Eucalyptus globulus
The best fibre for the finest paper.
No organisation exists in isolation from the world. As well as what it produces, a business is the result of the relations it cultivates with its stakeholders, and the way in which it interprets, anticipates and responds to the needs of society as a whole. We believe that the whole is more than just the sum of its parts. That is why we have a firm commitment to taking a long-term view and a comprehensive sustainability strategy that addresses the full spectrum of issues - environmental, social and economic.

The Navigator Company is a pillar of the Portuguese economy and not just one of the country’s leading exporters: we create more national value added than any other exporter in Portugal. More than just a source of satisfaction, this underlines our awareness that creating lasting and sustainable wealth involves sharing knowledge in areas that range from technology to sustainable forest management, all of this grounded on a virtuous relationship with natural and renewable resources.

Our 2019 Sustainability Report reflects this corporate sense of purpose and our desire to create value with the community. Commissioned especially for this publication, the engravings reproduced on the chapter dividers in this report illustrate and document the work we do to protect biodiversity, one of our contributions to improving Portugal’s woodlands.

These are ten examples of the 235 species of fauna and 740 species of flora protected by The Navigator Company in its conservation areas, numbers that have increased, in contrast to the global tendency for losses of protected species. This conservation strategy applied from day to day in our woodlands holdings is part of our holistic vision of sustainability, the same belief that in 2019 gave us confidence to make a public commitment to achieving carbon neutrality by 2035, a decade and a half ahead of the Portuguese and European target dates.

So the 2019 Sustainability Report offers more than an account of the past year. It is intended as a manifesto for the vision and high standards in which we believe.
MESSAGE FROM THE BOARD OF DIRECTORS
MESSAGE FROM THE BOARD OF DIRECTORS

In a society where the performance of companies is subject to growing scrutiny, with regard to topics high on the social and environmental agendas, and an increasing demand for the design of measures that respond to the needs and expectations of their stakeholders, The Navigator Company maintained its focus in 2019 on honouring its commitments and meeting the targets defined in the Sustainability Roadmap established for 2020-2025.

Aware of its role in mitigating and adapting to the effects of climate change, in keeping with national and international guidelines in this area, Navigator published its Roadmap to a Carbon Neutral Company with a flagship commitment to achieving carbon neutrality at all its industrial complexes by 2035, by when it estimates it will have reduced its CO₂ emissions by 90% in relation to 2018.

As part of an ambitious plan of industrial investment within the framework of the new roadmap, with a value of 158 million euros, Navigator pressed ahead in 2019 with its project for a new biomass boiler at the Figueira da Foz Industrial Complex, which will allow it to cut Navigator’s emissions by 20% overall, and by 81% at this particular unit.

The Company’s commitment to building a low-carbon society was again recognised by the Carbon Disclosure Project (CDP), which in 2019 confirmed its rating of Leadership (A- Climate). This means that we are implementing best practices in this area and makes us a frontrunner in the international business sector.

As a forest-based industry, particular importance must be attached to the role of Navigator’s plantations – with certified management under the leading international schemes (FSC® and PEFC) - as natural solutions for climate issues. The forestry sector is uniquely placed to lead the transition to a low-carbon and circular future, sustained by renewable natural resources, as stressed by the WBCSD (World Business Council for Sustainable Development), a leading global organisation in the field of sustainability of which Navigator is a member, as well as having a seat on the Executive Committee and serving as co-chair of the Forest Solution Group.

In view of this, the topic of Carbon Neutrality was the central focus of the 9th session of Navigator’s Sustainability Forum, a governance body comprising internal and external stakeholders, including specialists in diverse areas ranging from Climate Change and Biodiversity Conservation to Business Ethics. António Guterres, the Secretary-General of the United Nations, sent an opening message to the Forum, in which he called for action by industry: “More than a hundred private sector leaders committed themselves to accelerating the transition by their companies to the green economy. (...) Active participation by the business sector is essential. I am counting on your leadership and your support.”

On the social front, Navigator has worked to strengthen its relationship with local communities through structured dialogue with a variety of organisations represented on the Four Local Environmental Monitoring Committees (one in each region where our industrial units are located), allowing them to voice their expectations and seeking to respond to the needs identified as priorities.

Closer community ties were also fostered through the corporate volunteering programme, Love the Forest. Navigator involved its Employees in work to eradicate invasive plants in woodland areas of public interest close to its industrial and forestry sites, helping to protect Portugal’s forests. With a satisfaction rating of 98%, Navigator’s Employees clearly see this programme as a way of enhancing The Navigator Company’s corporate citizenship.

Internally, a succession plan has been drawn up for functions classified as critical in the industrial area, and the same task will now be undertaken for other Company areas. This plan is essential for preparing future managers, ensuring the effective know-how is passed and securing an appropriate response to the challenges posed by changes in the organisation of work, resulting from the digital society, and new demands arising from the generational change.

Occupational Health and Safety remains one of the Navigator’s priorities with several initiatives going ahead under the Safe Horizon Project and the Occupational Health Programme, the latter reaching a total of 1,881 Employees.

Over the course of this Report we draw special attention to Navigator’s partnerships with a variety of organisations, ranging from Universities to clients and suppliers, as well as to its important work in conjunction with NGOs, particularly in the field of forest protection and development of resilient and healthy woodlands. We feel it is important to highlight our partnerships with suppliers, seeking to encourage sustainability practices along the value chain. An example of this is our partnership with a shipping line and rail terminal, enabling us to substitute road haulage by rail for a significant volume of the paper dispatched from the Figueira da Foz rail terminal, enabling us to substitute road haulage by rail for a significant volume of the paper dispatched from the Figueira da Foz terminal.

On the field of forest, the source of our natural and renewable raw material, attention should be drawn to our sustained commitment to the programme to promote forest certification, which resulted in a 10% increase in the certified wood procured from the Portuguese market, in relation to 2018. We have also invested heavily in preventive measures that have reduced the structural risk of forest fires. In 2019, the burned area corresponded to a mere 0.13% of the holdings managed by the Company.

Aware that engagement with our stakeholders is essential for ensuring the sustainability of Navigator’s business, we have launched in 2019 a wide-ranging consultation exercise as part of the materiality assessment process. This process will be completed in 2020 and will be one of the crucial components in building the Company’s sustainability agenda and defining its strategic priorities.

Engagement, mobilisation and cooperation are key words in charting The Navigator Company’s future course. The current international situation, and the environmental and social challenges on the global agenda, demand accountability, ethical standards and our utmost efforts to make a positive impact on society. This will require us to keep our focus on collaborative partnerships, in order to achieve the ambitious targets set out in our Sustainability Roadmap 2020-2025 and to boost stakeholder engagement, in particular with our Employees, improving their motivation and well-being.

Lisbon, 19 February 2020

João Castello Branco
Chairman of the Board of Directors

Chief Executive Officer until 31 December 2019
**Tasmanian Blue Gum**

*(Eucalyptus globulus)*

The *Eucalyptus* genus belongs to the *Myrtaceae* family and numbers more than 700 species. *E. globulus* is an evergreen tree that can grow to a height of 55 metres. A fast-growing tree, it attains adulthood in ten to twelve years, and is regarded worldwide as the best *eucalyptus* species for producing pulp and paper.

*E. globulus* has become naturalised in the Iberian peninsula, where it was introduced in the early nineteenth century. In Portugal it has found ideal soil and climate conditions for it to adapt and produce generous yields. It is found predominantly in the regions influenced by the Atlantic to the north of the River Tagus, and also in the western Algarve. On holdings managed by Navigator, it benefits from sustainable forest management and all plantations are certified.

Its long, cream coloured trunk is smooth and straight, and sheds its bark. The hanging leaves contain an essential oil rich in cineol, and the flowers offer plentiful nectar, much sought after by bees and other insects.
The “2019 Sustainability Report” was drawn up in accordance with the standards of the Global Reporting Initiative, adopting the “Comprehensive” option, and responds to the requirements of Decree-Law 89/2017 with regard to non-financial and diversity disclosure by large companies and groups. This is the second sustainability report published on an annual basis by The Navigator Company (Navigator).

In 2019, Navigator started a new materiality assessment, on the basis of a wide-ranging engagement exercise to acknowledge the point of view of its stakeholders. The findings of this process will be considered in redefining the material topics, as well as making a valuable contribution to building Navigator’s Sustainability Agenda. Our intention is to report on the findings in next year’s report.

This Report describes the Company’s performance on the nine material topics previously defined, relating them as appropriate to trends on the international sustainability agenda and to the United Nations Sustainable Development Goals. We have therefore sought to give prominence to the challenges (chapter 3) faced by the Company, in the light of international tendencies and Navigator’s Roadmap to Carbon Neutrality, one of the cornerstones of our response to the issues of climate change. This Report shows how the Company is contributing to a low-carbon economy, where energy efficiency and renewable energy sources, alongside technological innovation and new products, based on the forestry bioeconomy, are all part of our commitment to making a significant reduction in our carbon footprint.

We remain focused on developing and implementing our Sustainability Roadmap, drawn up with the involvement of all Navigator areas in a process of setting targets through consensus for the period 2020 to 2025. In addition, we highlight the commitment that took the front seat in 2019, for each of the nine focus areas, pointing to the measures and main projects undertaken through the words of our Employees.

Period, scope and limits of this Report

This Report refers to activities during 2019 (1 January to 31 December 2019), in alignment with the Annual Report and Accounts. It includes the Group’s activities which contribute to producing and selling pulp and paper. All indicators are consolidated, except those for Mozambique, where activities are described over the course of the document, wherever applicable.

The printed version does not contain the GRI index with all the indicators. To obtain this information, please consult the Sustainability Report on our website www.thenavigatorcompany.com.

Review of information

The information contained in the Report has been verified by KPMG, which has drawn up an independent limited assurance report included at the end of this document.

Opinions and contact details

Your opinion is important to us, so please complete the feedback questionnaire about this document on the Company’s website thenavigatorcompany.com.

For any further information, please contact:

The Navigator Company
Av. Fontes Pereira de Melo 27, 1050-117 Lisboa

Ana Nery
Sustainability Manager
ana.nery@thenavigatorcompany.com
Bonelli’s eagle
(Aquila fasciata)

It is characterized by a white front side which contrasts with its dark wings. As a rule, it hunts alone for prey such as rabbits, partridges and other Columbiformes (pigeons and doves) and reptiles. The reproductive period of the Bonelli’s eagle is from December to June, with a brood of up to three chicks.

The distribution of the Bonelli’s eagle is discontinuous and uneven across the country, with two distinct types of habitats: steep valleys with crags (in north-eastern Trás-os-Montes and Beira Interior). It builds its nest on steep slopes, or in well-forested hilly areas (Alentejo and Algarve), where it nests in large trees. It is found on Navigator’s properties in the southwest Alentejo, where it is subject to protection and conservation measures.
We promote **SUSTAINABLE FOREST MANAGEMENT**.

"CLEAR AND FERTILISE" programme supported 658 smallholders on total of 6,066 ha.

72% of wood supplies certified

€ 4.1 Million investment in protection against forest fires

We are reducing our impact on **ENERGY AND CLIMATE**...

ROADMAP TO CARBON NEUTRALITY launched in 2019

CDP Climate Leadership A-

Consumption of renewable energy 67%

New biomass boiler in Figueira da Foz set to cut Navigator CO₂ emissions by 20%

**We value CUSTOMER SATISFACTION...**

Customer Satisfaction Index (CSI) UWF Paper: 91%

Sales of Paper and Pulp: 124 countries and 11 territories

In-house production of UWF paper with basis weights higher than 120 g/m²

We invest in the **HEALTH AND SAFETY** of our Employees...

Safe Horizon Programme with ZERO ACCIDENTS TARGET

Frequency Index: 7.8

**We invest in the TALENT MANAGEMENT developing human capital.**

TRAINING & DEVELOPMENT

182,740 h training hours 59 h/Employee

25% of successions assured for critical functions

**SUSTAINABLE SUPPLIER MANAGEMENT is essential in our value chain.**

Code of Conduct distributed to 88% of suppliers

76% of suppliers¹ with sustainability assessment

74% of Wood Suppliers with certified Chain of Custody

**... and in COMMUNITY ENGAGEMENT.**

NAVIGATOR TOUR PROGRAMME

5,416 Visitors

16 #MYPLANET initiatives

10,000 Children took part in “Give the Forest a Hand”

**INNOVATION AND R&D are crucial to the sustainability of our business**

impactus Project

€ 4.3 Million: R&D investment

95% of projects with high levels of technological readiness / time to market

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¹ Materielly relevant suppliers – accounting for around 80% of Navigator’s total purchasing volume

² The suppliers assessed here correspond to approximately 75% of Navigator’s total volume of purchasing in the categories of woods, chemicals, logistics and other products and services
The Algerian oak is an extremely rare species; there are only around 300 of these oaks in Portugal today. Because of the importance of this species, which can live up to 250 years, Iberian oak tree forests have been classified as one of the habitats of the Natura 2000 network.

Native to the southwest Mediterranean basin, the Algerian oak is distributed across Morocco, Algeria and Tunisia, and appears in patches on the Iberian Peninsula. In Portugal, it is found only in the Monchique mountain range and the valleys of the Mira River drainage basin, in small groves on steeper slopes. Found at Navigator’s Águas Alves property, it is protected by being enclosed within areas of high conservation value, and through the recovery and expansion of the species' habitat.
### SUSTAINABILITY ROADMAP 2020-25

The Roadmap sets out The Navigator Company’s aims for the time horizon 2020-2025 on the basis of consultation with all Company areas, resulting in a series of 26 commitments with an array of targets to be achieved over the next five years. The completion of certain projects, together with the inclusion of new commitments, required changes to the numbering of the commitments in this Roadmap (in relation to that in the 2018 Report).

This Roadmap sets out The Navigator Company’s aims for the time horizon 2020-2025 on the basis of consultation with all Company areas, resulting in a series of 26 commitments with an array of targets to be achieved over the next five years. The completion of certain projects, together with the inclusion of new commitments, required changes to the numbering of the commitments in this Roadmap (in relation to that in the 2018 Report).

<table>
<thead>
<tr>
<th>#</th>
<th>Target Description</th>
<th>SDG</th>
<th>OUR COMMITMENT</th>
<th>WHAT WE DID IN 2018</th>
<th>2019</th>
<th>TARGET 2020-25</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>To increase the supply of FSC-certified wood</td>
<td></td>
<td></td>
<td>52%</td>
<td></td>
<td>100%</td>
<td>Complete</td>
</tr>
<tr>
<td>02</td>
<td>Develop know-how in the field of acquisition services</td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>Help reduce fires in rural areas</td>
<td></td>
<td></td>
<td>2%</td>
<td>0.03%</td>
<td>15%</td>
<td>In progress</td>
</tr>
<tr>
<td>04</td>
<td>Increase renewable energy as a % of total fuel consumption</td>
<td></td>
<td></td>
<td>18%</td>
<td>47%</td>
<td>88%</td>
<td>In progress</td>
</tr>
<tr>
<td>05</td>
<td>Reduce specific energy consumption (energy intensiveness)</td>
<td></td>
<td></td>
<td>51%</td>
<td></td>
<td></td>
<td>In progress</td>
</tr>
<tr>
<td>06</td>
<td>Help mitigate the effects of climate change</td>
<td></td>
<td></td>
<td>9%</td>
<td></td>
<td></td>
<td>In progress</td>
</tr>
<tr>
<td>07</td>
<td>Reduce water use in Navigator Group</td>
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<td></td>
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<td></td>
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<tr>
<td>08</td>
<td>Increase waste recovery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>Reduce concentration of pollutants in air emissions</td>
<td></td>
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<tr>
<td>10</td>
<td>Identify critical functions for internal succession</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In progress</td>
</tr>
<tr>
<td>11</td>
<td>Equip human resources with skills needed to pursue Company strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>Improve Company’s Organisational Climate</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>13</td>
<td>Zero Accidents Target</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Promote workers’ health, safety and well-being</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>15</td>
<td>Occupational Health and Safety</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>SUSTAINABLE SUPPLIER MANAGEMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In progress</td>
</tr>
<tr>
<td>17</td>
<td>CUSTOMER SATISFACTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In progress</td>
</tr>
<tr>
<td>18</td>
<td>COMMUNITY ENGAGEMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In progress</td>
</tr>
</tbody>
</table>

**SUSTAINABILITY REPORT 2019**

**SUSTAINABILITY REPORT 2019**

**SUSTAINABILITY REPORT 2019**
### INNOVATION

**22 Improve the competitiveness and efficiency of the different business areas**

Various measures under M3 Operational Programme for Excellence  
- **2018**: € 20 Million  
- **2019**: € 19.5 Million  
- **Target 2020-25**: Cut overall costs in Company

**23 Gain recognition as a benchmark for Lean systems in Portugal and in Pulp and Paper Industry**

New phase in implementation of Lean systems in industrial area and extension of methodology to tissue units  
- **Target 2020-25**: Engage Company in Lean Programme by end of 2021

### RESEARCH AND DEVELOPMENT

**24 Measure and monitor the impact of RAIZ’ work on value generation for The Navigator Company**

Implement “RAIZ impact and innovation scorecard” tool  
- **Projects assessed on the basis of Technology Readiness Level (TRL)/Time to Market (TTM)**  
  - 92%  
  - 95%  
  - 95% with high TRL / TTM levels in 2020-25

- **Projects assessed in accordance with risk level**  
  - 47%  
  - 47%  
  - 50% low risk in 2020-25

- **Estimated results of more than € 55,000/year/project**  
  - 61%  
  - 61%  
  - 65% in 2020-25

**25 Maintain the level of R&D investment in projects in the Circular Bioeconomy**

Measures under inpactus project  
- **Development of partnerships**  
  - 4 potential start-ups at pre-viability phase  
  - 4 spin-offs proposals in 2022

- **Doctoral theses**  
  - 20  
  - 17 in 2022

- **Scientific articles published**  
  - 21  
  - 100 in 2022

- **Papers at conferences**  
  - New target  
  - 38  
  - 50 in 2022

- **Patent applications**  
  - 5  
  - 10 in 2022

**26 Raise and implement European Commission’s quality and innovation standards with BIC (Business Innovation Centre) certification**

Renewal of BIC quality certification and drafting of written procedure for converting knowledge into value at RAIZ and inpactus  
- **Target 2020-25**: Qualitative targets

**In progress**
It is known for its “blue cap”, black eyestripe and white face, which contrast with its yellow chest and abdomen.

The Eurasian blue tit can be found throughout mainland Portugal, but is most commonly seen in oak and cork-oak grazing areas and lightly wooded places with old, leafy trees. It has been identified by Navigator on all of its properties throughout the country, especially in oak and cork-oak grazing habitats, oak tree forests, olive groves, zones of mixed cork oak and stone pine, and along riversides. At Herdade da Espirra, the company is setting up birdhouses to preserve and increase local tit populations.

Small, colourful and highly energetic, the Eurasian blue tit is the most abundant of its kind found in Portugal. It is an insect-eating bird, often seen moving among the foliage, sometimes in acrobatic positions. The Eurasian blue tit searches for cavities to build its nest, and is a frequent occupant of artificial birdhouses.
1.1 Who We Are and What We Do

The Navigator Company is an integrated forestry, pulp, paper, tissue and energy producer. It is today a pillar of the Portuguese economy and has an impact on the lives of thousands of people along its value chain. The Company strives to create sustainable value for society as a whole, through its commitment to sharing knowledge and to permanent dialogue with stakeholders.

The sense of responsibility and investment that Navigator puts into sustainable forest management, in research and development, in the most advanced technologies and in human skills, are reflected in the excellent quality of its products, which are global standard-setters in the sector.

Europe’s leading manufacturer of uncoated woodfree printing and writing paper (UWF), and the sixth largest in the world, Navigator is also ranked first in Europe and fifth in the world as a manufacturer of bleached eucalyptus kraft pulp (BEKP). It has annual production capacity of 1.6 million tons for both UWF paper and for paper pulp. In the tissue business, where 2019 was the first full year of operation for the new Aveiro mill, the Company has total annual capacity for 120,000 tons of finished products and 130,000 tons of reels.

Navigator is also a significant player in the power generation sector, accounting on an annual basis to approximately 4 to 5% of the electricity generated in Portugal. In 2019, 60% of the power produced by Navigator at its four industrial complexes was derived from biomass, a renewable energy source, accounting for approximately 52% of all electricity from this source in Portugal.

Navigator’s importance to Portugal can also be seen in its status as the country’s third largest exporter, and the largest generator of national value added, representing approximately 1% of GDP, around 3% of Portuguese exports of goods, and more than 30,000 jobs, on a direct, indirect and induced basis.

Business highlights

In 2019, The Navigator Company recorded turnover of €1,688 million, which includes €1,198 million in paper sales (71% of turnover), €165 million in pulp sales, €161 million in energy sales (with each segment representing 10%) and €132 million in tissue sales (8% of turnover). Turnover in 2019 also includes around €32 million in sales related to other businesses (vs. €12 million in 2018).

Market conditions deteriorated in 2019, with falling pulp prices and weaker demand in the European market. In this context, the Navigator Group’s performance reflects a sales strategy which has sought to protect the margin in Europe and the US, regions where it records most of its sales, with active measures to control total supply and volumes being redirected out of these geographical regions.

In the UWF paper segment, our market share in Europe grew by 1% in 2019 thanks to efforts to create a wider-ranging network of clients. Globally, the Company expanded its client base in UWF paper, with 90 new clients out of 681 active clients in Europe, and 90 new clients in the rest of the world, in a total of 430 clients outside Europe, mostly in the African, Latin American and Middle Eastern markets. This added penetration has been sought to add to the strength of the business model.
by generating and sharing value with the people of Mozambique. In addition to the State’s direct and indirect tax revenues, we may point to forestry and agricultural development, incentives for independent sustainable forest production in 40,000 hectares of eucalyptus, water quality monitoring agreements in the watersheds in the project area, the building of communication and logistical infrastructures and the expected creation of a further 10,000 new jobs over the lifetime of the project.

The Luá nursery, in Zambézia province, with annual production capacity of 12 million plants, is a good example of the positive impact of Portucel Moçambique’s business. In addition to eucalyptus saplings, the Luá nursery produces agricultural species for the local community and native species for restoring conservation areas. Equally important is its socio-economic role in the community, where it generates skilled jobs, encourages gender equality (50% of its employees are women), promotes good employment practices, contributes to adult literacy, with first to fifth grade lessons, and provides a medical centre. Nursery staff can also use a library and an area for planting vegetables and fruit trees for their own consumption.

1.2 Development

Navigator recorded total capex of €158 million in 2019. This figure includes investment of €118 million in maintenance and improving efficiency (current and non-current), €16 million on completion of the expansion projects implemented in 2018 (new tissue plant at the Aveiro site, the PO3 project to increase pulp capacity at the Figueira da Foz site, and the final stage of investment in high grammage products at the Setúbal site), as well as €24 million in environmental and regulatory investments.

For 2020, Navigator is planning to implement a capital expenditure programme designed to re-establish the highest standards of operational effectiveness, with a positive impact on costs, geared to ongoing improvements in financial and environmental performance.

Roadmap to Carbon Neutrality

Navigator’s Roadmap to a Carbon Neutral Company involves total investment of €158 million (between 2018 and 2035). With this ambitious plan for investment in its industrial facilities, Navigator became the first Portuguese company, and one of the first in the world, to bring forward compliance with national and European decarbonisation targets by 15 years.

The main capex project undertaken in 2019 in relation to this roadmap was the construction of a new biomass boiler at the Figueira da Foz site, to replace the existing boiler and the natural gas combined cycle power plant, making it possible to cut fossil CO2 emissions from the complex by 81%.

The value of sales stood at €132 million, as compared to €91 million in 2018, representing growth of 45%.

New cost optimisation plan

In early 2020, Navigator is planning to implement a new plan for cost optimisation and operational efficiency, reaching across the whole organisation and all its activities. This plan envisages a more far-reaching review of the organisational structure and its fixed and variable costs and should result in further substantial cost savings for the Group. The plan is due to be implemented in the second half of 2020 and over the course of 2021.

Competitiveness and efficiency in the different business areas

The Group’s performance in 2019 was constrained by the market context and by a number of external factors, which hampered global economic growth and had an impact on certain aspects of the production process.

In 2019, Navigator pressed ahead with the M² programme for cost optimisation and reduction, geared to controlling the Company’s variable costs. This continues to be implemented on a systematic basis, engaging with all units across Navigator’s organisation. Several significant projects were undertaken in 2019 to optimise our products, maritime and road logistics, and internal management of containers, as well as integrated negotiations for acquisitions of chemicals and, in industrial operations, improved energy efficiency in the paper machines in Setúbal and optimisation of the pulp bleaching process in Aveiro.

Mozambique Project

Portucel Moçambique’s performance has highlighted its contribution to the country’s economic and social development,
The sawfly orchid, Ophrys tenthredinifera, is typical in the Mediterranean region. In Portugal, it can be found just about anywhere, except for the country’s central and northern mountain zones. At the Navigator properties where it is located – primarily in the Alentejo – it is protected by special zones for the preservation of biodiversity with restrictions on the use of plant protection products.

Ophrys tenthredinifera is one of the wild orchids found in Portugal. Preferring sandy or slightly acidic soils, this orchid grows in moderately humid meadows and pastures, and in clearings in scrubland and forests.

With a blooming season extending from February to June, it is known for its flowers resembling bees or wasps and for giving off an odour similar to these species’ pheromones as part of its pollination strategy.

IUCN Red List

Extinct
Extinct in the Wild
Critically Endangered
Endangered
Vulnerable
Near Threatened
Data Deficient
Not Evaluated

Sawfly orchid
(Ophrys tenthredinifera Willd)
2.1 Vision, Mission and Values

Responsible management of our business is driven by ethics and integrity in the way we manage our operations, our people and our stakeholder relations. Sustainability is a key value for The Navigator Company and the framework for strategic development of our business. From forest to paper, a sustainable cycle is reflected in an extensive value chain that touches on several different sectors of Portuguese society.

We involve our stakeholders in assessing and reflecting on the trends and challenges that affect us, with regard to the main environmental and social topics on the global sustainability agenda, seeking to integrate their expectations and interests in the Company’s Sustainability Agenda.
Vision
To extend our leadership position in printing and writing paper to other business areas and add to Portugal’s international stature.

Mission
To be a global company with a reputation for innovation and sustainability in processing forestry materials into products and services that improve people’s lives.

Values

Trust
We believe in people, we welcome everyone’s contribution, we respect their identity, promoting development, cooperation and communication.

Integrity
We are guided by principles of transparency, ethics and respect in our dealings amongst ourselves and with others.

Entrepreneurship
We are passionate about what we do, we like to get out of our comfort zone, we have the courage to take decisions and to accept risks in a responsible way.

Innovation
We seek to bring out everyone’s skills and creative potential to do the impossible.

Sustainability
Corporate, social and environmental sustainability is our business model.

Excellence
In our work we focus on quality, efficiency, safety and getting it right.
2.2 Sustainability Governance

The Navigator Company has a well-established governance structure comprising a number of different bodies, each with clearly defined functions with regard to sustainability management, with a view to ensuring ethical and responsible business practices.

The material topics of sustainability and corporate responsibility are regularly reviewed within the Company and included in risk management assessments.

In 2019, four new external members joined the Navigator’s Sustainability Forum, representing different groups of the Company’s stakeholders. The new members provide additional input in areas such as sustainable supplier management, forestry and rural development, ethics and corporate social responsibility, and the economic-financial field.

The Sustainability Forum has internal members, such as the Executive Board, as well as external members, and membership is renewed to reflect emerging sustainability issues for the Company.

Risk management and opportunities

At Navigator, the Risk Management Division is responsible for monitoring and controlling the main risks, through a systematic and structured approach that involves all operational areas, and identifies the control activities needed for each situation. This work is carried out by means of internal audits. The risks are described in greater detail in the Navigator Company’s Corporate Governance Report.

Sustainability risks are also included in this approach, along with the respective opportunities, and have been systematised for each of the material topics. Below we present the main risks and opportunities identified in connection with the different material topics.
MAIN RISKS AND OPPORTUNITIES

OPPORTUNITIES

> Transfer know-how and build key skills for business sustainability
> Promote paper as a sustainable solution for the planet
> Encourage certification of the suppliers’ chain of custody
> Promote bioeconomy products
> Reduce our water footprint
> Decarbonise the Company

RISKS

> Shortage of certified raw material
> Loss of human capital and non-retention of talent
> Fires and natural disasters
> Variation in price of energy
> Industrial accidents at work
> Failure in wood supplies
> Environmental consequences of operations

> Increase forest yields
> Prevent the effects of climate change
> Occupational Health and Safety (OHS) training for all Employees
> Reduce the risk of fire
> Promote the circular economy

MAIN RISKS AND OPPORTUNITIES

2.3 Impacts on the Value Chain

At Navigator we know that the impacts of our operations and the value we generate go beyond our direct sphere of influence, and so we have examined the boundaries demarcating the nine material topics in the links of our value chain. The figure below identifies these boundaries and helps to optimise the management of the opportunities and risks associated with each topic.

Although the local community is not a direct link in our value chain, it is a very important stakeholder because of its connections to each of the other links, in addition to which the generation of social, environmental and economic value in the community is an important factor for Navigator’s success.

The product’s end of life is important to strengthen the sustainable life cycle of paper.
2.4 Materiality Assessment

In 2019, Navigator launched a wide-ranging and deeper materiality assessment process compared to the one previously undertaken (in 2015). In the course of this process, we have consulted all stakeholder groups, using interviews, focus groups and questionnaires.

This is a new step taken by the Company towards understanding the relative importance of issues, and to identifying new and emerging topics for these stakeholder groups. This process will end in 2020 with the identification of the material topics, which will serve as the basis for the review of Navigator’s Sustainability Agenda.

Below we present the main stages of the process which is currently under way.

Navigator’s sustainability performance in 2019 was assessed on the basis of the 9 material topics which have been reported in previous years, and which remain valid until the end of the materiality assessment process currently under way.

These topics were identified on the basis of a cross-analysis of the following information: the Company’s vision, risks and opportunities, feedback from interaction with our main stakeholders, in particular engagement with members of the Environmental Council and the Sustainability Forum, market trends, international benchmarking, and the UN Sustainable Development Goals.

**LIST OF MATERIAL TOPICS**

- **01-** SUSTAINABLE FOREST MANAGEMENT
- **04-** TALENT MANAGEMENT AND DEVELOPMENT OF HUMAN CAPITAL
- **07-** CUSTOMER SATISFACTION
- **02-** ENERGY AND CLIMATE
- **05-** OCCcupational Health and Safety
- **08-** COMMUNITY ENGAGEMENT
- **03-** INDUSTRIAL ENVIRONMENTAL MANAGEMENT
- **06-** SUSTAINABLE SUPPLIER MANAGEMENT
- **09-** INNOVATION, RESEARCH & DEVELOPMENT

**OUR MATERIALITY ASSESSMENT DISCOVERING WHAT REALLY MATTERS**

**2019**

**01 IDENTIFYING THE LIST OF TOPICS FOR ENGAGEMENT EXERCISE**

- Benchmarking in relation to peers, sector and leading international sustainability organizations
- Analysis of international and sectoral trends
- May session of the Sustainability Forum on materiality

**02 VALIDATION OF TOPIC LIST AND RESPECTIVE DEFINITIONS**

**2019/20**

**04 ENGAGEMENT EXERCISE**

- Local Focus Groups at the 4 industrial units
- Surveys to all stakeholder groups
- In-depth interviews of all stakeholder groups

**2020**

**05 LIST OF MATERIAL TOPICS**

- Activities Information analysis - Materiality matrix
2.5 Response to the Sustainable Development Goals

The Navigator Company’s commitment to responsible management of its business is reflected in the Sustainability Roadmap established in 2017. This Roadmap sets out 26 Commitments, organised around nine material topics, with the respective Sustainable Development Goals (SDGs), targets and results for 2019 (consult the Roadmap at the beginning of this Report). The Roadmap identifies the main measures taken by the Company to make a contribution to attain the Sustainable Development Goals. Priority has been assigned to seven SDGs, which are those where the Company has greater influence and contributes more directly to their attainment. Other SDGs have been identified, where Navigator also makes its contribution. The diagram below illustrates these two levels of application of the SDGs and how they are related. The seven priority SDGs are those shown inside the circle.

In 2020, Navigator will review the SDGs currently identified as having priority, in order to align its response with the new Sustainability Agenda which is being redefined. This will entail taking into account the findings of the materiality assessment and the work being done by the Forest Solution Group (FSG) at the WBCSD in designing an SDG Roadmap for the forestry sector (see insert). It is worthwhile to notice that Navigator is largely aligned with the SDGs identified in this reference document.

### The Main Initiatives in Response to SDGs in 2019

The response to climate change is one of the central topics of this Report, alongside the building of a low-carbon economy. We accordingly assign special prominence to the SDGs related to this topic.

<table>
<thead>
<tr>
<th>Action</th>
<th>OUR Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTION</td>
<td>OUR IMPACT</td>
</tr>
<tr>
<td>Promote training to ensure that internal know-how is retained. Learning Center online platform.</td>
<td>182,740 training hours 59h of training per Employee.</td>
</tr>
<tr>
<td>Literacy training for employees in Mozambique. School visits programme.</td>
<td></td>
</tr>
<tr>
<td>Paper produced by Navigator is used in learning and literacy training.</td>
<td></td>
</tr>
<tr>
<td><strong>TARGET: 4.4</strong></td>
<td></td>
</tr>
<tr>
<td>Promotion of worker safety.</td>
<td>30,000 jobs, in direct, indirect and induced employment.</td>
</tr>
<tr>
<td>Zero Accidents Target.</td>
<td>7,454 suppliers, of whom 76% Portuguese</td>
</tr>
<tr>
<td>Cardinal Rules for employees and suppliers.</td>
<td><strong>TARGETS: 8.3 and 8.8</strong></td>
</tr>
<tr>
<td><strong>TARGETS: 9.1, 9.4 and 9.5</strong></td>
<td></td>
</tr>
<tr>
<td>RAIZ Research Institute: inpactus Project.</td>
<td>4 potential bioeconomy start-ups at pre-viability phase 5 patent applications</td>
</tr>
<tr>
<td>Development of bioeconomy projects.</td>
<td>€ 4.3 million: investment in R&amp;D</td>
</tr>
<tr>
<td>Research project assessment tools.</td>
<td></td>
</tr>
<tr>
<td><strong>TARGETS: 12.2, 12.4, 12.5 and 12.6</strong></td>
<td></td>
</tr>
<tr>
<td>Minimisation of water and energy use: Corporate Programme for Reducing Water Use and Corporate Programme for Energy Efficiency.</td>
<td>Water use: 22.4 m³/t product</td>
</tr>
<tr>
<td>Circular economy projects.</td>
<td>80% of waste recovered</td>
</tr>
<tr>
<td>Programme to promote Forest Certification.</td>
<td>72% of wood supplies with forest certification</td>
</tr>
</tbody>
</table>
ACTION
Sustainable forest management practices.
- Forest fire defence.
- Biodiversity conservation practices and protection of natural habitats.
TARGETS: 15.1, 15.2 and 15.5

OUR IMPACT
108,269 ha forest with certified management
- 11% conservation areas
- Reforestation of 3,141 hectares
- 0.13% burned area
- 740 species of flora and 235 species of fauna identified in woodlands managed by Navigator

ACTION
Partnerships with a range of organisations to promote compliance with the other SDGs and to stimulate engagement with various stakeholder groups.
TARGETS: 17.16 and 17.17

OUR IMPACT
Stronger partnerships in different business areas
- Increased stakeholder engagement, in particular with local communities through Environmental Monitoring Committees

CLIMATE ACTION
This topic is highly relevant to Navigator and afforded special prominence in this report. In view of the fact that, in 2019, Navigator launched its Roadmap to a Carbon Neutral Company, placing itself at the forefront of the response to international trends relating to climate change.

This Programme is based on 4 fundamental focus areas: renewable energy, energy efficiency, reduction of fossil CO₂ emissions, and offsetting of emissions which cannot be eliminated.
TARGETS: 13.1, 7.2, 12.2, 12.4, 12.5 and 17.16

OUR IMPACT
67% energy from renewable sources
- 12.6 GJ/t product
- 0.246 t CO₂/t product
- 5.3 million t CO₂ stored in forest

SDG ROADMAP FOR THE FOREST SECTOR, THE CONTRIBUTION FROM WBCSD

2019 saw the publication of the “Forest Sector SDG Roadmap” developed by the Forest Solutions Group (FSG) of the WBCSD, in which Navigator is co-chair and author of the preface. This document sets out to make an important contribution to the forest sector, not just in the response to the challenges currently facing it, but also to promote growth and prosperity in alignment with the Sustainable Development Goals (SDGs), maximising its potential for achieving these goals.

The roadmap represents the result of joint efforts of a range of stakeholders and highlights the critical role of sectoral partnerships in transforming the industry. It advocates an approach with potential for informing and influencing decision-making and adoption of innovative measures, throughout the value chain, as a way of arriving at a sustainable, resilient and inclusive future.

The forest sector is aware that it is uniquely placed to promote the transition to a low carbon and circular future, anchored in renewable natural resources. When forests are managed properly, the products obtained - because they are inherently cyclical and are completely renewable - mean that the forest sector has an integrative role to play in achieving the SDGs.

Although the working group considered that forest-based companies have a more or less pronounced impact on all the SDGs throughout the value chain, the Roadmap identifies six as being central. These are the SDGs where the sector and its value chain have the greatest potential for influence and creating value in the long term.

The Roadmap also addresses how current megatrends - environmental and social - will shape relations between companies, people and the planet, describing the sector’s landmark achievements in the past twenty years. Starting out from a reflection concerning the current and future contribution of companies to the SDGs, eight opportunities for impact are identified: (i) working forests and (ii) the bioeconomy, two central pillars that involve opportunities relating to (iii) climate, (iv) water, (v) circularity, (vi) communities, (vii) people and (viii) procurement. In connection with the opportunities for impact, the Roadmap also describes the paths for achieving the SDGs, including specific measures, facilitators and key partners.

The opportunities for impact are illustrated by examples provided by the companies or stakeholders consulted. Under “People”, Navigator presents a case study relating to the Learning Center, an innovative, comprehensive and inclusive approach to training that promotes exponential learning. This topic is explored further in chapter 3.1.
Smaller than a Eurasian wolf, it is characterized by the yellow and red shades of its fur and lengthwise black stripe on its front paws.

Once found throughout Portugal, it now occupies only 20% of its native range. The latest census from 2003 gives an estimated population of 350 animals organized into 60 packs, located north and south of the Douro River. On properties managed by Navigator, the species has been spotted in the districts of Porto and Aveiro. Special zones for the preservation of biodiversity have been created to reconcile forest management with the species’ conservation.
3.1 Global Trends

The challenges and opportunities that The Navigator Company faces fall within the context of sustainability at a global scale. The Company pays close attention to international trends that call for a more responsible attitude in business management, and considers business solutions for the environmental and social issues faced by the planet to be part of the sustainable development equation. The analysis of various sources of international and sectoral information helps to provide the context for building the Navigator’s Sustainability Agenda from 2020 onwards.

Generally speaking, companies in the pulp and paper sector are focused on the circular bioeconomy and on product innovation, as a cross-sector response to global trends affecting people and the planet. These include:

- ** Emerging leaders**
  The new geography of leadership, especially in Asia, raises new issues and an uncertain outlook in relation to how these leaders will respond to the global challenges for sustainable development.

- ** Rapid urban growth**
  Growth in the world population, estimated to reach nine billion by 2050, will have impacts on managing the availability of natural resources on a sustainable basis.

- ** Future of employment**
  As a consequence of the previous trends, and also of decisions made by citizens, different forms of employment will take shape, requiring the development of new tools and a new framework for labour relations.

All these tendencies represent opportunities for the future. The Navigator Company seeks to respond to the resulting challenges by stepping up its contribution to sustainable development, prioritising conservation of natural resources, such as woodlands, the soil, water and biodiversity. To this end, it is committed to sustainable solutions, with the potential for adding value to our product - paper - and for renewing forestry resources, as an alternative to fossil-derived materials, simultaneously contributing to business continuity in harmony with rural development and the prosperity of communities.
3.1.1 Climate Change

- THE GLOBAL CONTEXT -

Climate change is at the top of the international agenda, and 2019 was a year of intense debate and growing public awareness of the climate crisis. Extreme weather phenomena are increasingly frequent and intense, leading to pressure on governments from civil society for the urgent adoption of measures to mitigate the effects of global warming, and leading companies to make commitments to reduce their impacts.

On the international scene, events such as the United Nations Climate Action Summit have highlighted the need to be more ambitious in mitigating and adapting to climate change. At the same time, the European Ecological Pact has underlined the EU strategy for a low-carbon economy, plotting the course for a carbon neutral Europe by 2050. It should be noted that Portugal is aligned with this strategy, and has adopted the same target in its national Roadmap for Carbon Neutrality, which was submitted to the United Nations one year before the deadline. Achieving this target in thirty years entails increasing the capacity to sequester carbon in woodlands and other land uses, total decarbonisation of the power generation system and urban mobility, and also profound changes in how we use resources, committing to circular economy models.

The Summit “reinforced the global understanding that 1.5°C is the socially, economically, politically and scientifically safe limit to global warming by the end of this century, and to achieve this, the world needs to work to achieve net zero emissions by 2050.”

United Nations Climate Action Summit, 2019

For its part, the European Commission is pursuing an action plan to develop a circular bioeconomy able to step up the sustainable use of renewable resources, thereby responding to global and local challenges, such as climate change and sustainable development.

- OUR RESPONSE -

The pulp and paper sector’s contribution to a climate-friendly future has been highlighted by CEPI (Confederation of European Paper Industries), together with other entities, in the report “Forest-Based Industries 2050: a vision for sustainable choices in a climate-friendly future”, where it is provided evidence of the efforts made by forest-based industries to promote best practices in forest management and in decarbonising their production processes.

This has been the road travelled by Navigator, one of the leading actors in Portugal’s woodlands and one of the top players in the European pulp and paper industry. In 2019, the CEOs of CEPI’s members, including Navigator, put their names to the “CEO Initiative: Our Contribution to EU 2050 Climate Neutrality”, reaffirming the sector’s alignment with the European strategy for combating climate change. Through sustainable forest management, the paper sector makes a significant contribution to Europe’s forest cover, allowing woodlands to play their role of carbon sequestration, provision of materials capable of storing carbon and substitution of fossil-derived raw materials. The industry also offers innovative and efficient solutions for a wide range of products, as a result of a sustainable and circular bioeconomy.

At Navigator, sustainable forest management is combined with programmes to improve energy efficiency or transition to technologies using renewable energy sources. Keeping ahead of international targets for carbon neutrality, the Company announced in 2019 an ambitious investment plan - its Roadmap to a Carbon Neutral Company - placing it among the corporate frontrunners in active efforts to mitigate and adapt to climate change [see chapter 3.2].

3.1.2 Protection of Natural Resources

The environmental problems we face globally, according to the European Environmental Agency, result mostly from mankind’s over-exploitation of natural resources, including energy resources (fossil fuels), minerals, water and land. It is therefore increasingly clear that the current global model for economic development - based on intensive use of resources, waste generation and degradation of the environment - cannot be sustained in the long term. The truth is that many of these resources are used only for a short period of time or become a loss to the economy when they are not recovered.

Aware of this great challenge, Navigator is investing in important areas for the protection of natural resources, adopting a business model based on the Circular Economy, Biodiversity Conservation and Water Preservation.
Circular Economy

- THE GLOBAL CONTEXT -

Sustainable use of natural resources, where all products are part of a biological, chemical and physical cycle, and are reused several times in their production process, has been dominating research around the world. The circular economy is a strategic concept based on reducing, reusing, recovering and recycling materials and energy, as happens in the forest-based industrial sector, in response to growing awareness of sustainability. At European level, forest-based industries are seeking to step up their contribution to a more circular economy, by eliminating waste from their value chain. CEPI has set targets for 2050 that entail recovery of 90% of materials and a recycling rate of 70%, stressing the importance of these materials from the bioeconomy standpoint.

The European Ecological Pact, approved in December 2019, argues that, in order to achieve the EU’s climate and environmental targets, a new industrial policy based on the circular economy will be needed. To this end, one of the European Commission's main aims will be to stimulate the development of new markets for circular and climate-neutral products, encouraging sustainable products. This will prioritise reduction and reuse, before recycling.

- OUR RESPONSE -

Navigator is an example of circularity in its production process. From the forest to the consumer, the process maximises the use of the resources involved, such as the use of by-products from the pulp production process in generating electricity. Approximately 70% of the energy consumed at our industrial complexes is obtained from biofuels derived from forest biomass, a renewable energy source. The example of the new biomass boiler at the Figueira da Foz Complex, due to start up in 2020, will allow all the thermal energy produced at that site to be renewably sourced (see chapter 4.2).

In addition to Figueira da Foz, Navigator’s industrial units in Aveiro and Setúbal are also equipped with biomass cogeneration plants, generating electricity from materials sourced from eucalyptus plantations, making use of bark, stumps, branches, twigs and sawdust resulting from de-barking operations. This is a doubly advantageous solution, as it helps to optimise forest management and minimise the use of fossil fuels.

90% OF THE MATERIALS USED IN NAVIGATOR’S PRODUCTION PROCESS ARE FROM RENEWABLE SOURCES.

80% WASTE RECOVERY RATE IN 2019.

Waste is recovered from pulp production and re-introduced, as a source of raw material, in the paper production process. This is the new “circular” effect at the Figueira da Foz Industrial Complex, after demonstration in 2019 of the feasibility of using carbonate sludges from pulp manufacture to produce PCC (Precipitated Calcium Carbonate). PCC is one of the main components in Navigator’s UWF paper, and this new arrangement has gained Portugal a new place on the international markets.

The PCC is produced at the Figueira da Foz site by a satellite factory operated by Specialty Minerals Inc. (SMI), one of the world’s leading producers of this material. From 2020 onwards, SMI will use part of the excess carbonate sludges (which is also used in the cement industry (see chapter 4.3)) as a substitute for the fossil raw material (lime) used to produce PCC. This partnership between Navigator and SMI has the potential for synergies between the two industrial operators, without undermining the end quality of the product. In addition, it has environmental benefits reflected in reduced mining of limestone and emissions avoided in road transport, as the sludges are reused directly at the Figueira da Foz Complex.

“Our carbonate sludges have had very promising results in their assessment for production of PCC, substituting a fossil raw material, limestone, which is mined. This partnership with SMI represents a huge step forward for circularity at Navigator in 2020, with extremely interesting potential from an environmental standpoint.”

Laura Costa, Environment and Energy Division
**Biodiversity Conservation**

**- THE GLOBAL CONTEXT -**

Human activity and climate change have been taking a serious toll on the natural world and ecosystems, as revealed by the report from the World Wide Fund for Nature (WWF), “Climate, Nature and our 1.5°C Future”. On the basis of the latest diagnoses, made by the IPCC (Intergovernmental Panel on Climate Change) and IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services), the WWF warns that urgent measures need to be taken and underlines the importance of solutions based on ecosystem services in achieving the ambitious target of keeping the maximum temperature increase within 1.5°C. In relation to forests, the report points to the wide array of services provided by these land-based ecosystems, where it is possible to conciliate conservation with the use of its resources. The reference framework for the adopted model is sustainable management, in other words, the approach that allows for use of raw materials taken from forests, whilst preserving biodiversity, yields and the vitality of ecosystems.

"Biodiversity is suffering, as a direct response to climate change and due to a degradation and the transformation of habitats in which species have lived for thousands of years. There are an estimated eight million plant and animal species on this planet, and around one million of them are now threatened with extinction, many within decades."

"Climate, Nature and our 1.5°C Future" _WWF, 2019_

**- OUR RESPONSE -**

Navigator has developed a strategy for integrating Biodiversity Conservation in its forest management model, seeking to ensure that activities are planned and carried out in a way that, at the very least, maintains the existing biodiversity levels on its holdings. Measures have also been implemented to achieve a biodiversity net gain. This has involved landscape regeneration schemes, such as the restoration of riparian galleries, i.e. riverside trees and thickets, with degraded habitats, in order to renew the services provided by these ecosystems.

Good conservation practice is accordingly part of the sustainable forest management activities which characterize the Navigator’s relationship with the natural world. In these efforts, forest certification plays a fundamental role in ensuring that best practices are applied in planted forests and that measures are included to conserve biodiversity. Certification is a well-established priority for Navigator and all the woodlands under its management fully comply with the standards required by the main international certification schemes (FSC® and PEFC).

Around 11% of Navigator’s woodland holdings comprise areas of conservation interest, and 4,100 hectares are classified by Rede Natura 2000 as protected habitats. In order to safeguard these habitats and species, forest management operations are conciliated with conservation by creating conservation interest areas, where restoration work is carried out, designed to promote natural regeneration and natural succession, as well as specific conservation measures for species of high conservation value, such as species that nest in areas under management, or neighbouring areas. In these cases, forestry operations are planned to avoid negative impacts in the critical breeding season. These areas are managed in order to maintain or improve the state of conservation of the habitats that provide food, shelter and breeding grounds for the species, and which also serve as ecological corridors, allowing for natural dispersion and genetic interchange between populations.

A Biodiversity assessment entails identifying, mapping and characterising the wildlife found on the holdings under management. Wildlife assessments are conducted in prospective forestry intervention areas, identifying classified species and habitats and evaluating the general state of conservation. This is done using specific methodologies for different groups, and results in the gathering of information to support the execution of management guidelines, in line with the best available information sources. The Company accordingly conducts annual monitoring of pre-selected areas with the help of leading external specialists and provides specialist training for its staff in the field of biodiversity conservation.

**IN THE WOODLANDS HOLDINGS MANAGED BY NAVIGATOR, AROUND**

- 740 SPECIES OF FLORA
- 235 SPECIES OF FAUNA

HAVE BEEN IDENTIFIED, SUBJECT TO REGULAR MONITORING, ESPECIALLY IN THE CASES OF THOSE WITH ENDANGERED STATUS.

**NAVIGATOR PROTECTS BONELLI’S EAGLE**

The Bonelli’s eagle – for which there are currently sixteen territories in properties managed by Navigator – has been monitored over the past twelve years with specific conservation measures. As part of the LIFE project (Conservation of Arboreal Populations of the Bonelli’s eagle in Portugal), Navigator has worked with CEAI – Centro de Estudos da Avifauna Ibérica (Iberian Birdlife Research Centre) to draw up a conservation plan establishing buffer zones around nests, adjusted to the lie of the land. A critical period has been identified, corresponding to the species’ breeding season, during which felling and planting operations are subject to restrictions. These concerted efforts have borne fruit: new pairs have established themselves and the population has stabilised.

Photo: ©Joaquim Pedro Ferreira

**Photo:**

The Bonelli’s eagle – for which there are currently sixteen territories in properties managed by Navigator – has been monitored over the past twelve years with specific conservation measures. As part of the LIFE project (Conservation of Arboreal Populations of the Bonelli’s eagle in Portugal), Navigator has worked with CEAI – Centro de Estudos da Avifauna Ibérica (Iberian Birdlife Research Centre) to draw up a conservation plan establishing buffer zones around nests, adjusted to the lie of the land. A critical period has been identified, corresponding to the species’ breeding season, during which felling and planting operations are subject to restrictions. These concerted efforts have borne fruit: new pairs have established themselves and the population has stabilised.

Photo: ©Joaquim Pedro Ferreira
In Navigator’s sustainable forest management practices, biodiversity conservation may be observed in the existence side-by-side of industrial eucalyptus forests and other forestry species, such as pines and other conifers, cork oaks, and areas of oaks, arbutus (strawberry tree), alder, willow and farmland. Whenever a new holding is added to the Company’s estates, a forest plan is drawn up, analysing the biodiversity present and the areas in need of protection, such as water courses, habitats and protected and endemic species. Navigator’s Impact Table is an assessment tool that enumerates the potential impacts of forestry activities, as well as measures to be taken to mitigate them.

**CRASSOSADO PROJECT REAFFIRMS SETÚBAL’S OYSTER POTENTIAL**

The CRASSOSADO project was the result of a project between Navigator and the ICNF - Instituto de Conservação da Natureza e das Florestas (Institute for Nature Conservation and Forests), set up in 2014 to assess the threats and opportunities for oyster farming in the Sado estuary. With the participation of several universities, the final phase of the project was completed in 2019, leading to the conclusions that, in terms of ecological quality, the Sado estuary presents a low level of degradation. This reaffirms the potential of oyster farming in the Setúbal region and its contribution to biodiversity in the estuary. In undertaking this project, Navigator and the ICNF sought to demonstrate that it is possible to conciliate livelihoods with sustainable management of this important natural resource.

**WBCSD VISITS NAVIGATOR AND TAKES PART IN LOVE THE FOREST**

On the occasion of the annual board meeting and General Assembly of the WBCSD, which in 2019 were held for the first time in Portugal (Lisbon), Navigator hosted two events for representatives of some of the world’s top companies in terms of sustainability. Guided tours of the Espirra nurseries and the Setúbal Industrial Complex tied in with the theme of “Sustainability at the Core of an Integrated Pulp & Paper Business”, and participants also had the chance to join a volunteering session in our Love the Forest programme. Billed on the programme as “Joining forces with a Purpose: The Navigator Company’s Volunteering Programme to help preserve Arrábida’s Unique Natural Heritage”, this was part of wider efforts to raise awareness of the need to protect the natural heritage in the regions surrounding Navigator’s facilities.

**NATURAL CAPITAL IN FOCUS**

related to the same issues. The Company has supported LIFE Volunteer Escapes and shared its approach to natural capital in a video (https://www.youtube.com/watch?v=qx6CGKv4Na4).

In 2019 it also took part in the event co-designed by SINCERE (H2020), a European project focused on adding value to forest ecosystem services, as the specialist stakeholder invited by BCSD Portugal, and in the European Ecological Federation Congress, in Lisbon, with a presentation entitled “The Navigator Company: When Business meets Natural Capital and aligns with SDGs”. Navigator’s work in the field of natural capital and biodiversity conservation has been the launchpad for a series of activities and for participation in other initiatives
Water Preservation

- THE GLOBAL CONTEXT -

Water is an essential resource for sustainable development and one of the central topics on the United Nations’ 2030 Agenda for the Sustainable Development Goals (SDGs). In Goal 6, the UN calls for universal and fair access to drinking water and sanitation within ten years. Water is fundamental for the survival of the human species, for producing food and energy, for socio-economic development and for preserving ecosystems. Responsible water use is therefore a global priority, taking into account the growing demand for this resource and rising levels of water stress resulting from climate change.

“Water use has been increasing worldwide by about 1% per year since the 1980s, driven by a combination of population growth, socio-economic development and changing consumption patterns.”

The UN World Water Development Report, 2019

- OUR RESPONSE -

Aware of the need to preserve an essential resource for humanity and for the economy, Navigator has a twofold approach to water issues: reducing use, through re-use, and treatment, so that water is returned to the environment in better conditions. Through its Corporate Programme for Reducing Water Use, which aims to bring down specific consumption of water by 15% by 2025 (vs. 2019), the Company has made a series of changes to its production processes, increasing recirculation and optimisation, in order to relieve pressure on water intake locations [see chapter 4.3].

At the same time, Navigator has invested in effluent treatment, with a number of measures to optimise WWTPs (Waste Water Treatment Plants) and to monitor the environment into which water is released, to ensure the least possible impact from its operations on marine ecosystems. All Navigator’s production units have WWTPs that comply with strict legislative requirements on discharges into the environment. Steps have also been taken to assess the potential for recovering treated effluents.

80% OF THE WATER INTAKE BY NAVIGATOR’S INDUSTRIAL UNITS IS RETURNED TO THE ENVIRONMENT.

TREATING EFFLUENTS TO REUSE WATER AT THE SETÚBAL COMPLEX

Committed to identifying opportunities to reduce water use in its production process, Navigator has also been running projects to boost recovery of this natural resource. Two years ago it started a programme to recover effluents at a WWTP on the Setúbal Industrial Complex. Effluents are treated in preparation for returning to mill circuits to replace intakes of fresh water. A pilot facility was set up, in partnership with Osminergia, which has treated the effluent from the oldest paper mill on the complex with ultrafiltration and removal of accumulated salts, followed by inverse osmosis. The resulting water presents generically the same quality as the fresh water intake.

The water recovery process, and the treatment that water undergoes before being returned to the environment, will be important for a study that Navigator is set to conduct in 2020 in partnership with the University of Coimbra and the Instituto Superior Técnico (public school of engineering and technology, part of the University of Lisbon), in order to assess the effects of dispersion in the Sado estuary of water treated at the two WWTPs operating on the Setúbal Complex.
In later 2019, the Confederation of European Paper Industries (CEPI), in partnership with international associations in the sector, released the first European guide promoting ecodesign: Paper-Based Packaging Recyclability Guidelines. Aimed at designers of paper packaging, the guide sets out to help create more functional packaging and to achieve higher recycling rates.

Mass use of plastic and the consequent pollution caused by plastic waste in ecosystems, particularly in oceans, remained a topic of debate on the international agenda in 2019. In view of this, and with the central aim of minimising the impacts of excessive consumption of this fossil-derived material, the European Council has approved new rules that gradually introduce restrictions on certain single-use plastic products, until a complete ban takes effect in 2021.

As a recyclable and biodegradable product derived from a renewable raw material (wood fibre), paper presents itself as a natural alternative to plastics, especially in packaging. Paper has been increasingly used for this purpose, whilst consumers, brands and retailers share great expectations that new recyclable solutions can be found. With a recycling rate for paper of 71.6% and for paper and cardboard packaging of 85% (CEPI, 2018), the European paper industry is committed to responding to these demands.

The National Geographic Society is running a global campaign with the slogan “Planet or Plastic”, encouraging all its local partners to find ways of reducing plastic consumption in their operations.

In Portugal, the partnership with Navigator has allowed it to substitute 150,000 plastic bags a year by paper envelopes in the distribution of its magazine.

Industry 4.0 is changing the conventional production and business models, opening doors to new solutions that allow companies to obtain competitive advantages. This new way of thinking about and managing industry is close to a “smart factories” model, with a view to creating an intuitive, sustainable and competitive industrial environment, that operates on an integrated and autonomous basis, offering higher levels of safety, and able to respond efficiently and effectively to needs. Regarded as the fourth industrial revolution, Industry 4.0 will make it possible to improve the quality of products and services and to optimise energy, as well as contributing to reduction of waste and costs along companies’ value chains. Investment in this new model is essential in order to leverage technological transformation, but also to find solutions for the new challenges facing the economic system.

The European Commission is funding the Digital Europe programme, which will provide funding of around 9.2 billion euros, from 2021 to 2027, to fund projects in five main areas: supercomputing, artificial intelligence, cybersecurity, advanced digital skills, and ensuring a wide use of digital technologies across the economy and society, in keeping with sustainability values.

The Navigator Company is working on projects, partnerships and new forms of production designed to stimulate the development of opportunities in several areas of Industry 4.0.

- OUR RESPONSE -

Development of sustainable paper products is part of Navigator’s history, and in recent years the Company has explored several opportunities to substitute competing products offering poorer environmental credentials. In order to showcase paper’s potential as an alternative to plastic, The Navigator Company has supplied paper bags for distribution of the widely read weekly newspaper, Expresso, since January 2019, and as from April of the same year National Geographic Magazine has been sent to the homes of subscribers in a paper envelope marked as ‘made by Navigator’. The Lisbon Book Fair also joined forces with the Company in 2019 in order to offer a more ecological solution for consumers to take their books home, replacing plastic with paper bags. These partnerships are intended not only to enhance the potentialities of paper as a substitute for single-use plastics, but also to raise consumer awareness of more sustainable packaging alternatives.

In addition to a range of bag and wrapper-bag solutions, Navigator is supplying paper, or conducting tests, for the production of lollipop sticks, the cotton bud stems, and other markets connected to single-use plastics. Internally, the Company eliminated disposable plastics in all its facilities in 2019: this has applied to water bottles, cups, glasses and coffee stirrers. Instead, only glass is permitted, as well as wood and cardboard to replace other plastic utensils.

3.1.3 The Alternative to Plastic

- THE GLOBAL CONTEXT -

3.1.4 Industry 4.0

- THE GLOBAL CONTEXT -

- OUR RESPONSE -

The Navigator Company is working on projects in five main areas: supercomputing, artificial intelligence, cybersecurity, advanced digital skills, and ensuring a wide use of digital technologies across the economy and society, in keeping with sustainability values.

- OUR RESPONSE -

The Navigator Company is working on projects, partnerships and new forms of production designed to stimulate the development of opportunities in several areas of Industry 4.0.
3.1.5 The Social Challenge

- The Global Context -

Corporate responsibility for social issues is an integral part of ethics in business development, and the ability of companies to respond to social concerns has an increasingly important influence on their “license to operate”. The need to raise awareness of these issues among senior corporate managers led the WBCSD to launch a guide for CEOs on the importance of human rights in business management today (“CEO Guide to Human Rights”). The guide was published in June 2019 and was authored by the chairmen and CEOs of several companies, including The Navigator Company.

This challenge involves not only human rights, but also business ethics, respect for diversity and, more broadly, corporate responsibility in responding to the expectations and needs of employees and local communities. Companies must make a commitment to being great places to work and ensure that their human capital is prepared and motivated to secure the future of their business.

People are a key asset for the future of companies. Aware of this, Navigator has adopted human resources policies that invest in training and developing its Employees, on the basis of performance management, which will allow it to respond to current and future business needs. The Learning Center has been designed to foster continuous learning, benefitting from partnerships with various academic institutions. It has been fundamental in supporting the Company’s response to its commitments in the field of talent management and the development of human capital.

The WBCSD document entitled “Business Leadership for the Future of Work” cited the innovative, far-reaching and inclusive nature of the Learning Center’s portal as an example of good practice in building skills, talent management and preparing future leaders for Navigator.

They must also show concern for the welfare of neighbouring communities and contribute to their development by sharing value.

“In a world where we face constant risks, both environmentally, with the climate emergency, and socially, with migration, just to give two examples, it is crucial that companies integrate respect for Human Rights into the responsible management of their business and maximise the positive impacts they can have on society.”

João Castello-Branco, Chairman of The Navigator Company and Chairman of BCSDD Portugal

- Our Response -

More than just a traditional training strand, Navigator’s Learning Center offers a pro-active and participative approach to building the capacity of the Company’s human capital for present and future challenges. Launched in 2019, the learning portal is bilingual (Portuguese and English) and can be accessed by computer, tablet or smartphone. It offers e-learning, b-learning and video courses, all of them free and available on demand, just a click away. Over the last year, more than five hundred training courses have been made available online, and others on a face-to-face basis, in 17 different areas, ranging from management and safety to leadership and behaviour, as well as in technical fields of relevance to industrial, commercial and forestry operations. There has been an overall Employee participation rate of 95%.

Developing an organisational culture based on ethics and integrity is a very important aspect in the response to social challenges. This entails reducing ambiguity and clarifying the behaviour to be adopted by the Company on the relationship with its stakeholders. In this context, Navigator has been actively disseminating its Code of Ethics and Conduct for Employees and its Code of Conduct for Suppliers, seeking to establish a high standard of responsibility in dealings between partners. Respect for Human Rights is built into the guidelines provided by these documents.

Skills Development, Just a Click Away

In 2019, Navigator published its Plan for Gender Equality, drawn up after conducting a self-assessment that identified strong points and areas for improvement. This plan envisages a series of measures to further equal opportunities in professional development and growth, and sets a number of targets, such as increased percentage of women in management positions in the period 2020-2022. The Gender Equality Plan is designed to comply with Article 7 of Law 62/2017, whilst previously to this the Code of Ethics and Conduct in force in Navigator already sought to foster a culture anchored in merit, diversity of talent and equal opportunities.
Another aspect of the social challenge can be seen in the socio-economic impact that the Company has on local communities. Being a forest-based industry, Navigator plays a crucial role as a driving force for the rural economy, triggering job and wealth creation in the regions where its forestry operations are located, from the Minho, in the north of Portugal, to the Algarve in the south, as well as in Mozambique. Portucel Moçambique, Navigator’s subsidiary in the country, has also made a commitment to the people with whom it shares stewardship of the land, running a Social Development Programme for local communities.

WELFARE SUPPORT FOR MORE THAN SEVEN THOUSAND FAMILIES IN MOZAMBIQUE

The Social Development Programme that the Company is running in Mozambique is designed to improve the living standards of communities in Zambézia and Manica provinces, where Portucel Moçambique is implementing an integrated forestry project for pulp production. The programme is a key element of Portucel Moçambique’s investment strategy, which is focused mainly on developing sustainable plantations that contribute to socio-economic prosperity and climate resilience. Food security and diversity, opportunities for economic growth and income generation, along with welfare support for the population, are the main aims of Portucel Moçambique’s Social Development Programme which up to 2019 has reached out to 7,000 families, out of the estimated 25,000 living in the areas where the Company operates.

A new pilot project for fish farming in Manica and a project to build two dams, and the respective irrigation perimeters in Zambézia, as well as the signing of a memorandum of understanding with the provincial government of Zambézia, for construction of an operating block in the district of Ile, are just some of the initiatives launched in 2019. Over the past four years, the programme broadened out into a range of social development initiatives, such as promoting farming (distribution of improved seeds, introduction of new crops and teaching of agricultural conservation techniques), construction of granaries with better storage conditions, and incentives for income generation, with the distribution of goats and bee hives. In addition, it has also brought benefits from an improved quality of life, such as by drilling and/or repairing bore holes for drinking water, donating solar lamps which can also charge small electrical apparatus and allow children to do school homework after nightfall, and the construction and restoration of 5,300 km of access roads.

PORTUCEL MOÇAMBIQUE SOCIAL DEVELOPMENT PROGRAMME

$ 40 Million
Planned investment over project lifetime

$ 6 Million
Investment in the social programme since 2015

7,000
Families supported in 120 communities up to 2019

2,800
Families who have received horticulture training

587,000 kg
Improved seeds distributed (corn, beans, soya and sesame)

40
Boreholes drilled and/or repaired

5,300 km
Roads and paths built and restored
3.2 Roadmap to a Carbon Neutral Company

The low-carbon economy has moved definitively onto the global agenda in order to respond to the climate change affecting the planet. Whilst societies adapt to a climate different from that in which they developed, a response commensurate with the current emergency consists of cutting carbon emissions and/or increasing carbon sequestration, as part of a global strategy leading to carbon neutrality. The Paris Agreement has committed nations to limit global warming, a road that will be travelled by focussing on cutting emissions, which mostly result from human activity.

Aware of its contribution to mitigating the effects of climate change, Navigator has made a commitment to achieving carbon neutrality at its industrial complexes by 2035, making it the first Portuguese company, and one of the first in the world, to anticipate the national and European goals by 15 years. The “Roadmap to a Carbon Neutral Company” was unveiled in 2019, but the Navigator’s efforts to create a low-carbon economy date back several years, with investment in improving efficiency in its processes, implementing technological solutions that allow it to cut energy consumption and use of renewable energy sources. A new chapter is set to be opened in 2020 with the start-up of the new biomass boiler at the Figueira da Foz Complex [see chapter 4.2].

Navigator’s strategy for carbon neutrality, which entails total investment of 158 million euros, is based on four objectives. Work will proceed on each of these simultaneously, taking into account the specific conditions at the industrial complexes:

- To achieve 100% power generation from renewable sources.
- To reduce fossil CO₂ emissions by substituting technologies.
- To reduce specific energy consumption by 15% by 2025, in relation to 2015 levels.
- To offset emissions that cannot be eliminated.

Over the next 15 years the company will reduce its CO₂ emissions by 90%.

Navigator’s investment in the roadmap to a carbon neutral company

<table>
<thead>
<tr>
<th>Complex</th>
<th>Investment (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setúbal Complex</td>
<td>63 million</td>
</tr>
<tr>
<td>Figueira da Foz Complex</td>
<td>59 million</td>
</tr>
<tr>
<td>Aveiro Complex</td>
<td>36 million</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>158 million</strong></td>
</tr>
</tbody>
</table>

**Setúbal Complex**

**Figueira da Foz Complex**

**Aveiro Complex**

**Total**

€ 158 million
CARBON NEUTRALITY
The Navigator’s Contribution

Forests play an essential role in capturing carbon and are Natural Climate Solutions

108,269 ha
11% CONSERVATION AREAS

OUR FORESTS ARE SUSTAINABLY MANAGED *
They sequester and store carbon while they grow

5.3 MtCO₂
Carbon stock in Navigator’s Forests

CARBON NEUTRALITY
The Navigator’s Contribution

BIOECONOMY
Opportunity for promoting low carbon solutions

ENERGY PRODUCTION FROM FOREST WASTE
* FSC® (FSC license - CO10852) and PEFC™ (PEFC/13-23-001)

WE INVEST IN ENERGY EFFICIENCY AND THE USE OF RENEWABLE ENERGY

Commitment TO BE CARBON NEUTRAL AT INDUSTRIAL COMPLEXES BY 2035

REDUCE 90% OF EMISSIONS
2018
2035
Offset 10%

67% Energy consumed from renewable sources
• 3 Solar Power Plants
• 4 Biomass Power Plants (2 power plants and 4 co-generation plants)
• 418,375 tCO₂ avoided

New Biomass Boiler at Figueira da Foz Complex
100% of energy generated will be renewable in 2020

Forest-based products store carbon over time

PAPER
- Natural source
- Renewable
- High recyclability rate
- Biodegradable

71.6% paper recycling rate in Europe

RETURNED TO NATURE AT END OF USEFUL LIFE

67%
3.2.1 The Bioeconomy Role

The economy, as we know it, is taking its first steps in a vast process of transformation. Considering the global population growth, the scarcity of resources, increasing pressures on the environment, and climate change, societies need to produce consumer goods using sustainable processes. By bringing together all sectors and systems in a chain based on biological resources, the bioeconomy is preparing the way for a more innovative and competitive society, more efficient in the sustainable use of renewable resources for industrial purposes and in protecting the environment.

Because it is built on sectors that operate with natural resources, the bioeconomy has a direct impact on the net balance of greenhouse gas emissions. This may be seen both in increased carbon sequestration, by primary biomass production sectors (such as forestry and farming), and the retention of carbon in bio-based products (e.g. wood), as well as in the potential reduction in emissions from substituting fossil based materials with renewable biomaterials, with a smaller carbon footprint.

In line with the vision advanced by CEPI (Confederation of European Paper Industries), Navigator shares the idea that the contemporary pulp and paper sector belongs to the hard core of the bioeconomy and has the potential to achieve an even more central position. Pulp mills can be adapted to supply a broad range of intermediate products, components and materials, of biological origin (biofuels, bio-composites and essential oils), by operating as biorefineries. These units are currently an important link in the chain of renewable energy production by cogeneration, through the use of forest biomass and by-products from the pulp production process, as demonstrated at Navigator’s industrial complexes in Aveiro, Figueira da Foz and Setúbal [see chapter 4.2]. In turn, insofar as paper is one of the top recycled materials, the industry adds an element of circularity to the economic system, contributing to an optimised use of resources, while, at the same time, creates jobs and wealth along the value chain.

3.2.2 The Forest’s Contribution

Forests play a highly important role in decarbonisation issues because, as well as regulating the climate and protecting soils and water, they are responsible for sequestering carbon as they grow. Woodlands are the terrestrial ecosystems with the greatest capacity for storing carbon. By assimilating large quantities of CO₂ through photosynthesis, they avoid this gas contribution to the greenhouse effect. Forests are a natural solution to the carbon issue, capable of contributing 37% of the emissions reduction needed to limit global warming to 2°C, according to the WBCSD report entitled “Natural Climate Solutions”.

In Portugal, forests are responsible each year for removing approximately 10% of CO₂ from the atmosphere, in addition to their function of storing carbon. Sustainable forest management, combining planted forests, for production, with conservation areas, boosts the carbon retention capacity, as happens in forests under Navigator’s management, which in 2019 presented an accumulated stock of approximately 5.3 million tons of CO₂.

At Navigator everything starts with the forest. This umbilical relationship is clear from the area of Portuguese woodlands managed by the Company - 108,269 hectares spread over 172 municipalities of mainland Portugal - and from its role in promoting the sustainable management and improvement of woodlands, as well as in conserving biodiversity and preventing fires. In 2019, the Company invested directly € 33.5 million in the 18 districts of Portugal in which it operates, and around 61% of this investment was in interior regions of the country. The investment in forest fire prevention and support to firefighting reached € 4.1 million in 2019.
The topics on the global sustainability agenda are important to The Navigator Company. Aware that corporate solutions for some of the most pressing environmental and social challenges cannot be designed without cooperation with its stakeholders, the Company has sought to promote debate and reflection on these issues through its Sustainability Forum, a sustainability governance body at Navigator.

The ninth edition of the event, devoted to the topic “Towards a Carbon Neutral Future”, explored the way forward to building a low carbon society. This was also the occasion on which the Company announced, for the first time, its public commitment to bringing forward its aim to achieve carbon neutrality at all its industrial units by 2035.

One of the highlights of the opening session was a message from António Guterres, the Secretary-General of the United Nations, who welcomed Navigator’s dedication to climate emergency issues. The Sustainability Forum then continued with a series of speakers well known for their expertise in the area, and a clear consensus emerged that carbon neutrality is the responsibility of all economic actors. The key message from this Forum was the need to encourage different sectors to find integrated solutions, stressing the crucial importance of the forest sector in the response to climate change.

“Climate change is a threat to our existence, and that makes it the defining issue of our times. It is a huge challenge, one that will require us to be much more ambitious, but we know there are solutions. I feel encouraged by the massive mobilisation of people around the world in defence of climate action, and by the commitments made at the recent Climate Action Summit. Governments, young people, cities, investors and civil society have come together to adopt the measures that the world needs so much in order to avert a climate catastrophe.”

António Guterres, Secretary-General of the United Nations (Navigator Sustainability Forum, 2019)
It can live for two centuries and its distinctive feature is its cork bark.

The cork oak is native to the western Mediterranean and occurs spontaneously throughout mainland Portugal, except in Trás-os-Montes and uplands at an altitude of a thousand metres or more in central and northern regions. It is the dominant tree in cork oak woodlands and montado - cork oak savannas, which are important habitats for biodiversity conservation and part of the Natura 2000 network of conservation areas. It also grows in other woodlands. Cork oaks are found on the Herdade de Espirra, one of Navigator’s estates.
4.1 Sustainable Forest Management

Navigator’s Perspective

Forests are a natural and renewable resource which is essential to the planet’s climate balance. They lie at the base of our value chain and play a fundamental role in the bioeconomy.

Navigator contributes to the development and improvement of Portuguese woodlands, which currently occupy around 36% of the country’s territory, constituting an important source of wealth for Portugal, with positive impacts on society and the environment. All woodlands in mainland Portugal under Navigator’s management are certified in accordance with the principles of sustainable forest management defined internationally. With the primary aim of supplying raw material, our forest management model integrates biodiversity conservation and also ensures that important cultural and environmental sites are preserved, maintained and/or improved, placing them at the service of communities and of biodiversity conservation.

We are committed to increasing the supply of wood with certified forest management

(Commitment 1)

This is why we play an active part in the “Better Eucalyptus” Project, in partnership with CELPA, and invest locally in our Programme to promote Forest Yields and Certification.

Sustainable Forest Management: Other Commitments

- Develop ecosystem expertise
  (Commitment 2)
- Help reduce fires in rural areas
  (Commitment 3)

Supply of certified wood (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total - national and international market</th>
<th>Portuguese market</th>
<th>Total - national and international market</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>27%</td>
<td>72%</td>
<td>72%</td>
</tr>
<tr>
<td>2018</td>
<td>27%</td>
<td>72%</td>
<td>72%</td>
</tr>
<tr>
<td>2017</td>
<td>27%</td>
<td>72%</td>
<td>72%</td>
</tr>
<tr>
<td>2016</td>
<td>27%</td>
<td>72%</td>
<td>72%</td>
</tr>
</tbody>
</table>

Target for 2025

75% national certified wood received at industrial complexes

6,066 ha area covered by smallholders involved in the programme

72% Supply of FSC® or PEFC certified wood (national and international market)
“CLEAR AND FERTILISE” SUPPORTED 658 SMALLHOLDERS IN 2019

“The ‘Clear and Fertilise’ programme helps to reduce the risk of fire and to improve forest nutrition, boosting its vitality and resistance to pests and diseases, and even its resilience to climate change. At the same time, smallholders are encouraged to apply good practices and to apply for certification of their woodlands.”

José Luís Carvalho, Forest Innovation and Development Coordinator

Vila Nova do Ceira is a small civil parish in the municipality of Góis, but it offers a model of a community committed to caring for woodlands. The example has been set by 17 local smallholders who in 2019 took part in the “Clear and Fertilise” programme, an initiative under the “Better Eucalyptus” project organised by CELPA (the Portuguese Paper Industry Association). Navigator has been an active participant in designing and funding the programme, as well as providing ongoing technical support. “Clear and Fertilise” is focused on reducing fire risks, mobilising smallholders to control spontaneous vegetation. As its own contribution, the industry has borne the full cost of fertilising the stands, as well as providing technical assessments and coordinating the control of vegetation in the woodlands owned by these smallholders.

The project started up in 2018, when it involved more than 100 landowners and was applied to an area of over 1,000 hectares. Proof of the relevance of the “Clear and Fertilise” scheme then came in 2019, when twice the expected number of applications were received and 658 independent smallholders got involved. The woodlands area covered rose to a total of 6,066 hectares. The interior central region, where Vila Nova do Ceira is located, was one of three (alongside the southern and central coastal regions) where the programme was implemented with the help of a network of forestry actors (associations of producers, cooperatives, wood suppliers and forest services providers), who pulled together to mobilise the owners of eucalyptus plantations to work towards sustainable management of productive woodlands. The “Clear and Fertilise” project aims to make improvements over 100,000 hectares by 2023, with work planned on 12,000 hectares in 2020, in what will probably be the largest ever campaign of spontaneous vegetation control in Portuguese woodlands by an organised coalition of private landowners.

Other developments in the course of 2019

Programme to promote forest yields and certification in Portugal

Forest certification leads to improved environmental and social performance, making it possible to achieve better results from forest management, with an impact on yields and employees’ safety, as well as the positive impact on local communities.

In 2015, certified wood accounted for 9% of the wood acquired on the Portuguese market. The programme started up in 2016 and at present most of the wood purchased is from properties with certified management (31.5%). The Company has supported 81 suppliers in joining the Chain of Custody, and has provided assistance to more than a dozen Certification Groups, Forest Producers’ Organisations and Chain of Custody Groups which, combined with other producers, have made it possible to achieve this result.

A range of initiatives were undertaken in this area in 2019:

> Training sessions on good practices and management support tools for technical staff, service providers and producers;
> Participation in consultation process concerning new approaches for smallholders in the PEFC and FSC schemes;
> Active participation in setting up new management bodies at regional level (e.g. Lisbon Metropolitan Area PEFC and Alentejo PEFC) in order to ensure nationwide coverage by both certification schemes, and promotion of certified forest management, such as in Madeira.

**Programme funded by Centro de Estudos Florestais (CEF), a research unit funded by Fundação para a Ciência e Tecnologia I.P. (FCT), UID/AGR/00239/2013 and UID/AGR/00239/2019) under thematic strand ADAPT&SERV and by the RIVEAL project, PTDC/CTA-AMB/29790/2011.**

**SUSTAINABILITY REPORT 2019**
“In view of the importance of ongoing prevention and defence of the territory and communities, Navigator’s total investment in fire protection increased by 25% in relation to 2018, totalling €4.1 million, divided between forest fire prevention and support to firefighting.

Institutional measures taking place in the rural sector are supported by internal resources and by external partners (from stakeholders in the forest sector to universities) seeking to find and test new solutions for preventing and controlling forest fires, a collective endeavour to benefit Portugal’s woodlands and rural communities.

Mozambique reduces burned area with prevention measures

Fire is a part of everyday life for most of the communities due to the scarcity of other energy resources, and also because it is a traditional way of preparing land for crops, meaning it is deeply rooted in cultural habits. There is also an added risk of burns getting out of control. Because of the geographical dispersion of occurrences and the lack of institutional arrangements to tackle the problem, they are regarded as a significant risk for the Company’s project, just as they are for families and communities who stand to lose their property and whose lives are endangered.

The measures adopted by Portucel Moçambique in this area started to bear fruit in 2019. Efforts have been made to raise the awareness of families to the need for clear rules on the use of fire, whilst motorised rapid intervention teams have been set up to take swift action and mitigate forest fire outbreaks at an early stage. However, this is still a widespread phenomenon, and the company will continue to devote special attention to this issue, maintaining its focus on improving the procedures for prevention and firefighting already developed.

PORTUCEL MOÇAMBIQUE AND WWF IN MOZAMBIQUE: NEW GENERATION PLANTATIONS MEETING

Portucel Moçambique and The Navigator Company, in partnership with the World Wide Fund for Nature (WWF) Moçambique, organised the first ever New Generation Plantations (NGP) Annual Meeting in Africa in November 2019, with around a hundred guests. New Generation Plantations is a platform for promoting sustainable forest plantations managed by the WWF, with participation by companies and governments around the world. This was a very important opportunity for Portucel Moçambique to present its project, showing how social prosperity and sustainable management of the rural landscape in Africa are evolving positively for all the stakeholders.

It should be noted that Navigator has been involved since 2007 in the NGP platform, coordinated by WWF International, and was one of its founders.

Reduction of rural wildfires

Correct forest management is undeniably the main factor in preventing wildfires, minimising the fuel load and creating natural barriers to propagation of flames, thereby reducing the number of ignitions and their consequences. The numbers speak for themselves: the burned area on professionally managed plantations, in particular those operated by companies in the eucalyptus sector, corresponds to 1.4% of the total area under management. Navigator this year recorded a figure of under 1%.

Continuous work to control vegetation, maintain water points, paths and fire breaks is carried out by production and forest management teams and by external resources, when necessary, and is combined with suspension of operational activities on days when the meteorological risk is high. During the summer, the Company’s own resources are backed up by an additional support from 350 people at the Special Rural Fire-Fighting Brigade managed by Afocelca, a joint venture by The Navigator Company and the ALTRI group. This brigade provides support in fighting wildfires both in woodlands managed by the two companies, and in surrounding areas, in close collaboration with the National Emergency and Civil Defence Authority. The brigade deploys around sixty fire engines of varying size, a corps of liaison officers at the different District Emergency Operation Command Centres, a Supervision and Training Unit and an Operations Centre.

At the same time, the Company remains an active participant in projects with various partners (from stakeholders in the forest sector to universities) seeking to find and test
4.2 Energy and Climate

Navigator’s Perspective

The United Nations Climate Action Summit, held in September 2019, underlined the urgency of responding to the challenges posed by mitigating and adapting to climate change.

Companies have to be part of the solution. By setting ambitious targets and long term measures related to our commitment to carbon neutrality, our aim is to inspire other companies to do the same.

In 2019, Navigator’s Sustainability Forum was given over to this topic, and was the platform at which we announced our Roadmap to a Carbon Neutral Company, whose main focus is on investing in renewable energy sources. Another important contribution is being made by the initiatives adopted under the Corporate Programme for Energy Efficiency.

WE ARE COMMITTED TO INCREASING RENEWABLE ENERGY AS A % OF TOTAL FUEL CONSUMPTION

(Commitment 4)

To do this, we are investing in equipment that uses renewable energy, such as solar and biomass.

IN 2019

<table>
<thead>
<tr>
<th>RENEWABLE ENERGY CONSUMPTION (%)</th>
<th>CO₂ EMISSIONS (t CO₂ / t product)</th>
<th>CO₂ EMISSIONS (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0.046</td>
<td>752,023</td>
</tr>
<tr>
<td>2018</td>
<td>0.045</td>
<td>769,016</td>
</tr>
<tr>
<td>2017</td>
<td>0.044</td>
<td>736,360</td>
</tr>
</tbody>
</table>

Total CO₂ emissions decreased in 2019, in relation to 2018. On the other hand, specific CO₂ emissions increased, due to the level of operational instability observed over the year, at both pulp and paper mills, resulting in lower production volumes (pulp and paper).

ENERGY AND CLIMATE: OTHER COMMITMENTS

Reduce specific energy consumption (energy intensity) in pulp and paper production
(Commitment 5)

Help mitigate the effects of climate change
(Commitment 6)
**IN FOCUS**

**“Navigator’s Roadmap to a Carbon Neutral Company was announced in 2019 and we started straight away to invest in implementing it. The new biomass boiler in Figueira da Foz will mean that all our thermal energy is derived from renewable sources, such as waste forest biomass, encouraging the clearance of undergrowth in forests along the IC8, thereby reducing forest fires.”**

Nuno Rodrigues, Environmental Projects Manager

The building of the new biomass boiler at the Figueira da Foz Complex is a flagship project for the start-up of Navigator’s Roadmap to a Carbon Neutral Company and was one of the main developments in 2019. Due to start up in the second half of 2020, this unit producing renewable thermal energy accounts for one third (€55 million) of the investment planned by the Company in order to reach 2035 with a neutral CO₂ carbon balance at its industrial plants [see chapter 3.2]. Heavy investment, but a significant contribution: it will cut Navigator’s total emissions by 20%, and slash emissions at the Figueira da Foz Complex by 81%. Built using the latest technology, the new biomass boiler will eliminate the consumption of fossil fuels in producing the steam needed for the pulp and paper production process in Figueira da Foz, substituting the capacity previously assured by the natural gas cogeneration plant and the existing biomass and natural gas boilers. The positive impact of this unit will be felt beyond the environmental field, thanks to its social benefits: as the offcuts from wood used at the complex (mostly eucalyptus bark) will not be enough to fuel the new boiler, Navigator will have to acquire 160,000 tons of waste forest biomass from local suppliers each year, resulting in a direct advantage for the rural forestry economy and an incentive for controlling spontaneous vegetation in woodlands, thereby helping to reduce the risk of forest fires.

### A BOILER WITH AN ENVIRONMENTAL AND SOCIAL IMPACT

| INVESTMENT | € 55 million |
| CAPACITY | 150 t /hour of high pressure steam |
| EMISSIONS AVOIDED | 155,700 t CO₂ / year |
| ANNUAL CONSUMPTION | 231,000 t waste forest biomass |

**Other developments in the course of 2019**

**Corporate programme for energy efficiency**

2019 was a year of consolidating energy efficiency as a way of optimising processes and cutting costs. The Company pressed ahead with the Corporate Programme for Energy Efficiency, with developments in every focus area.

The main areas of progress, in 2019, are summarised below:

1. **FOCUS AREA 1: ENERGY MANAGEMENT SYSTEMS ISO 50001**
   - External certification audit by independent body by end of 2019.

2. **FOCUS AREA 2: RENEWABLE ENERGY**
   - Start-up of solar power plant at RAIZ operating on self-consumption basis.
   - A significant part of the power consumed at the research institute is now obtained from 100% renewable solar energy.

3. **FOCUS AREA 3: ENERGY EFFICIENCY IN LIGHTING**
   - Implementation of industrial lighting projects, using LED technology, at all industrial complexes. The projects completed, and at the implementation stage in 2019, represent total investment of approximately €300,000.

4. **FOCUS AREA 4: BEHAVIOUR**
   - Internal communication plan to mark World Energy Day, raising awareness and calling on people to adopt more efficient forms of behaviour.

5. **FOCUS AREA 5: INDUSTRIAL PROCESSES**
   - Implementation of energy efficiency action plans at each production unit in line with previous initiatives.

6. **FOCUS AREA 6: ELECTRIC MOBILITY**
   - Transition to electric mobility at Navigator, with installation of charging stations and acquisition of vehicles.

7. **FOCUS AREA 7: INFORMATION SYSTEMS**
   - Energy Digital Effectiveness Project, involving new energy management software for industrial units in Aveiro, Figueira da Foz and Setúbal.
COMMITMENT TO RENEWABLE ENERGY: FOCUS AREA 2

SOLAR POWER PLANT AT RAIZ

The solar power plant installed on the roof of RAIZ in 2019 - 342 solar panels (power: 94 kW) capable of supplying one third of the electricity consumed at the R&D institute - was another step taken under Navigator’s Corporate Programme for Energy Efficiency, with a view to increasing renewable energy as a proportion of total fuel consumption.

With the completion of the RAIZ project, Navigator now has three solar power plants for its own consumption, and two new projects are already in development with total capacity of approximately 4.5 MW, which will be completed in the course of 2020.

ENERGY EFFICIENCY IN INDUSTRIAL PROCESSES: FOCUS AREA 5

TOP PROJECTS

1. AVEIRO
   EFFICIENT SIEVING PROJECT

   This project was one of the energy efficiency projects at the Aveiro unit with the best results and involved updating the technology of the primary white pulp sieves, ensuring an equivalent level in general performance.

   Investment: € 60,000. Annual saving: 538 MWh of electricity.

2. FIGUEIRA DA FOZ
   OPTIMISATION OF PROCESSING PULPERS AND ROLLER ON PAPER MACHINE 2 (PM2)

   By implementing process efficiency measures with only a low level of investment, this project made it possible to optimise the pulpers’ operation, in particular in relation to the stirring and pumping systems.

   The changes made have achieved energy savings estimated at 1,668 MWh/year, corresponding to an annual value of around € 141,000.

3. SETÚBAL
   REACTIVE ENERGY MANAGEMENT

   The aim of this project has been to generate automatic mechanisms, to create software programming routines and to develop images on control panels, in order to reduce additional costs associated with reactive energy management. These mechanisms were previously executed manually.

   Overall, this project has led to savings of approximately € 90,000, with additional investment of € 47,000.

M², innovation contributing to energy efficiency

Navigator’s various divisions have been moving even closer to a culture of optimisation and operational excellence, as can be seen in the different projects under the M² Programme. Examples of this are the energy efficiency projects on paper machines 3 and 4 at the Setúbal Industrial Complex.

01. Energy efficiency in optimisation of the vacuum system (PM3)

   This project consisted of replacing the vacuum production system equipment on paper machine 3, substituting the liquid ring pumps with turboblowers. In addition, new water/air separators and pressure control valves have been added to the distribution system. This transformation has optimised the vacuum system and brought down the energy consumption by nearly 40% (approximately 4.5 GWh), corresponding to a saving of € 343,000.

02. Energy efficiency (PM4)
   - Valmet & Navigator eUpgrade project

   The aim of this project is to improve effectiveness on paper machine 4, and also to reduce total energy consumption by the system, making it more efficient. In addition to achieving this aim the project also led to a reduction in annual energy consumption of 3.5 GWh, corresponding to an annual gain of € 266,000.
4.3 Industrial Environmental Management

Navigator’s Perspective

The industrial part of our operations requires an attitude of continuous improvement in the environmental management of Navigator’s production units.

The Company’s aim is to minimise the impact of its industrial operations on local communities. The focus is therefore on reducing consumption of natural resources, which are increasingly scarce on the planet, on minimising losses, from a circular economy standpoint, and on reducing emissions.

Efforts to preserve the environment are based on a culture of risk and opportunity assessment, as reflected in the Company’s sustainability agenda, and on operational projects and activities intended to reduce the environmental impacts of our operations.

In the name of transparency, we disclose key information about our environmental management, seeking to build a correct stakeholder perception of Navigator.

**WE ARE COMMITTED TO REDUCING WATER USE**

(Commitment 7)

To this end we are implementing a series of projects to cut water use at industrial complexes.

**IN 2019**

<table>
<thead>
<tr>
<th>Year</th>
<th>Water Use (m³ / t product)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>22.4</td>
</tr>
<tr>
<td>2018</td>
<td>21.2</td>
</tr>
<tr>
<td>2017</td>
<td>21.4</td>
</tr>
</tbody>
</table>

80% of water intake is returned to the environment.

The increase in water use in 2019 was due to the need to remove impurities in the pulp production process as a result of the instability over the year, at both pulp and paper mills.

**INDUSTRIAL ENVIRONMENTAL MANAGEMENT: OTHER COMMITMENTS**

- Increase waste recovery in industrial process (Commitment 8)
- Reduce concentration of atmospheric pollutants (Commitment 9)
Navigator’s Corporate Programme for Reduction of Water Use is a project that includes measures for implementation in the short, medium and long term, with the aim of significantly reducing the use of water at the Company’s four production units. Specific measures have been identified at each unit and are currently at the implementation stage or else at the planning stage for execution. This objective is based on optimising our management of this resource, maximising the use of our intake as well as optimising water quality before returning it to the environment.

Laura Costa, Environment and Energy Division

Water is a precious resource and minimising water use is a priority at Navigator. Over the years, the Company’s production units developed projects that have permitted reductions in water use in the industrial process, and a further significant stride was made in that direction in 2019. With the optimisation of liquid pulp washing, through transfer to the paper machines at the Figueira da Foz Industrial Complex, it has been possible to cut water use in that process by approximately 5%. This, along with other measures currently being worked on, will contribute to an overall reduction of 10% in the water used at that unit by 2024, in relation to current levels.

Navigator has been running a Corporate Programme for Reduction of Water Use since 2017, which has envisaged a series of measures to increase recirculation and re-use of water at various stages of the production process. The various initiatives on the drawing board include measures that entail large scale changes and investment in technology, as in the case of treatment and recovery of effluents for internal circuits [see chapter 3.1]. At the Setúbal Industrial Complex, four measures were successfully implemented in 2019, and others are nearing completion, resulting in an annual reduction of 300,000 m³ and 800,000 m³, respectively, with total investment of around €600,000. Having started out at the Setúbal site, the programme has been expanded to the Company’s other mills, and the Aveiro Complex has installed a new press in the pulp bleaching section, which has effectively cut water use by 2%.

IN FOCUS

Other developments in the course of 2019

Promoting the circular economy, increasing waste recovery

Navigator continues to invest in the reduction, internal re-use and external recovery of all the waste it produces. To that end, it has undertaken R&D projects, in partnership with RAIZ, in order to find new applications for waste products. Work proceeded in 2019 on three main fronts:

01. Sector-wide initiative (in partnership with CELPA and other industrial plants in the sector) with the aim of allowing the main waste products from Navigator processes to be used as by-products: a good example in 2019 was that of sands from the fluidised bed in the biomass boilers which are now classified as a by-product for certain uses (classification by APA, the Portuguese Environment Agency).

SANDS FROM BIOMASS BOILERS USED IN CEMENT INDUSTRY

In 2019, the Portuguese Environment Agency classified the sands resulting from power generation in Navigator’s biomass boilers as a by-product for use in the cement industry. Washed and pre-treated, these sands can be used in producing concrete and cement mortars, with significant environmental advantages, as they replaced quarried raw materials. The re-use of this waste product is being developed in partnership with Secil Britas, in Setúbal, and with Arfil, which treats the sands from the Aveiro biomass boiler so that another Navigator partner, Saint-Gobain Weber Portugal, can process and transform them into mortar. In 2019 a total of 6,900 tons of sand was sent to Secil Britas (and then on to Secil Outão) and 300 tons to Saint-Gobain, which incorporates it in their products.
02.

Internal recovery of waste products. For example, in 2019, biological sludges started to be recovered as a fuel for the Recovery Boiler at the Figueira da Foz Industrial Complex.

03.

Search for partners who can recover our waste, thereby furthering the circular economy (see chapter 3.1).

Reduce concentration of atmospheric pollutants by adapting biomass boilers

Reducing the concentration of atmospheric pollutants will be a priority objective over the next year, for two fundamental reasons: the need to keep up with the decrease in emission limits, expected in the short term, and the concern with this issue, shared by all Navigator stakeholders and society in general. In 2019, the Company’s action plan in this field consisted in adapting the biomass boilers to the new requirements of the Industrial Emissions Directive, through two areas of intervention:

- Fitting sleeve filters on the biomass boiler at the Aveiro Industrial Complex;

- Start of construction of the new Biomass Boiler at the Figueira da Foz Industrial Complex, which will permit full compliance with the Emissions Limits imposed by BREF LCP (applicable in 2021).

TOTAL AIR EMISSIONS

<table>
<thead>
<tr>
<th></th>
<th>Particles (t)</th>
<th>SO₂ (t)</th>
<th>NOₓ (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>269</td>
<td>364</td>
<td>1,714</td>
</tr>
<tr>
<td>2018</td>
<td>437</td>
<td>322</td>
<td>2,025</td>
</tr>
<tr>
<td>2017</td>
<td>484</td>
<td>668</td>
<td>2,276</td>
</tr>
</tbody>
</table>
4.4 Talent Management and Developing Human Capital

Navigator’s Perspective

People are one of industry’s most valuable assets. In a context of constant change in the skills required by the technological society, and in view of the more flexible relationship that younger people have with their career, it is necessary to create responses able to ensure that our Employees are motivated. Talent management and development of human capital have taken on a central role in The Navigator Company today, where the goal is to develop people as a key asset for the future. Our aim is to make the necessary contribution to managing Development, Mobility & Organisational Dynamics, on the basis of Performance Management.

Training remains a central plank in skills development, and our Learning Center here plays a fundamental role.

WE ARE COMMITTED TO IDENTIFYING CRITICAL FUNCTIONS FOR INTERNAL SUCCESSION
(Commitment 10)

To achieve this, we are identifying the different successors to functions regarded as critical, and have already concluded the plan for the industrial divisions.

IN 2019

221 children of our Employees took part in the Navigator Holiday Camps

TARGET FOR 2025

75% of successions filled

TALENT MANAGEMENT AND DEVELOPING HUMAN CAPITAL:
OTHER COMMITMENTS

Equip human resources with skills needed to pursue Company strategy
(Commitment 11)

Improve Company’s Organisational Climate
(Commitment 12)
“The importance of succession plans is that they prepare and develop Employees, paving the way for their professional growth, at the same time as the organisation prepares for generational changes, ensuring that know-how is effectively passed down.”

Ana Nunes, Human Resources Business Partner, Industrial Area

Navigator is investing in preparing the Company’s future leaders. Since 2017 the Human Resources Division has been working on succession plans for senior staff in industrial areas, so as to ensure that expertise is handed down to a new generation of Employees who will take over leadership and management roles. In 2019, a total of 52 critical functions were identified in senior management, and succession plans have been drawn up for these functions, not just in the industrial sectors at the Setúbal, Figueira da Foz and Aveiro Complexes, but also in the fields of Environment and Energy, Technical, Materials Management and the Company’s research institute, RAIZ. A total of 120 members of staff are potential successors to critical functions, in other words, they are in line to rise to leadership positions at one of Navigator’s industrial units. Each succession plan involves the current manager, identifying a pool of successors with the potential to take over a given set of duties in the short, medium or long term. The next stage in this project is to prepare the Company’s human capital to take on new responsibilities by drawing up development and career plans that enable an appropriate response to the challenges they will face. These plans are dynamic and must be reviewed and updated every two years.

PREPARE NEW LEADERS IN THE INDUSTRIAL AREA

IN FOCUS

Managing and developing our talent

01. Potential appraisal and development programmes

In order to follow up on our commitment to developing Employees’ careers, and in tandem with efforts to make good use of internal recruitment, the following initiatives are of particular importance with a view to potential appraisal and implementation of development programmes.

Middle Management Assessment - Develop to Lead

36 EMPLOYEES ASSESSED

Coaching programme

30 EMPLOYEES TOOK PART

2 Development Workshops to draw up Individual Development Plans

14 EMPLOYEES

02. Building technical skills

Initial skill-building courses for critical operational functions in Production and Industrial Maintenance areas

Some of the functions identified as critical in terms of succession are those of Industrial Production Technicians (Pulp and Paper) and Industrial Maintenance (Mechanical, and Control & Power). The reasons for this have to do with the specific technical expertise involved and the difficulty of recruiting professionals qualified to do these jobs, which require long periods of skill assimilation.

Given that around 20% of Employees will qualify for early retirement in the coming years, under the Company’s rejuvenation process, there is an urgent need to ensure they are replaced by technical staff with a minimum level of initial skills, whilst also ensuring the retention of technical expertise critical for business.

The solution found has been to develop internal technical training courses, in partnership with the ATEC Training Academy, capable of preparing these technicians for the substitution needs identified.

The courses have been run twice, once in 2018 and again in 2019, with a duration of six months, for production areas, and 9 months for maintenance. This has resulted in the preparation of 102 technicians (50 in 2019) and an integration rate of 87%.

03. Learning Center

Managing Knowledge, Training and Development

Knowledge management continues to be assured through the Learning Center, with the provision of internally developed training and support from our specialists in various areas of business expertise, and also with the use of internal trainers, in-house training accounts for more than 70% of total training.

In addition to in-house training, a number of training programmes have been implemented with external organisations and universities, in order to respond to development needs identified in assessment sessions.
Training needs assessment based on inputs from analysis of Individual Development Plans (IDPs)

2018

- 45% of Employees with IDP

2019 Training plan included training needs identified in IDPs

- 581 courses provided
- 182,740 training hours

Leadership training programmes for new managers, for participants in Assessment

- 51 people trained

Continued training in partnership with Universities, in areas such as Management, advanced Negotiation, Finance and Project Management

- 117 course participants
- 3,000 training hours

Improving organisational climate and promoting collaboration

01. Volunteering programmes

Volunteering programmes are designed to build closer ties between Navigator and local communities, clients and other stakeholders, whilst instilling a sense of engagement in woodlands protection and also helping to build team spirit and collaboration, by bringing together people from different generations, workplaces and skill areas.

LOVE THE FOREST

In 2019 this project involved initiatives in the Parque Serras do Porto and in the Serra da Arrábida. Around 130 volunteers joined forces to eradicate invasive species, in the two areas, in the spirit of giving their own time and caring for heritage that belongs to everyone.

Navigator’s Love the Forest project focuses on woodlands areas of public interest.

02. Work-life balance

Navigator’s culture is all about a sense of pride and belonging to Navigator, bringing the Company closer to its Employees and their families. Among other things, the aim is to get families more involved in the Company’s daily life, overcoming the obstacles of distance and a lack of knowledge about what Navigator does.

HOLIDAY CAMPS AT THE INDUSTRIAL COMPLEXES

“Where the parents work, the children play!” This was the slogan of the 2019 Navigator Holiday Camp, which opened the gates of the Company’s four industrial units to Employees’ children for four weeks of educational fun. A total of 221 children, aged 6 to 12 years, took the chance to take a closer look at the Company where their parents work, and to enjoy themselves as they discovered the importance of protecting woodlands and the environment, seeing the sustainable paper production process at first hand. In addition to a guided tour of the mill on each complex, the Employees’ children also had a day out in the country, on one of Navigator’s estates. Striking the right work-life balance, bringing the Company closer to Employees’ children, also involved raising awareness of health and safety at work, with the youngsters taking part in an evacuation drill, which marked the start of each holiday camp, as well as a first aid workshop. The success of the initiative was clear from the satisfaction rating from the children: 4.6 on a scale of 0 to 5.
4.5 Occupational Health and Safety

Navigator’s Perspective

Health and Safety at Navigator is increasingly seen as an asset for the Company, bringing the perception that its success is closely linked to a growing concern for improving the working conditions provided for Employees. This is a key topic for increasing Employee motivation and can lead in turn to a potential increase in competitiveness, higher productivity and, fundamentally, a lower rate of occurrence of accidents and occupational diseases.

Ensuring that our Employees return home safe and sound each day is one of Navigator’s great objectives.

WE ARE COMMITTED TO PROMOTING PHYSICAL EXERCISE, WELLNESS AND HEALTHY DIET
(Commitment 14)

To achieve this, we have an Occupational Health Programme (OHP) on several fronts: physiotherapy, psychology, nutrition and ergonomics.

TARGETS FOR 2020

- 50% of Employees reached by the Occupational Health Programme
- 20 workstations redesigned

IN 2019

- 1,881 Employees reached by OHP (up by 396 from 2018)
- 12 Workstations redesigned
Our physiotherapists provide support and take steps to improve posture, by giving advice and having individual sessions with Employees, but it was necessary to tackle the cause, which is often associated with work-related musculoskeletal disorders. We decided to expand the scope of the work done by the occupational health team and the pilot project in Setúbal has been a success. So much so, that we’re extending it to other work stations in Setúbal and other mills in the Navigator Group.

Paula Monteiro  
Corporative Health and Safety Coordinator

The use of a new tool for levelling sheets in paper rolls, after cutting, has helped to reduce tendinitis of the elbow and shoulder, which are among the greatest causes of complaints at the Setúbal Complex. The innovation is in the design of the handle of the tool. The repeated handling of this tool, which was poorly adjusted to the hands of each of the Employees on the reaming machine, was identified as a priority in the Ergonomics project. As part of Navigator’s Occupational Health Programme, this project was launched in May 2019 in order to prevent work-related musculoskeletal disorders, so as to improve the well-being of Employees as well as helping to reduce periods of absence.

With help from the mill’s physiotherapists, who had already undertaken countless initiatives to improve employees’ posture, the core team for the project brought together staff from manufacturing, safety, the Lean team, and an external team of ergonomics experts, to assess the tasks posing the greatest ergonomic risk and to develop prototypes to improve the quality of work or simply to adjust the layout of machines to offer a better balance for operators. At this initial stage, the work focused on four specific workstations (pallet turning, boxing, guillotine and reamers), operated by 114 Employees from the processing area at the most recent paper mill on the Setúbal site. The results have shown the programme to be a success, and it will be extended to Navigator’s other industrial units during 2020.

ERGONOMICS PROJECT  
PREVENT  
WORK-RELATED INJURIES

"Our physiotherapists provide support and take steps to improve posture, by giving advice and having individual sessions with Employees, but it was necessary to tackle the cause, which is often associated with work-related musculoskeletal disorders. We decided to expand the scope of the work done by the occupational health team and the pilot project in Setúbal has been a success. So much so, that we’re extending it to other work stations in Setúbal and other mills in the Navigator Group."

Paula Monteiro  
Corporate Health and Safety Coordinator

Safety month devoted to Ergonomics

The important work done by our physiotherapists, and its valuable contribution to the health and safety of The Navigator Company’s Employees, was highlighted by placing this area centre stage in “Safety Month”, in April 2019, and then in “Health Month”, organised in October. Both initiatives reached out to more than five hundred Employees at the four industrial complexes (Aveiro, Figueira da Foz, Vila Velha de Ródão and Setúbal), at the Lisbon building and in the different administrative areas.


Occupational health month

October was “Occupational Health Month” in The Navigator Company.

Five weeks of activities included sessions to raise awareness of the topic in the different sectors of the four industrial complexes and at the Lisbon building.

The topics addressed related to the different areas of Occupational Health: Physiotherapy, Psychology, Nutrition and Welfare Services.

Other developments in the course of 2019

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DID YOU KNOW THAT*:

> When manually lifting a load, your centre of gravity should be as close as possible to the load?
> You should avoid flexing your spine?
> When you work standing, you should spread your weight between your two feet, keeping your legs straight?
> The height of the work surface should be adjusted to the worker’s height?
> When sitting, your legs shouldn’t hang down, and you shouldn’t cross your legs?
> You should adjust your chair in relation to the level of the table, and not to the level of the floor?

*Advice provided as part of the celebrations for National Prevention and Safety at Work Day.


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Towards zero accidents

Despite the reduction in the number of accidents with sick leave in recent years, Navigator is pressing ahead with effective efforts to achieve a change in culture and behaviour for the sake of everyone’s health and safety, under the Safe Horizon 2020 Programme.

01. Cardinal rules

Five cardinal rules designed to encourage safe behaviour have been implemented as from 1 January 2019. These rules apply to all Employees, internal and external, and are intended as guiding principles for everyday working activities.

02. Standardisation of critical overall procedures

With a view to consolidating good practices and continuous improvement, joint efforts have been made with the production, industrial maintenance and forestry divisions to establish common procedures, in particular for activities considered as critical. One example of this is the procedure for Work Permits that has established tougher rules, and also had a significant impact on how hazards and risks are anticipated in the course of working activities. This approach, applied across the entire Company, enables improvement processes to be established on the basis of results and feedback from teams, by introducing new regulatory or legal requirements and by sharing best practices.

03. Improved safety for those working alone - Geolocation

Employees engaged in tasks they carry out alone at Navigator’s plants, especially on night shifts, are now provided with individual alarm devices which can enable a rescue response in less than a minute in the event of an accident. One example of this is the procedure for Work Permits that has established tougher rules, and also had a significant impact on how hazards and risks are anticipated in the course of working activities. This approach, applied across the entire Company, enables improvement processes to be established on the basis of results and feedback from teams, by introducing new regulatory or legal requirements and by sharing best practices.

04. Implementation of subcontractors manual

All subcontractors working with Navigator on a permanent or occasional basis are subject to a series of procedures and rules, which have recently been compiled and published in a Subcontractors Manual, applicable across the whole Company, setting out all the obligations and duties of service providers. This manual will make it possible to ensure that the relevant requirements are included when contracting suppliers, thereby minimising exposure to hazards and possible accidents at work, promoting the use of good practices and safe working methods.

PISC - PAPER INDUSTRY SAFETY CARD

This scheme has been set up by a working party at CELPA, the Paper Industry Association, of which Navigator is a member. It is designed to ensure that service providers meet quality standards relating to occupational health and safety, and also to pool resources in concerted training activities. PISC is a programme of training in Occupational Health and Safety (OHS), aimed at all external workers in the companies making up CELPA, who may be involved on an individual basis, or as employees of contractors, in jobs in the pulp and paper industry. Navigator also organises training of this type, requiring all its service providers to present the PISC.

Since the start of the year, workers can only provide services in the facilities of CELPA members if they present the Paper Industry Safety Card.
4.6 Sustainable Supplier Management

Navigator’s Perspective

The challenge faced by global markets in securing supplies of raw materials, on a sustainable basis, means it is crucial to manage the supplier chain effectively. In Navigator’s case, securing quality raw material is only one of the factors to be considered, and it is also crucial to assess questions relating to the sustainability of the value chain, where environment and social topics have gained special attention in recent years.

We have continued to develop close relations with our suppliers, seeking to establish partnerships that make it possible to reduce the environmental impacts of logistical activities, for example, and also to share knowledge and ensure that suppliers of wood, our key raw material, are aware of the importance of forest certification.

**WE ARE COMMITTED TO DISSEMINATING OUR CODE OF CONDUCT FOR SUPPLIERS**

(Commitment 15)

To achieve this, we are going to distribute the Code to all our suppliers, to raise their awareness on business ethics.

**TARGET FOR 2020**

To distribute the code of conduct to 100% of our materially relevant suppliers.

**IN 2019**

- Code of Conduct distributed to 88% of materially relevant suppliers
- 74% of wood suppliers with certified Chain of Custody

SUSTAINABLE SUPPLIER MANAGEMENT: OTHER COMMITMENTS

Expand the range of suppliers with sustainability assessment

(Commitment 16)
IN FOCUS

CREATE TIES WITH WOOD SUPPLIERS

“The suppliers get to see another side of Navigator and like to feel involved, and to feel part of this business. Whenever they join these visits they come away with a clear picture of the impact they have on the success of our business.”

Pedro Ferrão, Supplier Relationship Manager

During 2019, Navigator invited around 50 wood suppliers, with a total of 80 participants, to visit RAIZ and the Quinta de São Francisco where this R&D unit is located, in order to create ties that go beyond traditional working relations. This was an initiative of the Wood Supply Division, and the programme included a walk along the botanical trails on the estate as well as a tour of our state-of-the-art research institute, working in the field of forestry, as well as on technological and industrial solutions.

The day also planned to raise awareness of key issues for the Company, such as certification, yields, safety and raw material quality, and to explore best practices in forest management, from propagation of saplings to the planting of eucalyptus forests, looking specifically at soil assessments, climate analyses, pest control and also the best eucalyptus clones for different regions of the country. All these issues offered a chance to discover a different dimension of Navigator, involving the suppliers who are a vital link in the Company’s value chain. These events will continue to be organised in 2020, with visits to the industrial units in Aveiro, Figueira da Foz and Setúbal, visits to the Espirra nurseries and to RAIZ, as well as other relationship-building events not just for wood suppliers, but also for their families.

Distribution of Code of Conduct to suppliers

The distribution of the Code of Conduct for Suppliers is an important issue with an impact on our supply chain management, and special attention was paid to this question in 2019. The code has been sent to all suppliers of wood and chemicals classified as materially relevant. It is intended to raise supplier standards and ensure that they follow the guidelines adopted by Navigator in relation to its supply chain.

In the case of wood suppliers, the code is presented and explained face to face, in most cases when the suppliers meet Navigator representatives to sign supply contracts for the following year. This is seen as an important moment for suppliers, regarding their relationship with Navigator.

In addition, the content of the Code of Conduct is very consistent with the rest of the contract documentation, highlighting concerns relating to the environment, safety, human rights and fundamental employment rights, ensuring that these concerns are clearly conveyed to suppliers.

As well as the visits to our industrial complexes, nurseries and RAIZ (see insert), designed to give suppliers an all-round picture of Navigator’s activities, a number of other initiatives have been organised to improve our relationships with wood suppliers:

> Demonstrations of forestry operations, using equipment compatible with best management practices, in certified areas, whilst also stressing safety rules;

> A programme of technical support for our wood suppliers, allowing them access to best forestry practices and to the latest innovations from our research and development institute;

> Technical training in forestry for our commercial managers, which has helped them to complement and improve the ongoing technical support and assistance provided to our portfolio of suppliers.

In the case of other suppliers of materials and other raw materials, the Code of Conduct is presented in all preliminary consultations, and suppliers are required to endorse the code when they sign contracts.

Supplier sustainability assessment

Navigator has integrated sustainability throughout its value chain, seeking to transmit to its direct suppliers the importance of adopting best practices in conducting their business.

In order to respond effectively to Commitment 17 in our Sustainability Roadmap (Expand the range of suppliers with a sustainability assessment), a questionnaire was sent out in 2019, as in previous years, to the main categories of Navigator suppliers (wood, chemicals, logistics, and other products and services), in order to obtain responses from our materially relevant suppliers, who account for at least 80% of the Company’s annual turnover. The high response rate (96%) enabled us to assess sustainability performance in a very significant number of suppliers, representing approximately 76% of all Navigator’s purchasing.

Analysis of the responses showed that most suppliers have quality management models (54% of respondents have ISO 9001). Although most suppliers do not have certified environmental and social systems, there is a clear concern with these key issues (35% have ISO 14001 and 35% ISO 18001). In terms of forest certification, 83% of suppliers responding to the questionnaire said they have chain of custody certification from the Forest Stewardship Council (FSC) or the Programme for the Endorsement of Forest Certification (PEFC).

Other developments in the course of 2019

Roadmap (Expand the range of suppliers with a sustainability assessment)
Another relevant finding, taken from the supplier assessment, relates to concerns with Human Rights (73% said they have a structured policy in this area and 67% have appointed a manager for human rights issues or for compliance with ethical principles and rules of conduct) and with community engagement (54% have local development programmes supporting their communities). Health and safety policies were another strong point in our supplier chain, with 94% presenting an approved internal policy in this area and 97% having a manager responsible for compliance with occupational health and safety legislation.

**More sustainable paper transport**

Navigator continues to invest in improving efficiency in transporting its products, seeking more sustainable alternatives to substitute road haulage.

A total of 140 km was knocked off the road journey to the rail terminal made by each container of paper dispatched from the Figueira da Foz Industrial Complex, on the first leg of its export route. This number is all the more impressive when we consider that, over the year as a whole, this plant dispatched approximately 4,950 containers, with the same amount return empty to the complex. This huge reduction in the “road trail” in the shipping of Navigator paper was achieved thanks to the proximity of the new rail terminal in Granja do Ulmeiro (Alfarelos), just 46 kilometres from the Figueira da Foz Complex. Previously each truck/container needed to travel 185 km, between the mill and the rail terminal in Bobadela (Lisbon), for dispatch by rail to the Port of Sines. The same trip was made back, with another empty container. 1,384,880 is the total number of km of road travel eliminated from the route followed by containers carrying paper from the Figueira da Foz mill in 2019.

This huge improvement in logistical efficiency is the result of a partnership between Navigator, MSC (the shipping line operator) and TMIP (the operator of the rail terminal in Granja do Ulmeiro), offering clear economic advantages and a significant reduction in the carbon footprint, not least because each rail journey carries an average of 22 containers. The Setúbal Complex is also switching to rail transport, allowing a considerable efficiency gain in the transport chain.

**COLLABORATIVE PROJECT BOOSTS EFFICIENCY IN THE TRANSPORT CHAIN**

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“Consolidation of this project in 2019 produced an efficiency gain in the transport chain, with reduction in inland costs and significantly smaller carbon footprint.”

Nuno Soares, Shipping Manager

“We are extremely satisfied with the results achieved and are keen to press ahead with other similar projects. We’re already working on the second phase of this project, which will be a complementary solution to the Granja do Ulmeiro terminal, by operationalising the rail branch line at our Figueira da Foz site.”

Ricardo Perdigão, European Platforms & Rail Transport Manager
4.7 Customer Satisfaction

Navigator’s Perspective

Customers are a strategic stakeholder for the sustainability of The Navigator Company, which pays growing attention to environmental and social responsibility issues.

One of the main goals of The Navigator Company’s strategy is to maximise customer satisfaction, and regular initiatives are launched by different Company sectors to achieve this and secure sustainable expansion of our business.

Strong brands and product quality continue to be essential factors, alongside a close commercial relationship, and continuous innovation in the different components of our commercial activities.

WE ARE COMMITTED TO IMPROVING OUR CUSTOMER SATISFACTION INDEX (CSI)

To achieve this, we obtain independent measurements of customer satisfaction, broken down into components, seeking at all times to improve results and expand our business.

IN 2019

CUSTOMER SATISFACTION: OTHER COMMITMENTS

Increase number of products with forest certification label or EU Ecolabel

(Commitment 18)
The Navigator Company is aiming to increase the satisfaction of clients who have for some time been asking for a wider range of substances produced directly by the Company, in order to obtain greater consistency in the quality of the product range.

António Quirino Soares, Marketing Director

In the course of 2019, The Navigator Company expanded its production capacity and started to produce UWF in basis weights higher than 120 g/m². This new product area is intended to respond to the growing use of paper for a wide range of applications such as packaging, envelopes, direct mail shots, business and greetings cards, tags, certificates, postcards, covers for books and reports, perfume testers, braille documents and archive files, as well as others. The Company has been supplying these substances to its customers since 2002, under its best known brands (Inaset and Soporset), but has previously outsourced production whilst still using Eucalyptus globulus pulp manufactured by Navigator.

In 2019, the technological conversion project at the Setúbal mill was concluded, enabling the Company to produce UWF paper with basis weights between 135 g/m² and 300 g/m². In addition to presenting a more comprehensive value proposition to the printing market, allowing users to use the same paper for the covers and inner pages of reports or books, as well as for company stationery (envelopes, letters and cards), ensuring uniform quality standards and image, the Company can now respond to the need expressed by several clients to expand their range of paper in different substances for use in the packaging sector, and the entire printing paper range is suitable for contact with food (basis weights above or under 120 g/m²).

The UWF paper commercial area undertook a number of initiatives in 2019 that resulted in the launch of new products, innovative marketing campaigns, promotions and communication aimed at end consumers, seeking to bring the Company closer to the market.

The launch of the new Navigator UHD paper in early 2019 has enabled users to obtain quality improvements of up to 40% in inkjet printing, in a move to respond to growing use of this technology by both companies and individual consumers. This was achieved thanks to years of research and the involvement of a number of bodies, including our Forest and Paper Research Institute (RAIZ) and professionals from various sectors of Navigator.

Another area of progress in 2019 was in renewing brand image and developing new claims for some of Navigator’s leading office paper brands. This has responded not only to the growing need to address sustainability issues and how paper contributes to that aim, but also to remind the public that the learning process is more efficient when paper — a medium for communication that dates back millennia — is involved.
In order to go the extra mile in providing customer service to users of its office paper, Navigator has also launched an innovative pilot project that lets companies that sign up to it receive new reams of paper whenever the stocks available in their office fall below a set minimum level.

This is done by using a dispenser where the reams are stored, which is in turn connected to the ordering system of our paper wholesalers. The dispenser placed in the client’s office alerts the distributor online whenever it needs to deliver paper, meaning that the user does not need to do anything to continue having paper available for its photocopying and printing. This facilitates the restocking process and creates greater value for users.
Local communities play an increasingly decisive role in the acceptance of companies by their different stakeholders. These communities are the first link in the chain to feel the impacts of our industrial and forestry operations, and their engagement is therefore crucial, especially in social responsibility initiatives.

We believe we have a role to play in society by sharing knowledge in areas such as sustainable management of forests and natural resources. This is the vision we seek to project in our engagement with the community and in implementing different projects, including Navigator Tour, in which we open our doors to the community, both local and national.

**Community Engagement**

Navigator’s Perspective

To achieve this, we are stepping up the Company’s interaction with the community, by pursuing a range of initiatives.

**WE ARE COMMITTED TO STIMULATING COMMUNITY ENGAGEMENT THROUGH CORPORATE SOCIAL RESPONSIBILITY PROJECTS**

(Commitment 20)

To achieve this, we are stepping up the Company’s interaction with the community, by pursuing a range of initiatives.

**IN 2019**

- More than 16 EVENTS
- 95 "GIVE THE FOREST A HAND" INITIATIVES
- 5,416 Visitors on NVG Tour
- 15 #MYPLANET INITIATIVES
- 08 MEETINGS of Environmental Monitoring Committees

**COMMUNITY ENGAGEMENT: OTHER COMMITMENTS**

- Continue the CRASSOSADO project (see 3.1.2) (Commitment 19)
- Build close relations with our stakeholders through different communication channels (Commitment 21)

**TARGET FOR 2025**

Organise up to 16 events/year
This project sets out to raise children’s awareness of the need to protect and improve woodlands. We are essentially encouraging conservation efforts, but we also address topics such as healthy lifestyle, outdoor exercise and ways for children to interact with paper. The response we received in 2019 is exponentially greater than in the previous year.

Paula Caroço
Project Manager - Communication and Brand Division

“...This is an excellent idea for getting children to understand that we have to protect the forest, but in a fun way, for them to reach that conclusion for themselves.” These were the words of the father of one of the children at the “Give the Forest a Hand” event in Hello Park, in Monsanto, and it clearly illustrates Navigator’s social responsibility commitment to the younger generation.

A total of 95 events were organised over the course of 2019, mostly aimed at the school community (aged 4 to 10). The project staff travelled the length and breadth of the country, mobilising more than ten thousand children.

Raising awareness of biodiversity conservation and rational water use were the themes of the roadshow that visited around 90 schools in Lisboa, Porto, Coimbra, Aveiro, Almada, Setúbal, Figueira da Foz and Vila Velha de Ródão. Alongside this, “Give the Forest a Hand” made appearances in Monsanto Park, the Lisbon Zoo and in the Bussaco national woodlands, as well as taking the scent of the forest to a number of shopping centres, where small bags with leaves of rosemary, verbena, lavender or eucalyptus were handed out to children.

The scale of this project’s success can be seen in the growth of its loyal followers (up by 30% on Facebook and by 150% on Instagram, in relation to 2018), and the list of subscribers to the “Give the Forest a Hand” magazine has almost tripled in size. New initiatives are planned for 2020, such as the launch of a website, with interactive games and cartoons.

01. Navigator Tour
Aimed at a variety of stakeholders, this programme is designed to show people the Company’s vision and values, in the context of its leading position in Portuguese society and its economy, as a driving force for development of sustainable forestry and the communities in which it operates.

The results: 5,416 people visited the four industrial complexes, the R&D centre at RAIZ and Navigator’s nurseries. The visitors included Employees, school groups, communities and organisations of institutional importance to the Company.

02. Give the Forest a Hand
This project sets out to raise children’s awareness of the need to protect and improve Portugal’s woodlands. It essentially encourages conservation efforts, but also addresses topics such as healthy lifestyle, outdoor exercise and ways for children to interact with paper. The project is illustrated in the special insert on the previous page.

03. #MYPLANET
The Navigator Company’s environmental responsibility programme, aimed at an urban audience who today have real environmental concerns. The aim is to support and raise the profile of initiatives organised by partners that share the same aspirations.

The results: more than 16 initiatives in 2019 in partnership, for example, with the Sea Brigade, Ocean Alive and Ocean Hope. This project also publishes a bi-monthly magazine sent out to a thousand subscribers. On social media it has 3,500 followers on Facebook and 4,500 on Instagram.
04. Environmental Monitoring Committees

These Committees are a forum for analysis and discussion of environmental issues associated with the industrial units, and the multiple ways they interact with the environment. They have a very broad membership, with representatives from a variety of public and private organisations: Municipal Councils, Regional Health Authorities and Health Delegations, Universities and Polytechnics, Regional Departments, Civil Parish Councils, School Groupings, as well as a range of associations and NGOs.

The results: two meetings were held in 2019 at each of the industrial complexes: Aveiro, Figueira da Foz, Setúbal and Vila Velha de Ródão, involving an average of 25 stakeholders per meeting.

Rural world, the new project with forest producers and landowners

This project was launched in 2019 with the fundamental aims of bringing Navigator closer to important groups, and forest producers in particular, and of opening up communication channels between these groups and other stakeholders, thereby creating joint value and encouraging people to share good practices. As an integrated paper manufacturer, operating along the entire value chain originating in the forest, Navigator accordingly set up a platform to host relevant contents. This exercise in sharing is intended to further growing engagement with communities, and especially with forest producers and landowners.

#MYPLANET – Sustainable living by The Navigator Company sets out to support and raise the profile of conservation efforts for the Planet, by promoting them through various communication channels, and developing partnerships with the entities responsible for its implementation. It also provides operational support for volunteers and organisations. Because talking about problems is a vital first step, but taking action is the only way to resolve them.

Partnership to protect “treasures” in Redondo region

The secrets of Castelo Velho, an ancient Bronze Age settlement high up in the Serra de Ossa, are being revealed by teams led by the archaeologist Rui Mataloto, as part of the CASTELO Archaeological Research Project. This has been set up to protect the cultural and historical heritage in the region, with help from Navigator and logistical support from Redondo Municipal Council. The settlement was home to a community of around one thousand people some three thousand years ago and extends over 14 hectares classified as a protection and conservation zone on the Castelos Estate, a certified forestry holding owned by Navigator. The archaeological find has turned up several items of ceramics and grindstones, but the most interesting feature is the housing structure and form of household organisation, unique in the south of the Iberian peninsula. The large size of the dig means that much remains to be discovered in future seasons, making Castelo Velho another point of interest in the Serra de Ossa, which already feature mapped pathways for recreational and leisure use by the local community.

The 14 hectares of archaeological remains on Navigator’s property are classified as a conservation zone.

Our project in Mozambique

Community engagement and relationships

Portucel Moçambique has been improving the engagement with its stakeholders, adapting the approach to the specific characteristics of its partners, especially in the relationship with communities, given that this is a very large group (currently more than seven thousand families), spread over very wide areas in the provinces of Manica and Zambézia.

The company has accordingly taken a series of steps, including the organisation of regular local meetings, implementation of 25 advisory committees, the day-to-day work of forty community liaison officers who form a bridge between stakeholders and the company in relation to local issues of interest to both parties. A large number of community engagement meetings were held in 2019, including settlement meetings, community advisory boards and forums for community leaders. These were complemented by complaints offices and “door-to-door” contacts.
Girl Move, social leadership and enterprise with young Mozambican women

Since 2017, Navigator has been a partner of Girl Move, a Portuguese charity which works to empower Mozambican teenage girls, young graduate women and others nearing the end of their degree studies, through the “CHANGE Programme: Leadership and Social Enterprise” which is based on 3 pillars: leading myself, leading others and changing the world. Each year the programme supports 30 Girl Movers.

The slogan for the event celebrating another edition of the CHANGE programme in 2019 was: “A new generation changing the world”. At this event, which brought together the Girl Movers, the companies that hosted them for their life traineeships and their host families, the life stories of women who have earned their place in history were told to those present, interwoven with the life journeys of the young women. This year we turn the spotlight on Bessta, a young woman who joined Navigator for a traineeship under a dedicated mentoring programme.

My name is Bessta Dombo, I’m 27 years old, I’m a Forestry Engineer and a Girl Mover.
I dream of a world where there is no conflict between people and nature, where sustainable systems allow us to live in a balanced way, because I believe that nature itself sends us a message of balance in the way it works. If we are able to take advantage of nature’s bounty and respect its limits, we can live at peace with it.
4.9 Innovation, Research and Development

Navigator’s Perspective

Innovation is responsible for increasing productivity and is essential for countries and organisations to be competitive and sustainable.

Innovation has taken root at Navigator thanks to heavy investment in Research and Development through RAIZ. Expertise is generated at this research facility through processes of co-creation with different stakeholders: industry, universities, the State and civil society, which is increasingly eager to take part in innovation processes.

The emphasis on innovation both in our internal culture, and in R&D, which is carried on at RAIZ, has resulted in a demand for new solutions to improve economic performance, and also to develop more sustainable products and make use of by-products, contributing to the circular economy with significant impacts on the environment and on society.

WE ARE COMMITTED TO MEASURING AND MONITORING THE IMPACT OF RAIZ’ WORK ON VALUE GENERATION FOR THE NAVIGATOR COMPANY

(Commitment 24)

To this end we are implementing the “RAIZ impact assessment” tool.

TARGETS FOR 2020-2025

50% projects with low risk

65% projects with AMI > 4

95% projects with TRL > 4 and TTM < 10 years

IN 2019

47% projects with lower level of risk

61% projects (47) with high level of Aggregate Impact (AMI) > annual estimated profit > € 151,000/year/project

95% projects with high levels of technological readiness and time to market - TRL > 4 and TTM < 10 years

INNOVATION, RESEARCH AND DEVELOPMENT: OTHER COMMITMENTS

Maintain the level of R&D investment in Circular Bioeconomy projects

(Commitment 25)

Raise and Implement European Commission’s quality standards with BiC certification

(Commitment 26)
IN FOCUS

MONITOR POTENTIAL IMPACT FOR BETTER DECISION-MAKING

“Assessing the impact of the projects on which we work, with a vast network of partners, is extremely important for the future of these projects. We need to know how to invest our time, how to assess the risks of the projects and to measure the potential and real value created at Navigator and in society. The importance of this monitoring tool lies in the fact that it aggregates different dimensions. It’s a single, potentially comprehensive system.”

Leonor Guedes, Technical and Administrative Support Manager, RAIZ

A new monitoring tool was implemented in 2019 for assessing the impact of R&D and innovation programmes at RAIZ. This is known as the “Decision Support and Impact Assessment Methodology of Innovation and Knowledge Programs based on Research and Technological Developments in Organizations”. This methodology enables decision making on the basis of an assessment of indicators such as technological readiness versus time to market, and the risks involved, making it possible to gain an objective picture of the impact of each research programme/project on Navigator’s business. This new systemic approach to managing and assessing the value co-created by innovation, research and development activities makes it possible to pinpoint the link-ups between different actors and the dynamics in innovation life cycles, making for fuller assessment and communication of the true impact of these projects. This in turn leads to more robust strategic decision-making, previously based only on indicators of financial returns.

Certified in 2019 as a Business Innovation Centre (BIC), the classification awarded to organisations that implement good innovation management practices, RAIZ is currently pursuing projects in collaboration with the State, universities, public and private bodies and civil society. Internationally patented, this monitoring tool has already been used on 80 projects, half of them belonging to the impactus programme, the largest public-private R&D investment project ever implemented in Portugal’s forestry sector.

Other developments in the course of 2019

Bioeconomy and circular economy help to bring down carbon footprint - impactus project

The impactus project is creating an excellent environment for relations between universities, business and industry, and offers inspiration for redrawing value chains in business, as well as potentially offering a new green infrastructure for developing innovative products and technologies. This challenge is clear from the fact that more than 50% of the projects under way are in the field of the bioeconomy and the circular economy;

some of them contributing to a reduction in the carbon footprint.

New products from renewable sources, as alternatives to fossil-based products

Biofuels, biocomposites and new paper products substituting fossil-based plastics. These new products are helping to reduce carbon emissions in line with the Roadmap to a Carbon Neutral Company, as presented in chapter 3.2.

INNOVATION IN THE FOREST LABORATORY

This is a project at RAIZ which in 2019 set out to create an experimental laboratory for topics relating to forests, paper, the forest-based bioeconomy and sustainability, and is dedicated to future generations. This project is unique in Portugal and is open to civil society, making it possible to raise the awareness in future generations of pressing issues related to forests and the bioeconomy, taking a practical approach to issues which it has not previously been possible to demonstrate by experimentation.

Designed to equip young people with the skills needed to take part in the National Bioeconomy Strategy, this project has applied for funding from the Sustainability Programme of the Calouste Gulbenkian Foundation.

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With its bright blue back and wings and its orange-coloured front side, the common kingfisher is easy to identify by its plumage.

In Portugal, the common kingfisher can be found almost anywhere, but it is most common in the coastal areas of the central and southern regions, on flatter terrain. It is rarely seen at altitudes above 1,000 metres. It is also common in coastal lagoons and large estuaries, where it can be found from August to April, outside of the nesting period. It has been identified on properties managed by Navigator in the country’s central and southern zones.

Common kingfisher
(Alcedo atthis)

This small bird builds its nest in holes dug in the ground, or in the riverside slopes where it feeds. It is often seen perched motionless on a branch, where it waits for the right moment to fly low or dive to capture the prey that makes up its diet: fish, crustaceans, insects and amphibians.

INDEPENDENT LIMITED ASSURANCE REPORT

IUCN Red List

Least Concern

Extinct

Critically Endangered

Endangered

Vulnerable

Near Threatened

Data Deficient

Not Evaluated

Extinct in the Wild
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INDEPENDENT LIMITED ASSURANCE REPORT TO THE NAVIGATOR COMPANY, S.A.

((Free translation from a report originally issued in Portuguese language. In case of doubt the Portuguese version will always prevail.)

Introduction

We were engaged by the Board of Directors of The Navigator Company, S.A. ("Entity") to perform limited assurance work on the sustainability information prepared by the Entity for the year ended 31 December 2019.

Management’s responsibilities

Management is responsible for:
— The preparation and presentation of the sustainability information included in the 2019 Sustainability Report, in accordance with the Global Reporting Initiative Guidelines, GRI Standards; and
— Establishing and maintaining appropriate performance management and internal control systems from which the reported performance information is derived.

Our responsibilities

Our responsibility is to carry out a limited assurance engagement as described in the paragraph below ("Scope") and to express a conclusion based on the work performed.

Scope

We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 – Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants. That Standard requires that we plan and perform the engagement to obtain limited assurance that nothing has come to our attention that cause us to believe that the sustainability information included in the Sustainability Report for the year ended 31 December 2019 was not prepared, in all materially relevant aspects, in accordance with the requirements of the GRI Standards Guidelines and that the Entity has not included in the sustainability information included in the Sustainability Report for the year ended 31 December 2019 the GRI Guidelines for the "Comprehensive" option.

The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

A limited assurance engagement on a sustainability report consists of making inquiries, primarily of persons responsible for the preparation of the information presented in the 2019 Sustainability Report, and applying analytical and other evidence gathering procedures, as appropriate. These procedures included:
— Interviews with senior management and relevant staff, at corporate and operational levels, concerning sustainability strategy and policies for material issues, and the implementation of these across the business.
— Interviews with relevant staff and those responsible for the preparation of sustainability information for the year ended 31 December 2019;
— Comparing the information presented in the Entity’s Sustainability Report for the year ended 31 December 2019, to corresponding sources of information in order to determine whether all the relevant information contained in such underlying sources has been included in the Report; and
— Reading the information presented in the Sustainability Report to determine whether it is in line with our overall knowledge of The Navigator Company, S.A.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement, and consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, all relevant matters that would be identified in a reasonable assurance engagement might not have come to our attention, and therefore we do not express a reasonable assurance conclusion.

Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the information included in the Sustainability Report of the Navigator Company S.A. for the year ended 31 December 2019 is not presented, in all material respects, in accordance with the requirements of the GRI Guidelines and that the Entity has not applied the GRI Standards Guidelines to the “Comprehensive” option in the Sustainability Report for the year ended 31 December 2019.

— Establishing and maintaining appropriate performance management and internal control systems from which the reported performance information is derived.

Our responsibilities

Our responsibility is to carry out a limited assurance engagement as described in the paragraph below ("Scope") and to express a conclusion based on the work performed.

Scope

We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 – Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants. That Standard requires that we plan and perform the engagement to obtain limited assurance that nothing has come to our attention that cause us to believe that the sustainability information included in the Sustainability Report for the year ended 31 December 2019 was not prepared, in all materially relevant aspects, in accordance with the requirements of the GRI Standards Guidelines and that the Entity has not included in the sustainability information included in the Sustainability Report for the year ended 31 December 2019 the GRI Guidelines for the "Comprehensive" option.

The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

A limited assurance engagement on a sustainability report consists of making inquiries, primarily of persons responsible for the preparation of the information presented in the 2019 Sustainability Report, and applying analytical and other evidence gathering procedures, as appropriate. These procedures included:
— Interviews with senior management and relevant staff, at corporate and operational levels, concerning sustainability strategy and policies for material issues, and the implementation of these across the business.
— Interviews with relevant staff and those responsible for the preparation of sustainability information for the year ended 31 December 2019;
— Comparing the information presented in the Entity’s Sustainability Report for the year ended 31 December 2019, to corresponding sources of information in order to determine whether all the relevant information contained in such underlying sources has been included in the Report; and
— Reading the information presented in the Sustainability Report to determine whether it is in line with our overall knowledge of The Navigator Company, S.A.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement, and consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, all relevant matters that would be identified in a reasonable assurance engagement might not have come to our attention, and therefore we do not express a reasonable assurance conclusion.

Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the information included in the Sustainability Report of the Navigator Company S.A. for the year ended 31 December 2019 is not presented, in all material respects, in accordance with the requirements of the GRI Guidelines and that the Entity has not applied the GRI Standards Guidelines to the “Comprehensive” option in the Sustainability Report for the year ended 31 December 2019.
Restriction of Use and Distribution of our Report

Our Independent Limited Assurance Report is issued solely for information and use by the Board of Directors of The Navigator Company, S.A. in connection with the disclosure of the 2019 Sustainability Report and is not intended to be used for any other purpose. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than The Navigator Company, S.A. for our work, for this independent limited assurance report, or for the conclusions we have reached.

Lisbon, 27 March 2020

SIGNED ON THE ORIGINAL

KPMG & Associados - Sociedade de Revisores Oficiais de Contas, S.A.
Represented by
Paulo Alexandre Martins Quintas Palhão (ROC no. 1427)
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