted of 632 employees, an increase of 32% over 2020 (with 479 employees). This significant increase is mainly due to the acquisition of the BioBag Group, which at 31 December had a staff of 135 employees located at its headquarters in Norway, at its production site in Estonia (where 66% of the Group's employees are concentrated), and at its branches in Sweden, Denmark, Ireland, Finland, Poland, Australia, Canada and the USA.

At Novamont's Italian sites, there were 33[5] external workers and contractors, consisting of workers with fixed-term contracts and temporary staff.

We have always preferred to build stable and lasting working relationships; among our personnel, there is a marked predominance of employees with permanent (97%) and full-time contracts (97%). Diversity is essential to ensure a dynamic and socially cohesive environment. At 31 December 2021, 22% of our employees in Italy were women. At the headquarters in Novara, the percentage of women was 44.5%. In Italy, the significant number of employees under 30 years of age (12%) confirms our willingness to offer job opportunities to young people, in a business context characterised by dynamic partnerships with universities and institutions.

5. Mean value.

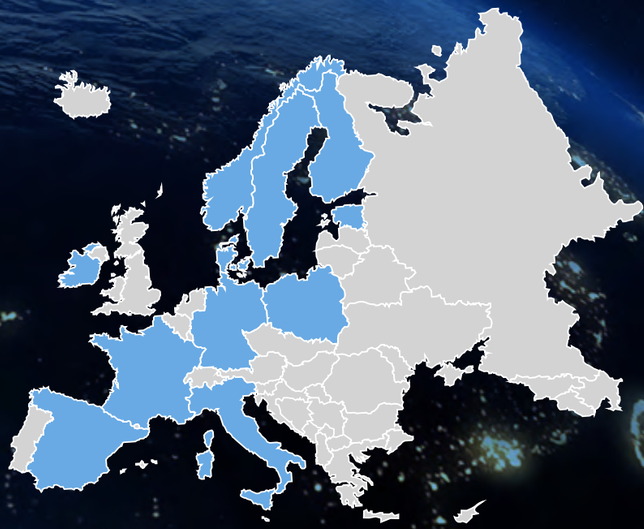




632 employees as of 31 December 2021

Italy: 484
- Novara: 164
- Terni: 125
- Piana di Monte Verna: 16
- Patrica: 115
- Bottrighe: 64[6]

Denmark: 5
Estonia: 89
Finland: 2
France: 4
Germany: 2
Ireland: 2
Norway: 10
Poland: 1
Spain: 3
Sweden: 5



AMERICA
USA: 22

OCEANIA
Australia: 3

6. The figure includes 62 employees of Mater-Biotech S.p.A. and 2 employees of Novamont S.p.A.

## The Group's employees, by contract type, gender and geographical area

| *[No. of people]* | 31 December 2021 | | | 31 December 2020 | | | 31 December 2019 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Permanent contract | Fixed-term contract | Appren-ticeship | Permanent contract | Fixed-term contract | Appren-ticeship | Permanent contract | Fixed-term contract | Appren-ticeship |
| **NOVAMONT GROUP** | **613** | **19** | **0** | **459** | **16** | **4** | **448** | **6** | **4** |
| **EUROPE** | 588 | 19 | 0 | 455 | 16 | 4 | 444 | 6 | 4 |
| **Italy** | 466 | 18 | 0 | 446 | 16 | 4 | 439 | 6 | 4 |
| **Men** | **361** | **15** | **0** | **347** | **10** | **2** | **342** | **4** | **2** |
| **Women** | **105** | **3** | **0** | **99** | **6** | **2** | **97** | **2** | **2** |
| Novara | 159 | 5 | 0 | 153 | 4 | 4 | 149 | 2 | 4 |
| Terni | 123 | 2 | 0 | 121 | 3 | 0 | 122 | 0 | 0 |
| PMV | 15 | 1 | 0 | 15 | 1 | 0 | 14 | 0 | 0 |
| Patrica | 105 | 10 | 0 | 95 | 6 | 0 | 91 | 0 | 0 |
| Bottrighe | 64 | 0 | 0 | 62 | 2 | 0 | 63 | 4 | 0 |
| **AMERICA** | 22 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 |
| **OCEANIA** | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## The Group's employees, by working hours (full-time/part-time) and gender

| *[No. of people]* | 31 December 2021 | | 31 December 2020 | | 31 December 2019 | |
|---|---|---|---|---|---|---|
| | Full-time | Part-time | Full-time | Part-time | Full-time | Part-time |
| **NOVAMONT GROUP** | **613** | **19** | **465** | **14** | **444** | **14** |
| **Italy** | 474 | 10 | 453 | 13 | 436 | 13 |
| **Men** | **373** | **3** | **356** | **3** | **344** | **4** |
| **Women** | **101** | **7** | **97** | **10** | **92** | **9** |

## Employees in Italy by gender and age group

| | 31 December 2021 | | 31 December 2020 | | 31 December 2019 | |
|---|---|---|---|---|---|---|
| | No. of people | % | No. of people | % | No. of people | % |
| **Men** | **376** | **77.7** | **359** | **77.0** | **348** | **77.5** |
| **Women** | **108** | **22.3** | **107** | **23.0** | **101** | **22.5** |
| < 30 years | **57** | 11.8 | **54** | 11.6 | **47** | 10.5 |
| 30-50 years | **308** | 63.6 | **308** | 66.1 | **306** | 68.2 |
| > 50 years | **119** | 24.6 | **104** | 22.3 | **96** | 21.4 |

## Employees in Italy by professional category, gender and age group

| | No. of People | % | | | | |
|---|---|---|---|---|---|---|
| | | Men | Women | < 30 years | 30-50 years | > 50 years |
| | 31 December 2021 | | | | | |
| Directors | **21** | **85.7** | **14.3** | 0.0 | 19.0 | 81.0 |
| Managers | **86** | **69.8** | **30.2** | 0.0 | 66.3 | 33.7 |
| Supervisory staff | **72** | **55.6** | **44.4** | 4.2 | 73.6 | 22.2 |
| Office workers | **123** | **65.9** | **34.1** | 22.8 | 58.5 | 18.7 |
| Manual workers | **182** | **97.3** | **2.7** | 14.3 | 67.0 | 18.7 |
| | 31 December 2020 | | | | | |
| Directors | **21** | **85.7** | **14.3** | 0.0 | 19.0 | 81.0 |
| Managers | **85** | **68.2** | **31.8** | 0.0 | 68.2 | 31.8 |
| Supervisory staff | **65** | **55.4** | **44.6** | 4.6 | 75.4 | 20.0 |
| Office workers | **126** | **65.1** | **34.9** | 23.8 | 59.5 | 16.7 |
| Manual workers | **169** | **97.6** | **2.4** | 12.4 | 72.2 | 15.4 |
| | 31 December 2019 | | | | | |
| Directors | **21** | **85.7** | **14.3** | 0.0 | 19.0 | 81.0 |
| Managers | **74** | **68.9** | **31.1** | 0.0 | 70.3 | 29.7 |
| Supervisory staff | **63** | **60.3** | **39.7** | 3.2 | 77.8 | 19.0 |
| Office workers | **126** | **62.7** | **37.3** | 16.7 | 66.7 | 16.7 |
| Manual workers | **165** | **98.2** | **1.8** | 14.5 | 70.9 | 14.5 |

**The Group's incoming and outgoing employee turnover[7] rates, by gender, age group and geographical area**

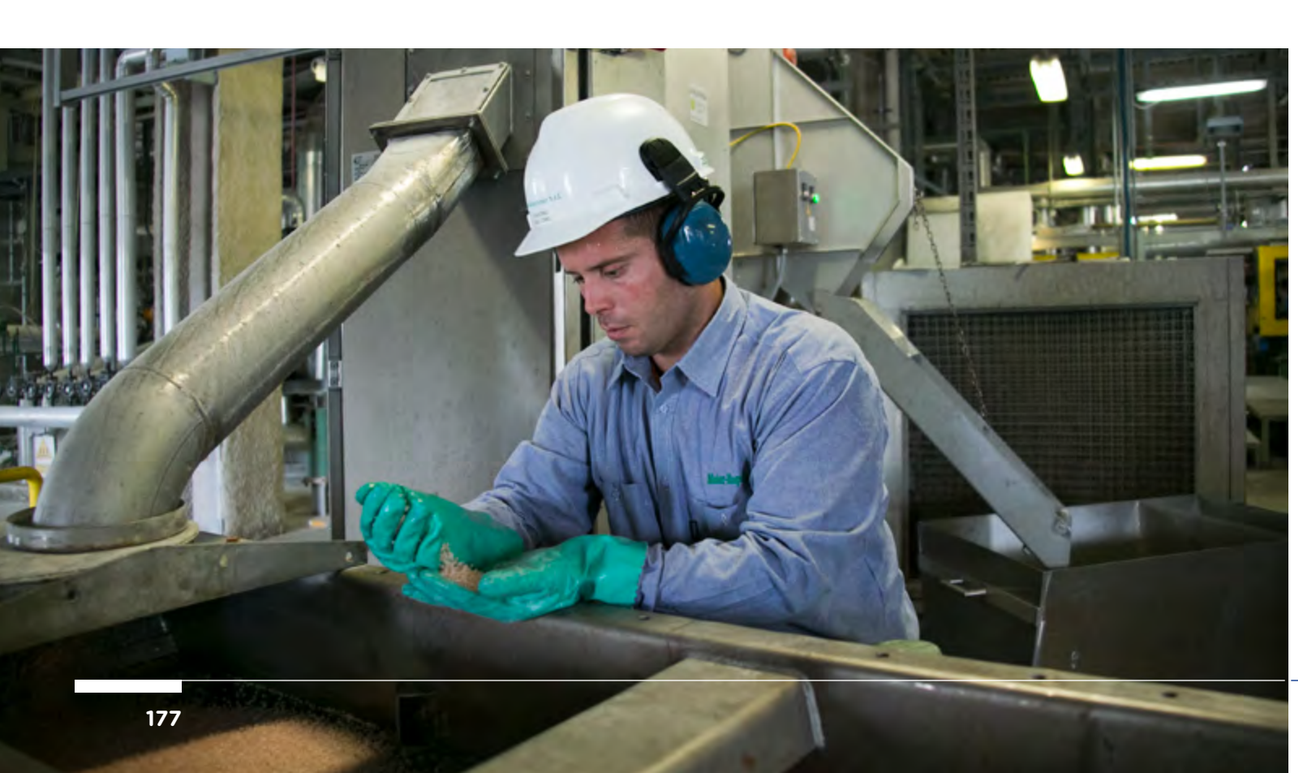
| | 2021 | | | | 2020 | | | | 2019 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INCOMING | | OUTGOING | | INCOMING | | OUTGOING | | INCOMING | | OUTGOING | |
| | No. of People | Rate [%] | No. of People | Rate [%] | No. of People | Rate [%] | No. of People | Rate [%] | No. of People | Rate [%] | No. of People | Rate [%] |
| **NOVAMONT GROUP** | **44** | **7.0** | **38** | **6.0** | **39** | 8.1 | **18** | 3.8 | **29** | 6.3 | **19** | 4.1 |
| **EUROPE** | **42** | 6.9 | **32** | 5.3 | **39** | 8.2 | **18** | 3.8 | **28** | 6.2 | **18** | 4.0 |
| **Italy** | **33** | 6.8 | **15** | 3.1 | **35** | 7.5 | **17** | 3.6 | **28** | 6.2 | **18** | 4.0 |
| **Men** | **28** | 7.4 | **10** | **2.7** | **24** | 6.7 | **12** | 3.3 | **15** | 4.3 | **10** | 2.9 |
| **Women** | **5** | 4.6 | **5** | **4.6** | **11** | 10.3 | **5** | 4.7 | **13** | 12.9 | **8** | 7.9 |
| **< 30 years** | **15** | 26.3 | **4** | **7.0** | **18** | 33.3 | **2** | 3.7 | **12** | 25.5 | **4** | 8.5 |
| **30-50 years** | **14** | 4.5 | **8** | **2.6** | **16** | 5.2 | **10** | 3.2 | **11** | 3.6 | **11** | 3.6 |
| **> 50 years** | **4** | 3.4 | **3** | **2.5** | **1** | 1.0 | **5** | 4.8 | **5** | 5.2 | **3** | 3.1 |
| Novara | **13** | 7.9 | **10** | 6.1 | **14** | 8.7 | **8** | 5.0 | **17** | 11.0 | **12** | 7.7 |
| Terni | **2** | 1.6 | **1** | 0.8 | **4** | 3.2 | **1** | 0.8 | **0** | 0.0 | **0** | 0.0 |
| PMV | **1** | 6.3 | **1** | 6.3 | **2** | 12.5 | **0** | 0.0 | **1** | 7.1 | **0** | 0.0 |
| Patrica | **15** | 13.0 | **1** | 0.9 | **11** | 10.9 | **1** | 1.0 | **5** | 5.5 | **0** | 0.0 |
| Bottrighe | **2** | 3.1 | **2** | 3.1 | **4** | 6.5 | **7** | 11.3 | **5** | 7.5 | **6** | 9.0 |
| **AMERICA** | **1** | 4.5 | **4** | 18.2 | **0** | 0.0 | **0** | 0.0 | **1** | 25.0 | **1** | 25.0 |
| **OCEANIA** | **1** | 33.3 | **2** | 66.7 | **-** | - | **-** | - | **-** | - | **-** | - |

7. The incoming and outgoing turnover rates are calculated by dividing the number of new hires and terminations, respectively, recorded in 2021, by the number of employees, by gender and geographical area at 31 December 2021.

In 2021, there were **44 new hires**, and **38 terminations**; this latter figure includes employees who left the Group voluntarily, whose contract expired, who were dismissed, who failed to pass the probationary period, or who retired. This gives an incoming turnover rate of 7.0%, which is higher than the outgoing turnover rate of 6.0%.

# Health and safety at work

The physical protection of employees and contractors and a healthy work environment are essential: not only do we have a legal responsibility in this respect, but also an ethical one.







In 2021 at the Group's Italian sites, there was 1 recordable work accident without serious consequences, a decrease compared with 2020 and 2019 (2 accidents). However, the Dagöplast plant recorded three work accidents, none of which had serious consequences. This has led to a series of measures aimed at bringing the situation under control and preventing the recurrence of such accidents. The accidents recorded for 2021 involved male personnel working in production and warehouse activities, and female personnel doing laboratory work.

For the Group's Italian sites, we also monitor the accident trend for the external workforce, which recorded 2 work accidents during the year. Lastly, as in the previous year, no cases of occupational illness were recorded.

## The Group's accident trend[8]

| | 2021 | 2020 | 2019 |
|---|---|---|---|
| No. of recordable work accidents | 4 | 2 | 2 |
| *of which fatal* | 0 | 0 | 0 |
| *of which with severe consequences* | 0 | 0 | 0 |
| Hours worked[9] | 1,075,296 | 792,746 | 770,272 |
| Rate of recordable work accidents[10] | 0.7 | 0.5 | 0.5 |
| Rate of deaths resulting from work accidents[11] | 0.0 | 0.0 | 0.0 |
| Rate of work accidents with severe consequences[12] | 0.0 | 0.0 | 0.0 |

Conduct is often the main or contributory factor in cases of work accidents; thus, appropriate activities to make personnel aware, inform and train them on the topic of safety are always guaranteed.

In 2021, we provided our employees with 5,154 hours of health and safety training.

8. The accident data for 2019 and 2020 refer exclusively to the Group's Italian companies.

9. The hours worked for Novamont France, Novamont GmbH, Novamont Iberia and Novamont North America were estimated from the hours worked per capita at the Group's non-production sites.

10. (No. of recordable accidents in the year/Hours worked in the year) *200,000

11. (No. of fatal accidents in the year/Hours worked in the year) *200,000

12. (No. of accidents with severe injuries in the year/Hours worked in the year) *200,000

## NOVAMONT AND THE COVID-19 EMERGENCY: COMMITMENT FOR THE HEALTH AND SAFETY OF EMPLOYEES

From the onset of the Covid-19 pandemic, at Novamont we set about giving **absolute priority to the health and safety of all our employees**. Together we managed to implement, in a short space of time and for a large number of people, not only new protocols and vital precautionary measures, but organisational tools and solutions never previously adopted. In 2021, these solutions also allowed us to minimise the risk of spreading the virus and at the same time guarantee the continuity of our production activities. The **Coronavirus Emergency Unit** (set up at Group level) and the **crisis units** (set up for each site and involving trade union representatives) continued to work to ensure the application and verification of the rules to prevent the risk of Covid-19 infection in the workplace.

To ensure the health and safety of our employees, the following measures were taken:

1. We made **changes to our production system**, providing **back-up** solutions and suspending any operations that were not essential to production or the most critical developments;
2. To reduce the number of staff physically present in the workplace, we introduced part-time and full-time **smart working** wherever possible, issuing our employees with laptops (a policy we continued this year);
3. For staff physically present in the workplace, we implemented **specific measures to limit contact** inside and outside the company, for example by encouraging virtual meetings;
4. We continued the regular general **sanitisation** of all buildings and **cleaning** of departments and the most sensitive areas;
5. We renewed our **Covid-19 insurance cover** to which all staff (including external contractors) have continued to benefit;
6. We made **antigen/molecular swabs** available to all employees who reported a potential risk of contagion (including cases where the legislation did not require them to do so, for example for indirect and/or low-risk contact);
7. To ensure the well-being of our employees and help them cope with the psychological effects of the Covid-19 crisis, which was stressful for employees at many companies, in February we decided to launch a **counselling service completely** free of charge for all employees at the Group's Italian sites. This service, outsourced to an external firm and the cost of which was borne entirely by Novamont, allowed our workers to talk to a psychologist/psychotherapist at a series of one-to-one sessions in order to find answers or discuss specific points in their life and career, e.g. anxieties and concerns about health, couple and family relationships, work/life balance, recovering from illness, management of life changes, self-esteem and self-confidence, loss of a loved one, lifestyle choices and personal well-being. The service was extended until 2022 and will include employees at the Group's foreign sites for the first time.

# Training and development

Training is one of the key points of our work, because it brings each of us closer to the company's vision, which we have chosen and which we share. We want our people, who are already highly qualified, to be able to adapt to the dynamics of growing competition and complexity of the markets. In 2021, 9,087[13] hours of training were provided, with an average of 18.3 hours per employee.

13. For this year, the data reported do not include the training hours provided at BioBag Group sites.


Our training is organised in such a way as to ensure a varied and targeted offering that adapts the skills of our employees to the growth of the company and the development of the national and international legislative landscape. In 2021 we signed our employees up to an in-depth training course on "***Horizon Europe* (2021-2027)**", by the Agency for the Promotion of European Research (APRE). The aim of the programme was to provide an overview of *Horizon Europe* – the new European Union Framework Programme for Research and Innovation for the period 2021-2027 – to explore the more technical aspects of reporting and project planning, so that employees could acquire the skills necessary to put together a successful *Horizon Europe* proposal. Around 50 employees took part in an *online* training course split into two modules, representing a total of 10 hours of training.

For staff in charge of energy management, in September 2021 we gave them the opportunity to attend an **energy training course** provided by *Energy Saving*. The course structure consisted of three virtual training sessions focusing on three thematic areas linked to the energy sector, including electricity generation, energy efficiency, incentive mechanisms, energy bills and market concepts. Around 35 employees were involved in the follow-up programme.

In 2020, the training programme "**Environmental and social responsibility: setting up and consolidating businesses in the chemical and waste management sectors**" was launched at the Bottrighe site. The programme, which consists of various training activities and multi-stakeholder meetings, is aimed at companies in the chemical and waste sectors. Its aim is to design and implement sustainable production models that encourage a reduction in environmental impact, energy conservation, reuse, recycling and recovery of materials and the conversion of waste into resources. Particular attention is paid to corporate and territorial *welfare*, and to the relationship between businesses and communities from the perspective of a circular economy. The programme concluded in 2021 with Mater-Biotech attending meetings on Network Development Plans: these involved external stakeholders and led to a collaborative *co-design* round table between the company and the community, with the aim of restoring meaning to regional development policies based on an integrated and intersectoral approach and a long-term strategic vision. Lastly, we continued training on **Office 365** to present the features of the Office 365 Suite and explain the benefits of adopting it, experimenting with the practical use of its main tools.

>9,000 hours of training provided in 2021 (average of 18.3 hours per person) in the following areas:

57%
Health and safety

27%
Quality and Environment

9%
Technical specialisation

3%
Cross-job

3%
Soft skills

2%
Legislative Decree 231/01 and privacy

67% online training via **e-learning** platforms or remotely

# DIGITAL, TRANSPARENT, INCLUSIVE: INTERNAL COMMUNICATION BECOMES AN ASSET FOR THE GROUP

In 2021, internal communication, aimed at the Group's employees, took on an increasingly central role, becoming an essential tool for responding to the challenges arising on the one hand from Novamont's complex and diversified environment, where the company population is divided between several sites in Italy and abroad, and on the other from the pandemic and the consequent adoption of remote working.

During the year, Novamont therefore decided to embark on several key initiatives, primarily geared towards developing the corporate intranet as the main channel for the internal communication of messages, content and materials of interest to employees, with a view to digitalisation, sharing, transparency and engagement.

The B-People platform, launched in 2020, has been updated and was enhanced during 2021 with new thematic pages and multimedia content. It is also available in English, so can be used by employees at foreign sites.

The sections and updates on the platform are often the result of an inter-functional collaboration within the company: the various functions that have chosen to showcase their activities and projects and to share materials include Human Resources, QAS, Purchasing, IT and Product Ecology and Environmental Communication.

The intranet is also home to the ***Knowledge Base***, an area launched in 2021 and curated by the Novamont Study Centre. This is intended to compile and share knowledge and understanding within the Group: thematic insights, scientific articles and market analysis are some of the documents made available to company employees.

With a view to continuous improvement and greater transparency, new forms of communication have been adopted such as videos and infographics. At the same time, special sections have been created to illustrate, for example, aspects related to sustainability or economic/financial indicators from the Group's Consolidated Financial Statements and Non-Financial Statement (Sustainability Report). The new tools and actions to foster engagement also include questionnaires, webinars and focus groups: as valuable opportunities for employee feedback on internal activities, these have given a voice to the company's workforce.

The intranet has also become a hub for publicising the company's commitment to local initiatives, highlighting their objectives, milestones and collaborations with local stakeholders and inviting employees to actively take part, thus promoting greater engagement with the Group's projects in the areas concerned.

Digitalisation not only applies to internal communication, but in 2021 was also a real driving force for innovation within the organisation. ***Digital transformation*** projects include configuring collaborative environments and monitoring activities based on Office 365 functionality, which is implemented to support business teams. In addition, to address the challenges posed by the pandemic, the Group decided to adopt new IT tools to digitalise and streamline some of its internal processes, for example by logging site attendance, smart working days and business travel.

# Communication and promotion of sustainability

The quality and transparency of product communication to all stakeholders. The dissemination of knowledge and the creation of a dialogue with citizens to reflect together on the most urgent issues related to sustainability and the ecological transition.

Chapter
7

Communication channels

Event promotion

Communication projects

# Disclosure on Management Approach

## Management approach

In 2020, Novamont issued its **Sustainability Policy** which, on the topic of communication and promotion of sustainability, formalises the Group's commitment to:

- Encouraging the development of an ethical and environmental conscience by raising awareness about the correct management of products, resources and waste throughout the community;
- Guaranteeing the inclusiveness of the various stakeholder groups, including by means of effective and transparent communication.

In applying those principles, Novamont undertakes to ensure a continuous dialogue with its stakeholders, due to the presence of specific functions responsible for the communication of messages within and outside the Group, both at an institutional and product level. The messages are conveyed through a multitude of dialogue and communication channels, designed to make stakeholder communication more effective and to increase participation. In particular, the environmental and social characterisation of our products is conveyed using specific forms of communication. These include technical data sheets[1] (which are published on the Group's website), the Group's *Environmental Position* on specific environmental matters, publications, documents supporting customers and internal company functions, and documents that inform the general public.

Novamont recognises the importance of accurate, comprehensive communication, which enables stakeholders to make informed decisions conscious of the interests involved, the alternatives and the relevant consequences, as mentioned in the Code of Ethics. For this reason, Novamont has developed content for its communications which is intended to ensure that the messages are accurate and transparent. In specific cases, some content is also examined by the legal department.

In the last few years, *social media* has emerged as one of the most important communication channels. We cannot overlook this if we want to communicate quickly and easily with an ever wider and more varied group of users. Conscious of this trend, and in line with our **Social Media Strategy,** in 2021 the Group consolidated its presence and activities on the main *social* media sites.

Other important communication channels include our websites, as well as our direct participation in national and international events and the promotion of marketing campaigns, some of which are organised together with the Group's key partners. Novamont is also supported by a press office, which writes and publishes press releases, articles and interviews with the outside world.

More information about the actions, programmes and initiatives implemented by the Group in relation to this topic are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Strategic Planning and Corporate Communications
- Business Communication and Special Projects
- Product Ecology and Environmental Communication
- Intellectual Property and Legal Affairs

These functions interface with the Group's subsidiaries, actively collaborating with the respective plant management.

## Complaint, consultation and discussion mechanisms

For aspects concerning the material topic, the Group provides the opportunity to request information through its websites www.novamont.com and www.materbi.com, or by emailing csr@novamont.com and info@novamont.com.

1. The technical data sheets are produced in accordance with the European standard EN 16848 *Bio-based products – Requirements for Business to Business communication of characteristics using a Data Sheet*.

# Our communication channels

Sustainability is valuable in itself and in the actions and results achieved along the way. Yet its real strength lies in sharing all of this: by communicating our commitment to our stakeholders, we can be open to accepting everyone's contribution and offering our perspective, while obtaining their points of view in return. Only by doing this is it possible to foster an alternative business culture that belongs to everyone.


## Sustainability Report

Published annually since 2008, this is our main communication tool in the area of Corporate Social Responsibility.


## Websites

The main information about our activities, products and initiatives can be found on the following websites:

| | |
|---|---|
| **novamont.com** | Novamont's corporate website is one of the main channels for our corporate and product communication. |
| **uk.novamont.com<br>france.novamont.com<br>germany.novamont.com<br>northamerica.novamont.com<br>novamontiberia.es** | These contain sections dedicated to communication and contact with the most relevant foreign authorities and markets |
| **materbi.com** | This website is all about Mater-Bi and its applications |
| **agro.novamont.com** | This website contains detailed information about our approach and our products, applied to the world of agriculture |
| **allascopertadelmaterbi.it** | The website of the integrated education project "Alla scoperta del Mater-Bi" ("Discovering Mater-Bi"), aimed at the general public (families, young people, children and schools) |
| **materagro.com** | The website dedicated to the new Novamont-Coldiretti company, which describes the objectives of Mater-Agro |
| **biobagworld.com** | The website of BioBag International, a leading Norwegian group of companies in low-impact solutions for the packaging and organic waste recycling sectors |
| **resoilfoundation.org** | The website of the foundation for soil protection promoted by Novamont, Turin Polytechnic, the University of Bologna and Coldiretti |

## *Social media*

In 2021, Novamont consolidated its *social* media presence with several active channels:

**Facebook**

5,200 followers

facebook.com/novamont

facebook.com/materbi

facebook.com/scoprimaterbi

**Twitter**

6,300 followers

twitter.com/Novamont

twitter.com/materbi

twitter.com/scoprimaterbi

twitter.com/novamont_iberia

twitter.com/novamont_na

**Instagram**

2,100 followers

instagram.com/novamont_group

**LinkedIn**

29,000 followers

linkedin.com/company/Novamont

linkedin.com/company/novamont-iberia

**YouTube**

youtube.com/user/novamontchannel

## Publications

**We are increasingly seen as a leading proponent of the circular bioeconomy, and are therefore called upon to contribute to discussions and Italian and international publications on the subject.**

During the year, we contributed to various studies and reports. These included the report "*100 Italian circular economy stories*", produced by Fondazione Symbola and Enel to describe 100 significant case studies in Italy, in which Novamont explained the innovation behind the introduction of the first compostable food packaging.

Our CEO Catia Bastioli was also invited to recount how the circular bioeconomy can be a tool for local regeneration and a more sustainable future. In this regard, the following publications should be noted:

- **Agroecologia circolare Dal campo alla tavola. Coltivare biodiversità e innovazione**: a book by Giorgio Zampetti and Angelo Gentili, published by Edizioni Ambiente in June 2021. Catia Bastioli contributed to the publication with a chapter entitled "Ripartire dalla terra per la rigenerazione del suolo" ("Soil regeneration from the ground up").
- **Le parole della Transizione Ecologica - Un lessico per l'economia circolare**: a book by Roberto Cavallo, with the collaboration of Roberto Della Seta, Maria Napoli and Emanuela Rosio, published by Edizioni Ambiente in September 2021. Catia Bastioli contributed to the publication with a chapter on the word "Bioeconomy".



Lastly, in 2021 Novamont featured in various newspapers, which quoted its employees on the subject of the company, its model and its sustainable innovations. These included Corriere della Sera, La Stampa and Il Messaggero.

## Events, trade fairs and communication projects

**Participating directly in national and international events, trade fairs and communication projects gave us a valuable opportunity to strengthen dialogue with all our stakeholders, to build new partnerships, and above all, to promote our model of a circular bioeconomy with a view to raising awareness about sustainability.**

Some of the major events in 2021 that Novamont took part in as a reference point for the sector include[2].


### National events

#### 4th France-Italy Family Business Forum

Rome, 1-2 July

The Forum was organised by the Istituto per le Relazioni Economiche Francia-Italia (Institute for Franco-Italian Economic Relations – IREFI), with the backing of BNP Paribas Group and the support of the French Embassy, to talk about recovery plans, new cross-border value chains and the ecological transition. Catia Bastioli was invited to give a talk on the potential of the circular bioeconomy using Novamont as a case study.

#### SUD Progetti per ripartire ("Projects for a fresh start")

Virtual event, 23-24 March

Italy's Minister for the South and Territorial Cohesion, Mara Carfagna, promoted the initiative ahead of the finalisation of the National Recovery and Resilience Plan. Catia Bastioli was invited to talk about how the circular bioeconomy could be a sector that might revitalise southern Italy.

#### La nostra Italia Più verde, innovativa e inclusiva: le proposte di Legambiente per il Piano nazionale di ripresa e resilienza (A greener, more innovative and inclusive Italy: Legambiente's proposals for the National Recovery and Resilience Plan)

Virtual event, 30 March

This event was organised by Legambiente to put forward proposals for the National Recovery and Resilience Plan. Catia Bastioli was invited to take part in the session on the Climate Crisis to talk about how the circular bioeconomy can help revitalise territories and decarbonise the atmosphere, creating virtuous sustainable development models.

#### XIX Coldiretti International Food and Agriculture Forum

Rome, 18-19 November

This event is aimed at managers of agricultural and agro-industrial companies and representatives of the Italian and European financial, economic, social and institutional world who see the future of the agri-food sector as one of the keys to Italy's development. Catia Bastioli took part to present Novamont's circular bioeconomy model, while recounting the long-standing collaboration that led to the creation of Mater-Agro.

#### ECOMONDO

Rimini, 26-29 October

The international trade fair for materials, energy recovery and sustainable development. Novamont helped to organise the event "Prendersi cura del suolo è prendersi cura della vita: politiche per la salute del suolo e innovazione" ("Caring for soil is caring for life: soil health policies and innovation"), sponsored by the Re Soil Foundation, Coldiretti and the *Soil Health and Food Mission*. It also attended various events organised by Res4Africa, *Water Europe*, Legambiente and Cluster Spring.

During 2021, we took part in more than 130 national and international initiatives[3], some of which were organised together with our key partners.

2. Further details of events and communication projects (particularly the "Dialogues with Science" project) can be found in the 2021 Impact Report.

3. More information about events can be found in the News & Media section of our website novamont.com.

## International events

### Bringing £500m of Green Investment to the UK

Virtual event, 15 June

*Bio-based and Biodegradable Association* – BBIA held a virtual round table with government representatives to discuss how the right policies could lead to substantial investment in the UK's biotechnology sector, and in particular the use of chemicals to make innovative materials. Novamont was invited to give a presentation on its circular bioeconomy model.

### Integrating the agricultural primary sector in the sustainable bio-based economy

Virtual event, 29 June

This event was organised by *Bio-based Industries Joint Undertaking* (BBI JU), *Bio-based Industries Consortium* and SCAR *Bioeconomy Strategic Working Group* to show how the agricultural primary sector and the bio-based industry can integrate to create value. Novamont presented the case study of First2Run, the flagship project funded by the BBI JU which in 2020 won the award for achieving the most SDGs.

### IFIB 2021

Virtual event, 1 October

The *International Forum on Industrial Biotechnology and Bioeconomy* (IFIB) is one of the leading forums on industrial biotechnology and the bioeconomy in Europe, and the most important in Italy. Novamont took part to present its circular bioeconomy model, with a specific focus on sustainable integrated agriculture.

### RoGUILTLESSPLASTIC: DIALOGUE TABLE ON GENIUS WASTE

Milan, 7 September

This was one of the key events of the third edition of the international project RoGUILTLESSPLASTIC, held during Milan *Design Week* and focusing on reusing, recycling and upcycling waste. Denmark was *Official Country Partner* of the initiative. Novamont took part to share its view of sustainable finance.

### Plant Based Summit

Reims, France,
23-24 September

Now in its 6th year, the *Plant Based Summit* is the international conference devoted to the bioeconomy. Novamont took part in the event by presenting the case study of its circular bioeconomy model and showing how it can help achieve the *Green Deal* objectives.

### Bioplastex 2021

Virtual event, 30 July

This is India's largest international exhibition and conference on bioplastics, sustainable packaging and recycling. Novamont was an event sponsor and took part in the international conference to talk about the benefits of bioplastics in agriculture.

### 16th European Bioplastics Conference

Digital fair,
30 November – 1 December

This is the main international business forum for the bioplastics industry in Europe. Novamont took part in the conference *Bio-based plastics: measuring and communicating sustainability*, to talk about the importance of proper communication on bioplastics and *bio-based* products.



## Communication projects

### Tech.Emotion – Empower Human Potential

Sky Arte and Sky TG 24, 1 November

An emotional account of how Italy excels in technology, with 27 representatives from the worlds of business, sport, fashion, culture, design, food and academia taking the viewer on a fascinating journey full of inspiration for the future.

That was the premise behind the docuseries "*Tech.Emotion – Empower Human Potential*", produced by *Emotion Network* in association with Facebook and broadcast on Sky Arte and Sky TG24.

The six episodes featured world leaders, Italian entrepreneurs, visionaries and successful artists in an emotional journey across Italy. In the episode "*The great metamorphosis*", which aired on Sky Arte, Oscar Farinetti, founder of Eataly, chatted to Catia Bastioli, writer Alessandro Baricco and yachtsman Giovanni Soldini on the search for harmony between humans and nature.

# Education and training of new generations

Promoting knowledge and a culture of systemic, multidisciplinary sustainability, involving new generations and organising training courses for young researchers and experts in association with schools and universities.

Chapter
8

Future generations

Raising environmental awareness

Edutainment

# Disclosure on Management Approach

## Management approach

Novamont is actively involved in promoting participatory dialogue with schools and universities, in order to raise awareness among the new generations of the topics of the circular bioeconomy and sustainability, together with good environmental practices, and to ease young people's entry into the world of employment, by developing educational, interactive projects aimed at all age groups.

In 2020 Novamont issued its **Sustainability Policy**, which, on the topic of education and training of new generations, formalises the Group's commitment to promoting cultural growth in the bioeconomy sector through multidisciplinary training courses, in collaboration with partners in the public and private sectors.

The *educational* materials produced take into account the level of awareness of those involved and include, for pupils of all ages, the projects "Discovering Mater-Bi" and "Scuola@Novamont". For universities, Novamont continued to sponsor and support the delivery of the Master's in *Bioeconomics in the Circular Economy* (BIOCIRCE). Lastly, the partnership continued with the Istituto Tecnico Superiore di Terni, with delivery of the *Circular Economy Academy* training course.

Other actions, programmes and initiatives implemented by the Group are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Business Communication and Special Projects
- Strategic Planning and Corporate Communications
- Human Resources

These functions interface with the Group's subsidiaries, by actively collaborating with specific functions and the respective site management.

## Complaint, consultation and discussion mechanisms

Further information on aspects relating to the material topic may be requested from the website www.novamont.com or by emailing info@novamont.com.





# Our projects for new generations

We will build a more sustainable world only when everyone knows and is aware of his or her responsibility. For this reason, we are committed to accompanying the growth of the new generations, with training activities on the topics of environmental sustainability.

## Discovering Mater-Bi

In order to engage children, young people and parents in the world of bioplastics, we have developed an integrated education (or "*edutainment*") project called "**Alla scoperta del Mater-Bi**" ("Discovering Mater-Bi"). The project consists of a new web platform, a touring, interactive, multimedia exhibition, science and creative workshops, teaching materials, publications, games and comic strips. Our guide is a character called **Bia de Compostabilis**, a mascot formed of different packaging solutions and products made from Mater-Bi and who was created by the Walt Disney illustrator Paolo Mottura.

**The aim of "Discovering Mater-Bi" is to raise awareness and offer an interactive experience of the world of bioplastics and their life cycle through workshops and games. It also endeavours to show children, young people and their families how, through our everyday actions, we can all make a valuable contribution to the environment we live in.**

In addition, 2021 saw the launch of the new virtual game "**Missione 2050 – breve viaggio nel futuro per contrastare, oggi, i cambiamenti climatici**" ("Mission 2050 – a brief journey into the future to combat climate change today"), created by Novamont in association with the University of Eastern Piedmont. In the game, Bia de Compostabilis, accompanied by GAIA, sets off on a mission, travelling through time to two years that are crucial for the challenges of the future: 2030 and 2050. Each stage of the journey involves games and information to raise players' awareness of sustainability topics and to make them think about issues and scenarios related to climate change.

**To find out more, visit our educational website www.allascopertadelmaterbi.it. This is updated with new games and content designed to raise awareness among younger generations of topics linked to environmental sustainability.**



**In 2021, Bia and the "Discovering Mater-Bi" games and workshops made a stop at**

### GREEN SCHOOL

Adro (province of Brescia), May-June

An environmental education project aimed at teachers and children at pre-school and at the New Green School nursery in Adro. The project, run by CoopCerchio Della Vita and supported by us, was launched in May. It consists of a series of training sessions on bioplastics, providing environmental education for nursery teachers and creative workshops for children, with tableware and bags made from Mater-Bi.

## FA' LA COSA GIUSTA! (DO THE RIGHT THING!)

*Online*edition, March-October

The largest national trade fair about critical consumption and sustainable lifestyles, which is still a virtual event, launched a new collective narration project in 2021: Il Grande Trasloco, an online novel designed to reinterpret the world we live in, share ideas and tools and imagine the future we want to build. The novel is structured around a calendar of live meetings, webinars and workshops. The narrative project consists of six video stories, linked together by the same thread of sustainability and covering topics linked to creativity, the importance of storytelling in teaching and communication, digital education and gamification as a way of learning and talking about complex issues.

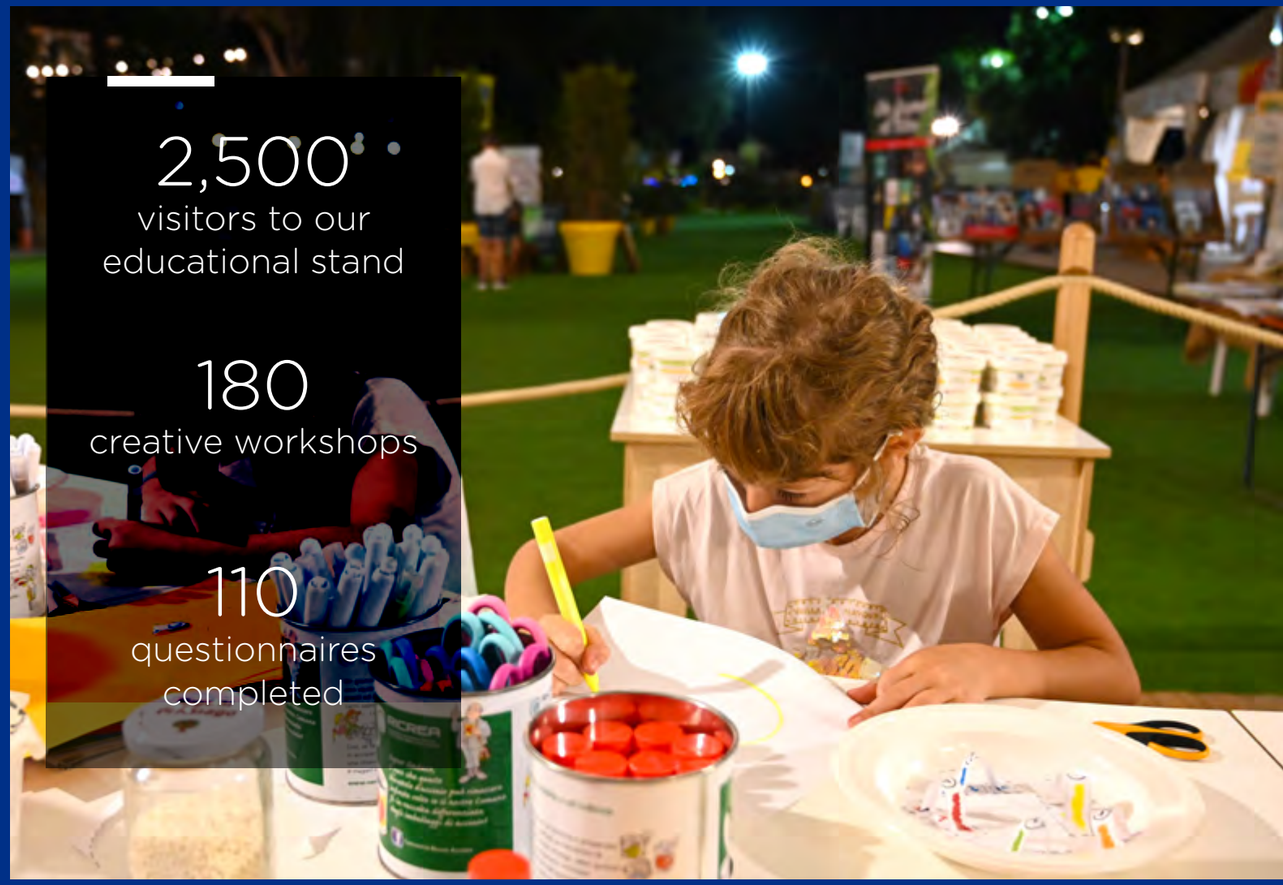
**5,300**
video story views

**14,000**
audience reached

## FESTAMBIENTE

Rispescia (Grosseto), 18-22 August

The Legambiente international ecofestival, dedicated to ecology and solidarity, took place again this year in complete safety and in compliance with Covid-19 rules. We took part in this 33rd edition with the new game "Mission 2050", the augmented reality story "Bia and Treasure Island", "Discovering the soil" and the *exhibit* "Around the microworld in 12 stages". Festambiente 2021 was also an opportunity for us to distribute a short questionnaire to test how much the children had learned and to get their views on sustainability issues.



**2,500**
visitors to our educational stand

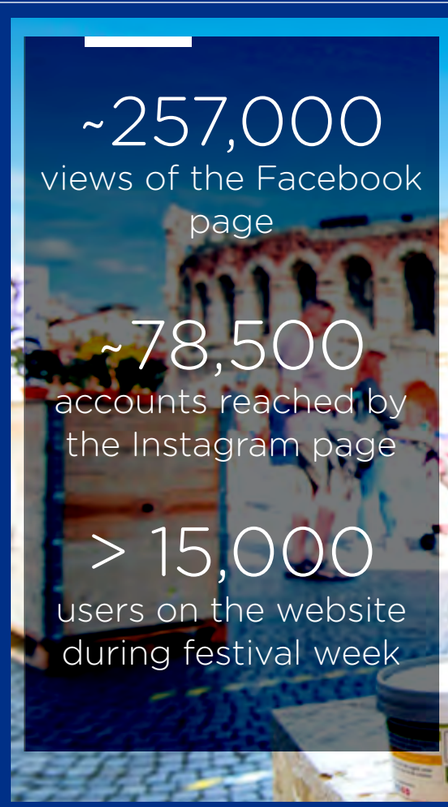
**180**
creative workshops

**110**
questionnaires completed

## SCARABOCCHI

Novara, 17-19 September

This festival emerged from a collaboration between the cultural association Doppiozero and the Fondazione Circolo dei lettori, with the support of Novara city council. It involved three days of workshops, performances and meetings, preceded by workshops at local schools, with the aim of experimenting with new ways of getting together through drawing and imagination. The second edition of the festival focused on ecology, sustainability and being part of a larger world: nature. Bia also went to Scarabocchi, taking part in the creative workshops "Discovering Mater-Bi", inspired by the "Mission 2050" game about climate change.



## TOCATÌ
## INTERNATIONAL FESTIVAL OF GAMES IN THE STREET

Verona, 17-19 September

A festival dedicated to sustainability, organised by the Associazione Giochi Antichi in association with Verona city council. As a partner of this 19th edition, we shared the values and spirit of the festival and the commitment to the UN SDGs: "Accompanying the growth of new generations with awareness-raising activities on sustainability issues is a fundamental part of our commitment to sustainability and transparency towards people, communities, territories, cultural and social assets and activities." This edition of Tocatì featured our bioplastics made from Mater-Bi and the importance of valuable resources such as compost, an essential element of soil protection.


## INTERNATIONAL BOOK FAIR

Turin, 15 October

Italy's largest book fair spans the entire publishing sector, from publishers, writers and booksellers to librarians, agents, illustrators, translators and readers. After being cancelled in 2020 because of the pandemic, the fair returned in 2021 as an in-person event, with a renewed focus on safety, spaces, sustainability and digitisation, enabling us to achieve extremely positive results. This 33rd edition was an opportunity for us to promote our "Mission 2050" workshops for primary schools.

## UPCOMING EVENTS

Casale Monferrato (Alessandria), 28 September, 19 October

An event sponsored by the Rete ScuoleInsieme di Casale Monferrato as a series of webinars to raise awareness about current events. The initiative demonstrates the resilience of schools to the current dramatic events, while offering an opportunity for serious reflection on the complex challenges we face. During the second edition, two key events were held on climate change, coinciding with *Youth4Climate*, Pre-COP26 and *All4Climate in* Milan, in preparation for the 2021 UN *Climate Change Conference* in Glasgow. During these sessions, we presented our "Mission 2050" game about climate change.

## Scuola@Novamont

**Scuola@Novamont is the education project we created to teach pupils and students at secondary schools and universities in Italy about the bioeconomy and circular economy.**

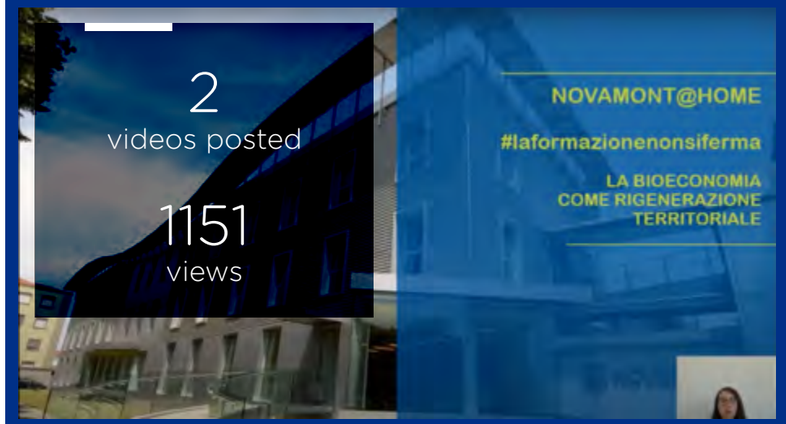
With a view to consolidating and promoting several digital outreach projects created during the pandemic, we worked on developing *online* lessons, video tutorials and home experiments as part of the **#laformazionenonsiferma!** initiative. The aim was to foster cultural growth around the issues of sustainability, bioeconomy and biorefineries, in order to entertain students and supplement the school curriculum. The videos are available on our web and social channels and on our Novamont YouTube channel.


### BIOECONOMY TUTORIALS

A series of informative and educational videos exploring the key concepts of our bioeconomy model


### VIVICHEM BIO EXPERIMENT KIT

We used our Vivichem teaching kit to introduce students to the dynamics and products of a modern biorefinery, with lessons and experiments for young chemists




### NOVAMONT@HOME

Instead of the usual student visits to our premises, we put together video tutorials showcasing Novamont's values, activities and products


### COMPANY PRESENTATIONS – DISTANCE LEARNING

Lessons and webinars with universities and upper secondary schools

**#laformazionenonsiferma**

**is the initiative created to supplement the school curriculum through various distance learning tools:**

Scuola@Novamont is an opportunity to share our values and our way of doing business, focused on reconnecting the economy and society to boost employment and innovation capital in our country, for which young people are the main resource.

## BIOCIRCE

January 2020 saw the start of the fourth edition of the ***Master's in Bioeconomics in the Circular Economy***[1] **(BIOCIRCE)**, the interdisciplinary and international Master's programme aimed at training professionals specialising in the circular bioeconomy about the responsible and sustainable use of renewable resources and biotechnological processes. The project was created in 2017 as a joint initiative between four universities (Bicocca University in Milan, University of Naples Federico II, University of Turin and University of Bologna) in collaboration with a number of non-academic organisations that deal, at different levels, with the bioeconomy and the circular economy (Intesa Sanpaolo, Novamont, GFBiochemicals and PTP Science Park in Lodi).

Due to the pandemic situation, the Master's was put on hold in 2020 before resuming in 2021, when the students completed their six-month internship at the companies that had signed up to the scheme, including Novamont, which hosted one student.

On 19 November 2021, registrations closed for the **fifth edition** of the Master's, which will start in January 2022. For this year's course, there are two different options for registration: a "concentrated" option, specially designed for people who are already in work, which allows participants to take part in the taught part of the course, and a "complete" option, which allows students to attend all classes and also includes a six-month internship.

In addition, the project work and teaching content have been expanded to include a special module on soil, which will directly involve the Re Soil Foundation.

1. More information is available at www.masterbiocirce.com.

## Istituto Tecnico Superiore di Terni

With the aim of **promoting the development of professionals who are increasingly qualified to face the challenges of the bioeconomy**, we work closely with the Istituto Tecnico Superiore di Terni, a technical college. In July 2021, the ***Circular Economy Academy*** training course was officially unveiled, entitled **"Senior technician for the research and development of biotechnology-based products and processes – with specialisation in industrial materials and processes for environmental sustainability"**. Once they have completed their training, students will have an understanding of the needs of public and private-sector companies. They will also be able to identify future lines of development by defining, activating and implementing an integrated management system based on environmental sustainability, the circular economy and innovation. The main activities carried out in association with Novamont range from designing the new syllabus and giving lessons on various topics related to the product life cycle and the principles of the bioeconomy and biorefineries, to arranging work experience.

## Startupper School Academy

On 27 January, the ***Startupper School Academy***, the programme led by Lazio Innova to promote entrepreneurship in schools, returned in digital format. The aim of the programme is to help develop a business mindset among older secondary school pupils in the Lazio region.

For the third consecutive year, we took part in the "**Startupper among school desks**" initiative, the Academy's training course that promotes the idea of entrepreneurship and encourages young people to design and pitch projects, using our bioeconomy model as a case study. This year's partners included Cluster Spring and the Re Soil Foundation, the European *Biovoices* and *Transitio-2BIO* projects, and the *European Bioeconomy Network*.

During the final event held in June, the three winners of the "**Special Bioeconomy Award**" received our Vivichem Kit, an educational pack enabling young people to create a mini-biorefinery through the description of renewable raw materials and the processes that lead to the production of bioproducts and biopolymers. The team that came first also received a cash prize.

## Introduction to the workplace

We work closely with universities and schools to offer opportunities for students to choose a career path and take their first steps in the workplace.

In 2021, we welcomed the following to our Italian sites:

**15**
interns and apprentices

**2**
scholarship holders

**3**
final-year students

# Partnership and collaboration for territorial regeneration

Chapter
9

Networking: partnerships and alliances to foster connections and share knowledge among businesses, non-profit organisations, research institutes, governments and communities.
The development of multidisciplinary value chains and projects to create sustainable solutions, restoring economic, social and environmental value to each region.

Synergies

Common goals

Knowledge-sharing

Development of virtuous local models

# Disclosure on Management Approach

## Management approach

Novamont is committed to creating and promoting the development of partnerships and collaborations to foster connections among the Group and non-profit organisations, the research community, companies, government and the public. Those interactions are essential for a paradigm shift, not only allowing a shared culture to emerge around the circular bioeconomy, but promoting local projects capable of catalysing a wide range of initiatives.

As a result, the Group is developing its business to facilitate the growth of communities through their direct involvement. In particular, Novamont works with local companies and government to further the development and protection of the local area, supporting the implementation of projects for the circular bioeconomy.

Novamont's contribution to territorial regeneration also includes the promotion of initiatives aimed at fostering interaction with local people who work in the social sector and who share our principles of sustainability and the circular economy. This support takes place through sponsorships, donations, the free supply of material and the joint planning of initiatives, forging a path to social inclusion that has major implications for the region.

Territorial regeneration also means taking industrial and research sites that are no longer competitive or are disused, and giving them a new lease of life by building new plants with the application of world-beating technologies. These plants are intended as bioeconomic infrastructure, interconnected biorefineries that are integrated within the local area; the starting point for new value chains, partnerships and alliances.

In 2020, Novamont issued its **Sustainability Policy** which, on the topic of partnership and collaboration for territorial regeneration, formalises the Group's commitment to:

- Collaborating on the development of sustainable economic models that are in line with the principles of the circular economy and of industrial symbiosis, creating alliances with local stakeholders, connecting different sectors and thereby contributing to the creation of value in communities and for the whole of society;
- Signing voluntary programmes for environmental protection and promotion of the sustainable development of the chemical industry, in accordance with values and conduct oriented towards safety, health and the environment.
- Helping to maximise efficiency in the management of organic waste in urban and metropolitan areas, by encouraging biological recycling.

Furthermore, in confirming its commitment to the management of quality, environmental impacts and health and safety in the workplace, in 2020 Novamont updated its **Policy for Quality, Environment and Health and Safety (QEHS)**. This states that the Company and its subsidiaries must undertake, among other things, to adhere to the principles of sustainable resource management, pollution prevention, environmental management, product safety and sustainability, if necessary by joining international voluntary programmes that champion those principles.

As part of its organisation system, the Group established a set of procedures that regulate how company activities are carried out. These include the **Participation in Associations procedure**, which describes how Novamont S.p.A.'s participation in associations is managed.

To have increasingly positive impacts on communities and regions, in 2020 the Group also adopted the framework of the ***B Impact Assessment*** **(BIA)**[1], as the main tool for managing sustainability topics, including those connected with the commitment to communities.

All actions, programmes and initiatives implemented by the Group in relation to the material topic are detailed in the following paragraphs.

## Responsibilities

The personnel involved in managing the aspects linked to this topic are assigned to the following Novamont S.p.A. functions:

- Chief Executive Officer
- Strategic Planning and Corporate Communications
- Corporate Relations and Associations
- Business Communication and Special Projects
- Commercial
- Bioplastics Application Marketing, Technical Assistance and Development

These functions interface with the Group's subsidiaries, by actively collaborating with specific functions and the respective site management. Since 2020, they have operated with the coordination and support of the Sustainability Committee and internal working groups involved in the management of B Corp certification and pursuit of the common benefit.

## Complaint, consultation and discussion mechanisms

Further information on aspects relating to the material topic may be requested from the website www.novamont.com or by emailing info@novamont.com. Complaints may be made by contacting the Supervisory Board. In addition, the Quality, Environment and Safety function monitors any complaints from the local community.

1. More information on the framework can be found on pages 34-35.

# Reindustrialisation of disused sites

The geographical context is a fundamental aspect of the economic and social value of each company. This is particularly true for Novamont, because the concept of sustainability means a two-way exchange with the local area: on the one hand, the local area is a direct source of raw materials, resources and human skills; on the other, it is a partner that can benefit from the value creation, job opportunities and conservation offered by the company.

As a result of continual investment and the application of technologies derived from our research activities, we have been able to convert sites that are no longer competitive or that are disused, transforming them into innovative research centres and flagship plants [2]. These plants are intended not as white elephants, but as bioeconomic infrastructure, interconnected biorefineries that are integrated within the local area; a real starting point for new value chains, partnerships and alliances.

In addition, the revitalisation of disused industrial sites allows us not only to reduce the environmental impacts associated with the protection of virgin land from land take, but to have a positive impact on employment and the local economy. This is the principle behind the locally integrated biorefinery project, which is environmentally, economically and socially sustainable.

Driven by radical environmental, economic and social changes, innovative biotechnologies require multi-criteria studies to test their relevance. From this perspective, in partnership with the Università Cattolica del Sacro Cuore and Wageningen University, in 2021 we began an analysis to assess the social dimension (expressed in terms of indirect FTE) associated with the production of 1,4-BDO, the bio-based building block produced in the Bottrighe plant and used to make fourth-generation Mater-Bi.

In particular, through the input-output (IO) economic model, the study quantified changes in the economic and employment market, contributing to a better assessment of the social dimension of this innovative value chain. The results of the analysis showed that for each direct FTE, there are around 18 indirect FTEs. In July 2021, Novamont completed the process of acquiring the industrial complex at the Terni chemical facility owned by Basell. This transaction, coordinated by the Terni Section of Confindustria Umbria, also involved the Bernardini Group, Ceplast and Mirachrome. It will facilitate the revitalisation of the site, providing a boost to the bioeconomy sector and the economic development of the surrounding area. Further details can be found in the 2021 Impact Report.

2. Additional information can be found in the 2021 Impact Report.

As a result of the technologies derived from our research activities, we have been able to convert sites that are no longer competitive or that are disused, transforming them into innovative research centres and industrial plants.

### Novara

Novamont's Administration and Research Centre is situated in the chemical facility in Novara. It was formerly the offices and guest quarters of the Donegani Institute, which underwent a full restoration. The old buildings were redesigned so that research and administration could coexist in a single building.

### Terni

The production site in Terni was created in 1990 within the Polymer Site, in a building adjacent to the Moplen granulation facility. This had undergone a steady process of deindustrialisation, which ultimately led to its closure.

### Piana di Monte Verna

The Research Centre for the Development of Industrial Biotechnologies was converted from an old pharmaceutical research centre. This opened in 1992 (as Tecnogen S.p.A.) for the production of investigational medicines, and subsequently fell into disuse.

### Patrica

The factory was converted from a plant previously used to manufacture PET; the various sections of the plant were renovated, modified and, in some cases, completely rebuilt, applying the innovative technologies developed by Novamont on a continuous scale.

### Bottrighe

The factory in Adria is the result of the industrial conversion of the previous site, BioItalia (formerly Ajinomoto), which was used to manufacture lysine. In the process of converting the site, Novamont kept 60% of the facilities. All the existing buildings were preserved and renovated, maintaining the characteristic features of the period industrial building.

# Our network

## Associations and institutions

Innovation is not a journey to be taken alone, and our adventure would not have been possible without the contribution of so many partners and associates who, over the years, have believed in and supported the circular approach to the bioeconomy, and who are an integral part of our business model.

To help build a shared culture around topics linked to the circular bioeconomy, we are actively involved in the most significant networks and corporate initiatives, considered reference points for the circular economy and bioeconomy at both national and international levels[3]. **At the international level**, Novamont is the founder and member of the *Bio-based Industries Joint Undertaking – BBI JU*, now the *Circular Bio-based Europe Joint Undertaking* (CBE JU), and is a partner of the *Ellen MacArthur Foundation*. At a national level, we created the Alleanza per l'Economia Circolare (Alliance for the Circular Economy). We also work closely with the Symbola Foundation, and are members of the ICESP (*Italian Circular Economy Stakeholders Platform*).

In 2014, we were also instrumental in establishing the National Technological Cluster of Green Chemistry SPRING, which in 2021 became the Italian Cluster for the Circular Bioeconomy. This is focused on regional development by forging connections among regional authorities, universities, research centres, non-profit organisations and industry, together with the development of multidisciplinary innovation projects.

3. Additional information can be found in the 2021 Impact Report.

### Cluster SPRING

The **Italian Cluster for the Circular Bioeconomy SPRING** was created in 2014 with the aim of bringing together innovation stakeholders from the entire value chain of chemistry from renewable sources, thereby reinforcing an Italian bioeconomic model that reduces $CO_2$ emissions and makes efficient use of resources. As a founder member, Novamont has chaired the Cluster since 2014, the year in which Catia Bastioli was appointed President. This appointment was subsequently confirmed in 2017, and renewed again in September 2020. In 2021, Cluster SPRING had a total of **128 members**, broadly representative of all the various member categories (public-sector research, industry, organisations dedicated to technology transfer and dissemination, regional bodies, non-profit organisations) located throughout the country. SPRING is part of the National Coordination Group for the Bioeconomy, together with four Ministries (MIUR – Education, University and Research, MATTM – Environment, MISE – Economic Development, MIPAAFT – Agricultural, Food and Forestry Policies) and other major national players. It has established a working group with 14 regional authorities, enabling constructive and ongoing dialogue with local bodies that see the bioeconomy as a lever for regional growth and regeneration. In 2021, SPRING updated its **three-year action plan** for the Cluster and took part in three task forces set up by the National Bioeconomy Coordination Group.

- **Ateco codes and *End of Waste*, EER codes and *Carbon Farming*;**
- **Bioeconomic taxonomy for national operational programmes, regional operational programmes, and national and regional Smart Specialisation Strategies (S3);**
- **National Technology Cluster on Timber.**

During the year, the Cluster produced several position papers, drafted contributions to *policy proposals* (particularly those related to the National Recovery and Resilience Plan), and helped draft the report "The bioeconomy in Europe", the reference *report* for the sector, prepared annually in association with Intesa Sanpaolo and Assobiotec to provide a quantitative overview of the bioeconomy at Italian and European level.

## Coldiretti

Coldiretti is the leading farmers organisation at national and European level.

The collaboration with Novamont includes the study of oleaginous crops and the testing of biodegradable products for agricultural use in Italy, focusing on soil regeneration and the creation of new opportunities for farmers. 2021 saw the launch of the company Mater-Agro[4].

In the **agricultural** sector, we have been working with Coldiretti for years to create a new cooperation model that, using the bioplastics value chain and based on vegetable oils, introduces innovation and regeneration into industry and agriculture, establishing innovative supply chains that respect the land, in association with farmers.

Finally, **NGOs and the third sector** provide a vital link with civil society. This enables us to foster a participatory scientific approach based on field experiments, working collectively on local projects able to catalyse a wide range of initiatives. To that end, we work closely with Legambiente, WWF Italia, Marevivo and Terra Felix, to name but a few.

At the **international level**, Novamont also participates in the working groups of the *Witzenhausen Institute*. Since 1990, this has brought together stakeholders from industry, government and the scientific community in Kassel (Germany) to discuss new approaches to waste management and to increase recycling rates.

4. More information about Mater-Agro can be found on page 163 in Chapter 5 “Soil protection and revitalisation”.

## External programs and initiatives

**Of the various initiatives in the economic, environmental and social fields developed externally that we have taken part in or supported, we can mention:**

**2012**

**Responsible Care:**
a voluntary programme to promote the Sustainable Development of the global Chemical Industry.

**2016**

**Italy Towards Zero Organic Waste in Landfills:**
The strategy promoted by the *Kyoto Club* and the Foundation for Sustainable Development, which seeks to bring an end to the disposal of organic waste in landfills.

**2017**

**Operation Clean Sweep:**
an international initiative to prevent the loss of plastic pellets and their release into the aquatic environment

**Alliance for the Circular Economy:**
an initiative signed by companies and representatives of the most important Made in Italy production chains to accelerate the adoption of the circular economy in Italy.

**2018**

**New Plastics Economy Global Commitment:**
the programme promoted by the Ellen MacArthur Foundation to eliminate the pollution caused by plastic, at source, by setting increasingly ambitious targets.

**2019**

**4 per mille initiative:**
an international initiative launched by France at the COP 21, to bring together, voluntarily, all subjects in the public and private sectors, as part of the Lima-Paris action plan.

**Life Cycle initiative:**
an initiative promoted as part of the joint UNEP (United Nations Environment Programme)/SETAC (Society of Environmental Toxicology and Chemistry) partnership, to encourage the global use of the Life Cycle Thinking (LCT) approach, by public and private decision makers.

**Assisi Manifesto:**
a manifesto to build a world that is safer, more civil and polite, which has already been signed by more than 50 representatives of the economic, social and cultural worlds.

**ICESP platform:**
a *network* of*networks* whose goal is to create a national point of convergence on initiatives, experiences, prospects and expectations about the circular economy, which System Italy is seeking and can represent in Europe.

**WHP Novara – Workplace Health Promotion:**
a participation programme in which businesses undertake to implement actions, in the field of promoting health and sustainable development.

**2020**

**"A solution to build back better: the circular economy":**
Catia Bastioli signed the manifesto produced by the Ellen MacArthur Foundation, to ask for actions to speed up the transition to a circular economy, in response to the impacts of the pandemic emergency and to global challenges[5].

**"Coming out of the pandemic with a new Green Deal for Italy":**
Novamont signed the manifesto published on 7 May by the Foundation for Sustainable Development, with the goal of intervening in the national and European debate on measures to relaunch the economy[6].

**Re Soil Foundation:**
a foundation promoted in 2020 by the University of Bologna, Coldiretti, Novamont and Politecnico di Torino to drive real change, starting with soil protection and the key concept of territorial regeneration.

5 - www.novamont.com/leggi-news/catia-bastioli-tra-i-firmatari-della-dichiarazione-a-solution-to-build-back-better-the-circular-economy-di-ellen-macarthur-foundation
6 - www.novamont.com/leggi-news/manifesto-uscire-dalla-pandemia-con-un-nuovo-green-deal-per-litalia/

# THE UNITED NATIONS GLOBAL COMPACT

The **United Nations Global Compact** is a voluntary strategic initiative for companies, towns, non-profits and organizations that intend to align their goals with the principles put forward by the international community to encourage sustainable development. Since May 2020, Novamont S.p.A. has supported, promoted and applied, within its sphere of influence, the **ten principles of the *Global Compact*** in the area of **human rights**, **labour**, **environmental protection** and **anti-corruption**.

With our signature, we join the more than 14,000 organizations that have already adhered to an international network made up of virtuous players, concrete tools and opportunities to share, for the promotion of good corporate practices. With a view to constant improvement, we renew our commitment to supporting a corporate model that strives to achieve sustainable development, which, for us is a mark of identity.

By joining this initiative, we undertake to:

- **Promote and spread among our stakeholders the principles of the Global Compact;**
- **Implement these principles within the corporate culture and strategy;**
- **Produce an annual Communication on Progress (COP) for the reporting of the activities carried out to protect and promote the ten principles.**

# THE TEN PRINCIPLES

HUMAN RIGHTS | ENVIRONMENT | Anti-corruption | LABOUR

| | |
|---|---|
| Principle I | Businesses should support and respect the protection of internationally proclaimed human rights |
| Principle II | Make sure that they are not complicit in human rights abuses |
| Principle III | Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining |
| Principle IV | The elimination of all forms of forced and compulsory labour |
| Principle V | The effective abolition of child labour |
| Principle VI | The elimination of discrimination in respect of employment and occupation |
| Principle VII | Businesses should support a precautionary approach to environmental challenges |
| Principle VIII | Undertake initiatives to promote greater environmental responsibility |
| Principle IX | Encourage the development and diffusion of environmentally friendly technologies |
| Principle X | Businesses should work against corruption in all its forms, including extortion and bribery |

## Memberships to associations and organizations

Collaboration among all of the players in the sector is indispensable for creating a context in which environmental and social value have the same, central position as economic aspects. This is why we belong to national and international associations that are working towards this goal, by cooperating in respect of mutual interests.

| ITALIAN ASSOCIATIONS | | |
|---|---|---|
| AIDB - ASSOCIAZIONE ITALIANA DOCUMENTALISTI BREVETTUALI | AIRI - ASSOCIAZIONE ITALIANA PER LA RICERCA INDUSTRIALE | ASSOBIOPLASTICHE |
| ASSOBIOTEC | ASSOFERTILIZZANTI | ATIA - ISWA ITALIA |
| BIOREPACK | CHIMICA VERDE BIONET | CIRCULAR ECONOMY NETWORK |
| CLUB DONEGANI | CLUB OF ROME | CLUSTER TECNOLOGICO NAZIONALE DELLA BIOECONOMIA CIRCOLARE – SPRING |
| CNVV - CONFINDUSTRIA NOVARA VERCELLI VALSESIA | CONFINDUSTRIA TERNI | CONSIGLIO NAZIONALE DELLA GREEN ECONOMY |
| CONSORZIO IBIS | CONSORZIO ITALIANO COMPOSTATORI | FEDERCHIMICA |
| FILIERA ITALIA | FONDAZIONE MARISA BELLISARIO | FONDAZIONE SODALITAS |
| FONDAZIONE SVILUPPO SOSTENIBILE | FORAZ - CONSORZIO INTERAZIENDALE PER LA FORMAZIONE PROFESSIONALE | ISTITUTO ITALIANO IMBALLAGGIO |
| ITALIA DECIDE | KYOTO CLUB | OSSERVATORIO SULLA CRIMINALITÀ NELL'AGRICOLTURA E SUL SISTEMA AGROALIMENTARE |
| PROPLAST | RETE ITALIANA LCA | SOCIETÀ DI ORTOFRUTTICOLTURA ITALIANA |
| SYMBOLA | UMBRIA SPRING | UNI |
| UNICHIM | UNIPLAST | |

| INTERNATIONAL ASSOCIATIONS | | |
|---|---|---|
| ABA – AUSTRALIASIAN BIOPLASTIC ASSOCIATION | AMB – ASOCIACION MEXICANA DE BIOPLASTICOS | AMORCE – ASSOCIATION NATIONALE DES COLLECTIVITES, DES ASSOCIATIONS ET DES ENTREPRISES POUR LA GESTION DES DECHETS, DE L'ENERGIE ET DES RESEAUX DE CHALEUR |
| ANPEA – ASSOCIATION NATIONALE PROFESSIONNELLE POUR LES ENGRAIS ET AMENDEMENTS | ASOBIOCOM – ASOCIACIÓN ESPAÑOLA DE PLÁSTICOS BIODEGRADABLES COMPOSTABLES | ASSOCIATION CHIMIÈ DU VEGETAL |
| AVFALL SVERIGE | BBIA – BIO-BASED AND BIODEGRADABLE INDUSTRIES ASSOCIATION | BELGIAN BIO PACKAGING |
| BIO-BASED INDUSTRIES CONSORTIUM | BNPP – BUREAU DE NORMALISATION DES PLASTIQUES ET DE LA PLASTURGIE | BPI – BIODEGRADABLE PRODUCTS INSTITUTE |
| CALIFORNIA GROCERS ASSOCIATION | CAMERA DI COMMERCIO ITALIANA IN CINA | C.A.R.M.E.N. E.V |
| CEFIC – EUROPEAN CHEMICAL INDUSTRY COUNCIL | CIPA – COMITÈ INTERNATIONAL DES PLASTIQUE EN AGRICULTURE | CLUB BIOPLASTIQUE |
| COMPOST COUNCIL OF CANADA | CRE – COMPOSTING & ANAEROBIC DIGESTION ASSOCIATION OF IRELAND | EPNOE – EUROPEAN POLYSACCHARIDE NETWORK OF EXCELLENCE |
| EUROPABIO | EUROPEAN BIOPLASTICS | EUROPEAN COMPOST NETWORK |
| EUROPEN – EUROPEAN ORGANISATION FOR PACKAGING AND THE ENVIRONMENT | FPI – FOOD SERVICE PACKAGING ASSOCIATION | FÖRDERVEREIN VKU |
| FPA – FOODSERVICE PACKAGING ASSOCIATION | GKL E.V | GLOBAL COMPACT |
| GMI – GREEN MANAGEMENT INSTITUTE | HERO E.V | HOLLAND BIOPLASTICS |
| ILLINOIS FOOD SCRAP COALITION | INSTITUT DE L'ÉCONOMIE CIRCULAIRE | JBPA – JAPAN BIOPLASTICS ASSOCIATION |
| MILJØPOLITISK NETTVERK I DENMARK | MUOVIYHDISTYS RY - THE FINNISH PLASTICS ASSOCIATION | NERC (NORTH EAST RECYCLING ASSOCIATION) |
| NORDIC BIOPLASTICS ASSOCIATION | NYC COMMUNITY COMPOST | PBPC – PLANT BASED PRODUCTS COUNCIL |
| PLASTICS EUROPE | PIA – PLASTICS INDUSTRY ASSOCIATION | REA – RENWABLE ENERGY ASSOCIATION |
| RUNDER TISCH BAW | SERPBIO – SERVICES ÉTIDES POLYMÈRES BIODÉGRADABLES | SPC - SUSTAINABLE PACKAGING COALITION |
| THE FINNISH PLASTICS ASSOCIATION | TPORGANICS | USCC - US COMPOSTING COUNCIL |
| VERBUND KOMPOSTIERBARE PRODUKTE E.V. | WRAP | |

# Local regeneration projects

We believe that interaction with the community and the surrounding area is essential for a paradigm shift, as part of a vision that looks not only at products but also at promoting sustainability and best practices locally.

In promoting those principles, we work with local companies and government to facilitate the development and protection of the local area and the environment, supporting the creation of circular bioeconomic projects on the ground. These are projects that involve local authorities, such as projects to support the separate collection of organic waste in Milan and Turin, or during the 2021 Alpine Ski World Championships, or in Serbia and Mozambique. They also include projects for the regeneration and protection of the landscape, such as the initiative launched in Pantelleria National Park[7].

7. Other projects can be found in the 2021 Impact Report.

## Organic waste management projects in Turin

In Europe's largest, multi-ethnic fruit and vegetable market at Porta Palazzo, Turin, we launched the **RePoPP project to exploit organic waste**, an initiative promoted by Turin City Council, Novamont, the non-profit organisation "Eco dalle Città", and the AMIAT – Iren Group, with the scientific coordination of the University of Gastronomic Sciences in Pollenzo (UNISG). Porta Palazzo is the largest, most culturally diverse food market in Turin, and the largest outdoor market in Europe. Each year, it produces some 4,000 tonnes of waste, with an estimated disposal cost of about €1.8 million. The aim of the project is to **set up an efficient system of collecting organic waste and fruit and vegetable products that could still be used in the market.**

Other projects are linked to RePoPP and supported by Novamont, such as "Fungicoltura al Mercato Centrale" – where coffee grounds are recovered from the cafe to grow mushrooms – and "Cucina al Mercato Centrale", a project in which leftovers are donated to women living in a shelter for the homeless and people in need.

Also in the Turin area, on 22 April a press conference was held to launch *Bag TO Nature*, a project promoted by Ascom, Epat Torino and Turin City Council, with the support of AMIAT – Iren Group and Novamont. The project was created to raise awareness among food sector operators in Turin of the issue of reducing waste and combating food waste, while encouraging consumers to protect the environment by disposing of waste properly. As part of the initiative, 40,000 food bags made from paper and compostable Mater-Bi bioplastic are supplied free of charge to Turin companies in the food sector so that leftover food can be taken away or delivered to be eaten at home. The bags are made by S.I.S., a leading paper manufacturer, with the support of Novamont.

## Protecting biodiversity on the island of Pantelleria

In November 2020, on Pantelleria, the go-ahead was given for the implementation of an agreement signed by Novamont, the National Parks Organisation on the Island and the Department of Agricultural, Food and Forest Sciences at the University of Palermo. The aim of the agreement is to **promote the conservation of the agricultural landscape and biodiversity, to design systems that have a low environmental impact and to test innovative agronomic practices, in order to reduce water and energy consumption and waste production.** In 2021, activities continued for the promotion of sustainable farming practices by means of tests on the efficacy of the Ager-Bi formulation in viticulture, the use of biodegradable mulching for horticulture and transplants of vines and caper bushes, and trials involving of the use of mulching film for covering the greenhouses used to dry zibibbo, an Italian grape variety.

## Promoting the bioeconomy in Serbia

With a view to promoting the spread of circular and sustainable systems outside Italy, on 29 January 2020, we signed a Collaboration Protocol with the Serbian government to **design a circular bioeconomic model that allows Serbia to develop low-impact agricultural and environmental systems**. The first phase of the project involves the development of a pilot case for the optimisation of urban solid waste management in the city of Gornji Milanovac, making this model a virtuous example of waste management that can be replicated in other parts of the country.

# Community initiatives

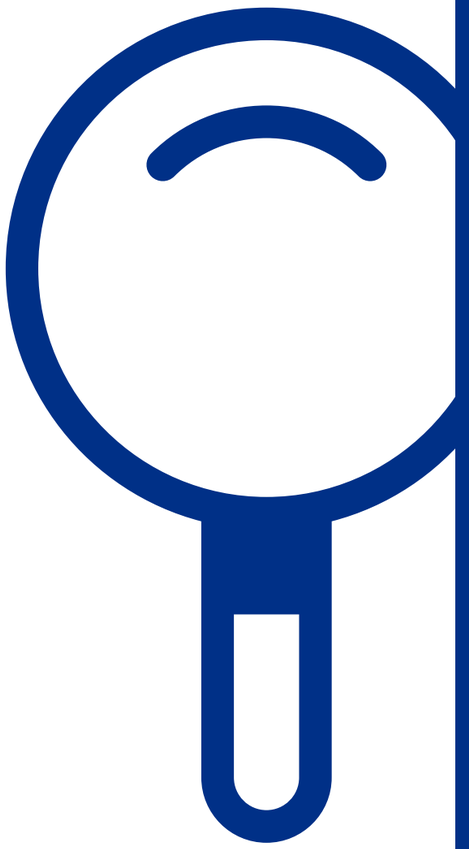
In 2021, we allocated funds to several associations in the Novara area, involved in promoting art, culture, awareness-raising and education locally.

As part of our collaboration with the **Circolo dei Lettori**, we helped launch the Scarabocchi festival, with the participation of the cultural association Doppiozero and Novara City Council. The festival consists of three days of workshops, performances and meetings, preceded by workshops in the city's schools. The collaboration with the Circolo dei Lettori Foundation has also extended to other projects, including Dialoghi con la Scienza ("Dialogues with Science"), a series of five events held in Novara to reflect, among other things, on the most pressing scientific issues and their most compelling narratives. In addition, we have signed a collaboration agreement with the Foundation to set up various joint initiatives in the Novara area over the two-year period 2021-2022. The aim is to raise public awareness of sustainability issues and to promote a model of cultural, economic and social regeneration.

In **the field of art and culture**, for years we have been supporting Novara Jazz, an international festival dedicated to jazz, electronic music and visual arts projects, organised by the cultural association Rest-Art. In 2021, we supported the crowdfunding campaign "Ripartiamo dai bambini" ("Let's give children a fresh start"), also the brainchild of Rest-Art. The idea behind it was to offer younger audiences recreational activities and experiences based on music, as a reboot after the restrictions imposed by the pandemic. Outside the Novara area, we supported the Time in Jazz International Festival, a major European cultural event held in Berchidda (Sassari). During the year we also decided to support the initiatives and projects of Nòva, Novara's first cultural youth centre. This originated from a public-private partnership that wanted to repurpose a disused urban space and turn it into a forum for expression, culture and active civic participation.

In terms of **innovation**, we sponsored the Re-Food project, organised by the Department of Agriculture and the Department of Architecture at the University of Naples Federico II, in collaboration with the ADI (Associazione per il Disegno Industriale). The project invites students and designers to submit ideas on the theme of re-using and/or recycling waste materials from agro-food chains. The participants are encouraged to be creative about rethinking waste materials through the design and production of everyday objects. In the area of **training**, we supported the drafting of "L'Atlante Delle Buone Pratiche - Filiere Sostenibili Della Pesca e Dell'acquacoltura" ("The Atlas of Best Practices – Sustainable Fisheries and Aquaculture Chains"). This is the brainchild of the Associazione Chimica Verde Bionet, which has joined forces with Legacoop Agroalimentare Dipartimento Pesca to raise awareness of the surprising ability of fisheries and aquaculture companies to adapt to the ecological transition.

For **Christmas** we eventually decided to support the project promoted by Coldiretti and Fondazione Campagna Amica, aimed at donating parcels of quality farm produce from Italy to families in need.

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| | 303-3 Water withdrawal | 120 | |
| | 303-4 Water discharge | 120 | |
| GRI 305 Emissions 2016 | 305-1 Direct (Scope 1) GHG emissions | 117 | |
| | 305-2 Energy indirect (Scope 2) GHG emissions | 118 | |
| | 305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions | 118 | |
| GRI 306 Waste 2020 | 306-1 Waste generation and significant waste-related impacts | 88 | |
| | 306-2 Management of significant waste-related impacts | 121 | |
| | 306-3 Waste generated | 121 | |
| GRI 412 Human Rights Assessment | 412-1 Operations that have been subject to human rights reviews or impact assessments | 105-106 | |
| **COMPLIANCE AND QUALITY OF PRODUCTS AND CUSTOMER CARE** | | | |
| GRI 103 Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | XX, 124 | |
| | 103-2 The management approach and its components | 125-128 | |
| | 103-3 Evaluation of the management approach | 125-128 | |
| GRI 403: GRI 403 Occupational Health and Safety 2018 | 403-1 Occupational health and safety management system | 129-130, 168 | |
| GRI 416 Customer Health and Safety 2016 | 416-1 Assessment of the health and safety impacts of product and service categories | 125-128 | |
| GRI 417 Marketing and Labeling 2016 | 417-1 Requirements for product and service information and labeling | 126, 143-144 | |

| GRI STANDARD | DISCLOSURE | PAGES | NOTES/OMISSIONS |
|---|---|---|---|
| **143-144 SOIL PROTECTION AND REVITALIZATION** | | | |
| GRI 103 Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | XX,152 | |
| | 103-2 The management approach and its components | 153-154 | |
| | 103-3 Evaluation of the management approach | 153-154 | |
| **RESPONSIBILITY TOWARDS THE COLLABORATORS** | | | |
| GRI 103 Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | XXI,166 | |
| | 103-2 The management approach and its components | 167-170 | |
| | 103-3 Evaluation of the management approach | 167-170 | |
| GRI 401 Employment 2016 | 401-1 New employee hires and employee turnover | 175-176 | Due to specific confidentiality reasons, the breakdown of turnover data by age group and gender has been provided exclusively with reference to the Group's Italian sites. |
| GRI 403 Occupational Health and Safety 2018 | 403-1 Occupational health and safety management system | 168 | |
| | 403-2 Hazard identification, risk assessment, and incident investigation | 168 | |
| | 403-3 Occupational health services | 168 | |
| | 403-4 Worker participation, consultation, and communication on occupational health and safety | 168 | |
| | 403-5 Worker training on occupational health and safety | 169, 178 | |

| GRI STANDARD | DISCLOSURE | PAGES | NOTES/OMISSIONS |
|---|---|---|---|
| | 403-6 Promotion of worker health | 168,180 | |
| | 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships | 167-169 | |
| | 403-8 Workers covered by an occupational health and safety management system | 168 | |
| | 403-9 Work-related injuries | 178 | The information necessary for the reporting of point 403-9 b, relating to workers who are not employees but whose work and/or workplace is controlled by the organization, is not available as it falls outside the perimeter of Novamont S.p.A. |
| | 403-10 Work-related ill health | 178 | |
| GRI 404 Training and Education 2016 | 404-1 Average hours of training per year per employee | 181,183 | For training on the subject of Health and Safety and for the foreign sites, the breakdown of hours of training by gender and employee category is not currently monitored; consequently, it is not possible to indicate this breakdown in the overall hours of training. |
| GRI 405 Diversity and Equal Opportunity 2016 | 405-1 Diversity of governance bodies and employees | 171,174 | The foreign companies were excluded from the reporting of the following disclosure, because the "foreign professional categories" are not comparable with the Italian categories; consequently, a homogeneous classification cannot be made. Moreover, the breakdown of employees by age group and gender could be a discriminatory element in some socio-economic contexts. |
| **COMMUNICATION AND PROMOTION OF SUSTAINABILITY** | | | |
| GRI 103 Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | XXI, 188 | |
| | 103-2 The management approach and its components | 189-190 | |
| | 103-3 Evaluation of the management approach | 189-190 | |
| **EDUCATION AND TRAINING OF NEW GENERATIONS** | | | |
| GRI 103 Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | XXI, 200 | |
| | 103-2 The management approach and its components | 201 | |
| | 103-3 Evaluation of the management approach | 201 | |

| GRI STANDARD | DISCLOSURE | PAGES | NOTES/OMISSIONS |
|---|---|---|---|
| **PARTNERSHIP AND COLLABORATION FOR TERRITORIAL REGENERATION** | | | |
| GRI 103 Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | XXI, 218 | |
| | 103-2 The management approach and its components | 219-220 | |
| | 103-3 Evaluation of the management approach | 219-220 | |

# Other indicators

| INDICATOR | METHODOLOGY | PAGES |
|---|---|---|
| **MATERIAL TOPICS** | | |
| **RESEARCH AND INNOVATION** | | |
| No. of patents and patent applications | - | 51 |
| Percentage of turnover in R&D | Research costs incurred (on personnel, general costs, instruments and equipment, patents, purchases of goods and services of a technological nature) / Turnover | 50 |
| No. of partnerships with Italian and international companies in the field of the circular bioeconomy | - | 58 |
| **VALUE CHAIN AND PRODUCT SUSTAINABILITY** | | |
| Circular Flow Index | Percentage of turnover linked to circular processes and materials | 122 |
| **COMPLIANCE AND QUALITY OF PRODUCTS AND CUSTOMER CARE** | | |
| Percentage of products with compostability certification | Percentage of Mater-Bi grades sold and certified in accordance with EN 13432 | 147 |
| Complaints Index | (No. Complaints + No. Reports) / tonne of product sold × 1,000 | 150 |
| Percentage of customer satisfaction | No. of questionnaires with “satisfied” or “very satisfied” results / Total no. of questionnaires received | 149 |
| Percentage of product sold to repeat customers | Tonnes of Mater-Bi sold to brand licensee customers / Tonnes of Mater-Bi sold in total | 150 |
| **143-144 SOIL PROTECTION AND REVITALIZATION[1]** | | |
| No. of participants involved in the outreach activities of the Re Soil Foundation | - | 161 |
| **COMMUNICATION AND PROMOTION OF SUSTAINABILITY** | | |
| No. of national and international events involving Novamont | - | 196 |
| No. of followers on Novamont’s social channels | - | 193 |
| **EDUCATION AND TRAINING OF NEW GENERATIONS** | | |
| Engagement data for educational and training initiatives (e.g. no. of visitors, no. of classes involved, etc.) | - | 204-212 |
| No. of interns, apprentices, scholarship holders and final-year students | - | 216 |
| **PARTNERSHIP AND COLLABORATION FOR TERRITORIAL REGENERATION[1]** | | |
| No. associated with the Cluster Spring | - | 226 |

1. Other KPIs associated with the material topic are reported in the 2021 Impact Report.

# Correlation between the Principles of the UN Global Compact and the GRI Standards Disclosures

| AREA | PRINCIPLES | GRI STANDARDS DISCLOSURES |
|---|---|---|
| HUMAN RIGHTS | Principle I - Businesses should support and respect the protection of internationally proclaimed human rights; | 412-1 |
| | Principle II - Make sure that they are not complicit in human rights abuses | 412-1 |
| LABOUR | Principle III - Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; | 102-41 |
| | Principle IV - The elimination of all forms of forced and compulsory labour; | - [2] |
| | Principle V - The effective abolition of child labour; | - [2] |
| | Principle VI - The elimination of discrimination in respect of employment and occupation. | 102-8; 401-1; 401-3; 404-1; 405-1; 406-1 |
| ENVIRONMENT | Principle VII - Businesses should support a precautionary approach to environmental challenges; | 301-1; 302-1; 303-1; 305-1; 305-2; 305-7 |
| | Principle VIII - Undertake initiatives to promote greater environmental responsibility; and | 301-1; 302-1; 302-3; 303-1; 303-2; 303-3; 303-4; 305-1; 305-2; 305-7; 306-2; 307-1 |
| | Principle IX - Encourage the development and diffusion of environmentally friendly technologies | 301-1; 302-1; 302-3; 305-1, 305-2, 305-7; 306-2 |
| ANTI-CORRUPTION | Principle X - Businesses should work against corruption in all its forms, including extortion and bribery. | 102-16; 102-17; 205-3 |

2. The following disclosures were processed without the use of specific GRI indicators on pages 86-87 and 105-106 in Chapter 3 "Value chain and product sustainability" and on page 167 in Chapter 4 "Responsibility towards employees".





# Assurance letter

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***Independent auditor's report on the consolidated non-financial statement***

*pursuant to article 3, paragraph 10, of Legislative Decree no. 254/2016 and article 5 of CONSOB regulation no. 20267 of January 2018*

To the Board of Directors of Novamont SpA

Pursuant to article 3, paragraph 10, of Legislative Decree No. 254 of 30 December 2016 (the "Decree") and article 5 of CONSOB Regulation No. 20267/2018, we have undertaken a limited assurance engagement on the consolidated non-financial statement of Novamont SpA and its subsidiaries (the "Group" or "Novamont Group") for the year ended 31 December 2021 prepared in accordance with article 4 of the Decree, and approved by the Board of Directors on 27 May 2022 (the "NFS").

Our review does not extend to the information set out in the paragraph "EU Taxonomy" of the NFS, required by article 8 of European Regulation 2020/852.

***Responsibilities of the Directors and the Board of Statutory Auditors for the NFS***

The Directors are responsible for the preparation of the NFS in accordance with articles 3 and 4 of the Decree and with the "Global Reporting Initiative Sustainability Reporting Standards" defined in 2016, and updated to 2020, by the GRI - Global Reporting Initiative (the "GRI Standards"), identified by them as the reporting standard.

The Directors are also responsible, in the terms prescribed by law, for such internal control as they determine is necessary to enable the preparation of a NFS that is free from material misstatement, whether due to fraud or error.

Moreover, the Directors are responsible for identifying the content of the NFS, within the matters mentioned in article 3, paragraph 1, of the Decree, considering the activities and characteristics of the Group and to the extent necessary to ensure an understanding of the Group's activities, its performance, its results and related impacts.

Finally, the Directors are responsible for defining the business and organisational model of the Group and, with reference to the matters identified and reported in the NFS, for the policies adopted by the Group and for the identification and management of risks generated and/or faced by the Group.

The Board of Statutory Auditors is responsible for overseeing, in the terms prescribed by law, compliance with the Decree.

*PricewaterhouseCoopers SpA*

Sede legale: **Milano** 20145 Piazza Tre Torri 2 Tel. 02 77851 Fax 02 7785240 Capitale Sociale Euro 6.890.000,00 i.v. C.F. e P.IVA e Reg. Imprese Milano Monza Brianza Lodi 12979880155 Iscritta al n° 119644 del Registro dei Revisori Legali - Altri Uffici: **Ancona** 60131 Via Sandro Totti 1 Tel. 071 2132311 - **Bari** 70122 Via Abate Gimma 72 Tel. 080 5640211 - **Bergamo** 24121 Largo Belotti 5 Tel. 035 229691 - **Bologna** 40126 Via Angelo Finelli 8 Tel. 051 6186211 - **Brescia** 25121 Viale Duca d'Aosta 28 Tel. 030 3697501 - **Catania** 95129 Corso Italia 302 Tel. 095 7532311 - **Firenze** 50121 Viale Gramsci 15 Tel. 055 2482811 - **Genova** 16121 Piazza Piccapietra 9 Tel. 010 29041 - **Napoli** 80121 Via dei Mille 16 Tel. 081 36181 - **Padova** 35138 Via Vicenza 4 Tel. 049 873481 - **Palermo** 90141 Via Marchese Ugo 60 Tel. 091 349737 - **Parma** 43121 Viale Tanara 20/A Tel. 0521 275911 - **Pescara** 65127 Piazza Ettore Troilo 8 Tel. 085 4545711 - **Roma** 00154 Largo Fochetti 29 Tel. 06 570251 - **Torino** 10122 Corso Palestro 10 Tel. 011 556771 - **Trento** 38122 Viale della Costituzione 33 Tel. 0461 237004 - **Treviso** 31100 Viale Felissent 90 Tel. 0422 696911 - **Trieste** 34125 Via Cesare Battisti 18 Tel. 040 3480781 - **Udine** 33100 Via Poscolle 43 Tel. 0432 25789 - **Varese** 21100 Via Albuzzi 43 Tel. 0332 289293 - **Verona** 37135 Via Francia 21/C Tel. 045 8263001 - **Vicenza** 36100 Piazza Pontelandolfo 9 Tel. 0444 393311

**www.pwc.com/it**

***Auditor's Independence and Quality Control***

We are independent in accordance with the principles of ethics and independence set out in the Code of Ethics for Professional Accountants published by the International Ethics Standards Board for Accountants, which are based on the fundamental principles of integrity, objectivity, competence and professional diligence, confidentiality and professional behaviour. Our audit firm adopts International Standard on Quality Control 1 (ISQC Italia 1) and, accordingly, maintains an overall quality control system which includes processes and procedures for compliance with ethical and professional principles and with applicable laws and regulations.

***Auditor's responsibilities***

We are responsible for expressing a conclusion, on the basis of the work performed, regarding the compliance of the NFS with the Decree and the GRI Standards. We conducted our work in accordance with International Standard on Assurance Engagements 3000 (Revised) – Assurance Engagements Other than Audits or Reviews of Historical Financial Information ("ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. The standard requires that we plan and apply procedures in order to obtain limited assurance that the NFS is free of material misstatement. The procedures performed in a limited assurance engagement are less in scope than those performed in a reasonable assurance engagement in accordance with ISAE 3000 Revised, and, therefore, do not provide us with a sufficient level of assurance that we have become aware of all significant facts and circumstances that might be identified in a reasonable assurance engagement.

The procedures performed on the NFS were based on our professional judgement and consisted in interviews, primarily of company personnel responsible for the preparation of the information presented in the NFS, analyses of documents, recalculations and other procedures designed to obtain evidence considered useful.

In detail, we performed the following procedures*:*

1. analysis of the relevant matters reported in the NFS relating to the activities and characteristics of the Group, in order to assess the reasonableness of the selection process used, in accordance with article 3 of the Decree and with the reporting standard adopted;
2. analysis and assessment of the criteria used to identify the consolidation area, in order to assess their compliance with the Decree;
3. comparison of the financial information reported in the NFS with the information reported in the Novamont Group's consolidated financial statements*;*
4. understanding of the following matters:
   a. business and organisational model of the Group with reference to the management of the matters specified by article 3 of the Decree;
   b. policies adopted by the Group with reference to the matters specified in article 3 of the Decree, actual results and related key performance indicators;
   c. key risks generated and/or faced by the Group with reference to the matters specified in article 3 of the Decree.

   With reference to those matters, we compared the information obtained with the information presented in the NFS and carried out the procedures described under point 5 a) below;
5. understanding of the processes underlying the preparation, collection and management of the significant qualitative and quantitative information included in the NFS.



In detail, we held meetings and interviews with the management of Novamont SpA and we performed limited analyses of documentary evidence, to gather information about the processes and procedures for the collection, consolidation, processing and submission of the non-financial information to the function responsible for the preparation of the NFS.

Moreover, for material information, considering the activities and characteristics of the Group:

- at holding level,
  a) with reference to the qualitative information included in the NFS, and in particular to the business model, the policies adopted and the main risks, we carried out interviews and acquired supporting documentation to verify its consistency with available evidence;
  b) with reference to quantitative information, we performed analytical procedures as well as limited tests, in order to assess, on a sample basis, the accuracy of consolidation of the information.
- for the Novara site (Novamont SpA) and for Mater-Biotech SpA, which were selected on the basis of their activities and their contribution to the performance indicators at a consolidated level, we gathered supporting documentation regarding the correct application of the procedures and calculation methods used for the key performance indicators.

***Conclusion***

Based on the work performed, nothing has come to our attention that causes us to believe that the NFS of Novamont Group for the year ended 31 December 2021 is not prepared, in all material respects, in accordance with articles 3 and 4 of the Decree and with the GRI Standards.

Our conclusions on the NFS of Novamont Group do not extend to the information set out in the paragraph "EU Taxonomy" of the NSF, required by article 8 of European Regulation 2020/852.

Milano, 10 June 2022

PricewaterhouseCoopers SpA

*Signed by*

Andrea Manchelli
(Partner)

Paolo Bersani
(Authorised signatory)

*This report has been translated from the Italian original solely for the convenience of international readers. We have not performed any controls on the NFS 2021 translation.*

# Glossary

### BASE YEAR

The year with respect to which a measurement is traced over time.

### BIO-BASED

Biologically-based. This refers to products that, in part or in whole, contain biomass-derived constituents, that is, that are from non-fossil, biological substances.

### BIOCHEMICAL

Any chemical compound that is part of the composition of a living organism or derived from substances present in living organisms.

### BIODEGRADABILITY

The ability of an organic substance to turn into simpler substances through the activity of micro-organisms (biodegradation). If the biodegradation process is complete, the organic substance is converted entirely into simple molecules: water, carbon dioxide, methane and new biomass.

### BIODIGESTER

A facility that recovers energy from the organic fraction of domestic and industrial waste, by a process of biomethanation of organic matter carried out by anaerobic micro-organisms, which leads to the formation of biogas.

### BIOECONOMY

An economy that uses biological resources, from land and sea, as the input for energy production, and in industrial (material), food and animal feed production.

### BIOGENIC EMISSIONS

Emissions that originate from natural processes, that, consequently, are not counted among the factors, directly caused by man, that alter the climatic balances; thus, they are different from direct $CO_2$ emissions of fossil origin.

### BIOLOGICAL/ORGANIC RECYCLING

The aerobic (composting) or anaerobic (biomethanation) treatment by microorganisms, under controlled conditions, of the organic fraction of waste, with the production of stabilized organic residues and methane. Burial in a landfill cannot be considered a form of organic recycling.

### BIOPLASTIC

Biodegradable and/or bio-based plastic.

### BIOPRODUCT

See bio-based.

### BIOREFINERY

An industrial facility that applies suitable conversion technologies to biomasses to transform them, in part, into fuel, and in part, into products, such as foods, materials, and chemical substances for the polymer, cosmetic and pharmaceutical industries, etc.

### BLOWN FILM

In polymer technology, this is a process used to obtain a film of small thickness (15-500 µm). These films are used, for example, to produce packaging, bags or films for greenhouses and for mulching.

### BY-PRODUCT

A secondary product from the industrial production of other products, that are economically less important than these.

### CARBON

A base element in organic chemistry and of organic substances. Living organisms are made up primarily of carbon, oxygen and hydrogen.

### $CO_2e$ – $CO_2$ EQUIVALENT

The standard reference used to measure the impact of greenhouse gases on global warming (Global Warming Potential – GWP). The contribution of each gas is standardized with respect to the contribution of one $CO_2$ molecule, used as a unit of measurement.

### COMBUSTOR

A system designed to achieve combustion in order to produce energy in the form of heat. There are various types of combustor, which depend on the characteristics of the combustible material.

### COMPOST

The result of bio-oxidation and humification of a mixture of organic materials (for example, plant cuttings, kitchen scraps and gardening waste, such as leaves and grass cuttings) by macro and micro-organisms in the presence of oxygen. The compost is used as a nutrient for farmland.

### COMPOSTABILITY

The property of biodegradable organic matter (food and grass cuttings, manure, some types of bioplastic, etc.) of being converted into compost in composting plants.

### COMPOSTING

The controlled biological decomposition, in the presence of oxygen, of organic waste, from which a rich humus material, called compost, is formed. Composting entails a thermophilic phase, and takes place, on an industrial scale, in special plants.

### CIRCULAR ECONOMY

A model in which all activities, starting from extraction and production, are organized in such a way as to use renewable resources or recycled materials, creating a system in which the products maintain their function for as long as possible, while keeping waste to a minimum.

### CSR - CORPORATE SOCIAL RESPONSIBILITY

This term refers to the responsibility of an organization for the impacts of its decisions and of its activities on society and on the environment, as a result of adopting an ethical and transparent conduct. a system in which the products maintain their function for as long as possible, while keeping waste to a minimum.

### FOOD SERVICE

The service of preparing and delivering to the community complete meals on a large scale (e.g. company canteens, schools, hospitals, prisons, etc.).

### FORMULATION

See Grade.

### GMO - GENETICALLY MODIFIED ORGANISM

An organism, with the exception of human beings, whose genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination (source: Directive 2001/18/EC).

### GO - GUARANTEE OF ORIGIN

Electronic certification that guarantees the renewable origin of sources used to produce electricity. For every MWh of renewable electricity introduced into the electrical system from qualified plants, the EP (electricity provider) issues a GO document, in accordance with Directive 2009/28/EC.

### GRADE

With reference to Mater-Bi, this indicates a specific type of material identified by a specific chemical composition and a unique product code. Thus, the brand name Mater-Bi® indicates a set of families of materials of different grades.

### HOME COMPOSTING

The composting process on a small scale, managed by private individuals, for gardening purposes, with the aim of producing compost for personal uses, starting with garden waste and, occasionally, kitchen scraps.

### LCA - LIFE CYCLE ASSESSMENT

An objective procedure for assessing the energy and environmental loads of a process or an activity; it is made by identifying the energy and materials used and the waste released into the environment. The assessment covers the whole life cycle of the process/activity/product, including the extraction and treatment of the raw materials, the manufacture, transportation, distribution, use, reuse, recycling and final disposal.

### LCT - LIFE CYCLE THINKING

An approach with which the environmental, economic and social sustainability of products, services, technologies and systems are analysed, taking into consideration all phases of the life cycle (extraction of the raw materials, manufacture, use, distribution and end of life).

### LSD - LARGE SCALE DISTRIBUTION

This is the evolution of trade, from retail to wholesale. It consists of large facilities or large groups (which, in some cases, are multinationals) with many facilities distributed nationwide, internationally, or even worldwide.

### MATERIALITY ANALYSIS

A process whose purpose is to identify and prioritize material aspects (synonym: relevance analysis).

### MARGINAL LAND

Farmland that is not used for agricultural purposes, unproductive for economic or social reasons, located in areas characterized by natural disadvantages, in mountain areas or other but which could be used for agricultural purposes through the intervention of means normally available from the farm. They are usually referred to in different terms: unused, degraded, insufficiently used, uncultivated, desolate and abandoned. Fallow land (land included in the crop rotation system but temporarily uncultivated, worked or not, which does not provide any harvest for the entire duration of the agricultural year) is excluded.

### MATERIAL TOPIC

A significant (or relevant) aspect that reflects the significant economic, environmental and social impacts of an organization and that may substantially influence the assessments and decisions of stakeholders.

### MONOMER

A small chemical substance that can react with itself or with other chemical substances to form large molecules, called polymeric chains, with a certain weight and length distribution, that, altogether, we call polymers. For example, “styrene” is a monomer of “polystyrene”. Azelaic acid is one of the monomers of a Mater-Bi family.

### MULCHING

An agronomic technique for controlling weeds, which entails covering the ground, with the exception of the area where the plant of interest is growing and developing, with an opaque material that stops the sun’s radiation, thereby preventing the growth of weeds. The most common mulching materials are plastic or bioplastic films, paper, layers of straw, layers of bark.

### NATURA 2000 NETWORK

The main tool of the EU policy for preserving biodiversity. This is one of the ecological networks that extends throughout the EU territory; it was established in accordance with Directive 92/43/EEC “Habitat”, to guarantee the long-term maintenance of natural habitats and of species of flora and fauna that are threatened or rare in the Community.

### OLEAGINOUS

A plant that is able to produce fatty substances and accumulate them inside itself (for example, in the fruit or in the seeds), which can be used for nutritional and industrial purposes.

### ORGANIC CARBON

The carbon present in those chemical compounds in which it is bound by covalent bonds to atoms of other elements (primarily hydrogen, oxygen and nitrogen). The carbon in carbon dioxide, carbonic acid and its salts, for example, calcium carbonate, are excluded from this definition.

### ORGANIC FRACTION (OF WASTE)

The fraction of municipal waste consisting of food scraps and grass cuttings or animal waste that comes from domestic or industrial sources.

### PACKAGING

A product made of materials of any kind, used to contain and to protect certain goods (from raw materials to finished products), to allow them to be handled and delivered from the manufacturer to the consumer or user, and to guarantee their presentation.

### POLYESTER

A polymer with ester groups in the principal chain. All polyesters degrade in the end, by hydrolysis, which is the main mechanism.

### POLYMERIZATION

The process of synthesizing a polymer starting with constituent monomers.

### PRECAUTIONARY APPROACH

The approach of behaving in a precautionary manner in the management of scientifically uncertain matters, adopted particularly in the assessment and management of risks.

### RENEWABLE

Said of those raw materials (starch, oils, cellulose) and energy sources (wind, sun, etc.) that will not run out.

### SEPARATE COLLECTION

Collecting waste by separating it out according to its type, for example, glass, plastic, paper, organic waste, metal, dry residue.

## STAKEHOLDERS

Parties "that have an interest", with whom an organization maintains relations (direct or indirect) and who, therefore, can influence its activities, either directly or indirectly. Examples of stakeholders include: customers, suppliers, financial backers (banks and shareholders), collaborators, as well as external interest groups, such as residents in the areas surrounding the company, and local interest groups.

## STANDARD

Normally a formal document that uniformly establishes engineering or technical criteria, methods, processes and practices.

## SDGs – SUSTAINABLE DEVELOPMENT GOALS

These are the essential elements of Agenda 2030 for sustainable development, which were signed, in 2015, by the governments of the 193 member countries of the UN.

## SUSTAINABLE DEVELOPMENT

Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs (source: Standard EN 16575).

## TYPE I ENVIRONMENTAL CERTIFICATION

Eco-labels (which conform to ISO 14024) which certify respect for specific, pre-established environmental parameters concerning the whole life cycle. These are B2C (Business to Consumer) type labels, as they are intended for the final user and are subject to external certification by an independent, third-party organization. The products certified with Type I labels are environmentally preferable.

## WASTE MANAGEMENT

In urban and industrial contexts, this indicates the group of technologies and methods for differentiating, collecting, transporting and treating the waste produced by human, industrial and domestic activities.