

SUSTAINABILITY REPORT 2016/2018

 **Portucel** Moçambique



PART OF
**THE NAVIGATOR
COMPANY**

SUSTAINABILITY REPORT 2016/2018







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MESSAGE FROM THE BOARD



Message from the Board

Dear Employees, Dear Partners

Portucel Moçambique is pleased to present its Sustainability Report for the period 2016-2018, the second we have submitted to our stakeholders, seeking to show the road we have walked through, in the light of best practice in our industry and of the United Nations sustainable development goals.

We are a Mozambican company, owned by The Navigator Company and the International Finance Corporation (IFC), engaged in implementing a forestry project integrated with an industry, generating a high level of national added value, as well as skilled employment and wealth for the country.

Portucel has been working with the Government, communities and civil society to implement a business venture of structural importance for the country, that respects the rights of communities in the Company's areas of influence - home to more than twenty-four thousand households - promotes inclusive development, complies with Mozambican law and preserves the country's natural resources.

What we have learned in implementing this project is the vital importance - for the economic, social and environmental sustainability of the project and of communities - of conciliating forestry plantations with areas for farming, housing, natural forests, protection and conservation areas, as well as sacred sites and others indicated by communities, without displacing populations or taking over agricultural land.

This approach, which has been built on the basis of the experience acquired in the field and on our work with different stakeholders, generates a virtuous circle in the relations with the communities and improves the results and the benefits shared along the value chain.

Some of the results are already visible, despite the fact that planting operations and the Community Development Program only scaled up in 2015. The findings of an independent survey, conducted each year for households in the project areas, shows that, as a result of the jobs created and of the activities of the Community Development Programme, household incomes have increased, poverty has been reduced, and food security has been improved, as detailed in this report.

This success has been achieved through a number of activities, such as training in conservation and smart farming, provision of improved seeds, drilling and repairing boreholes, distributing kids, building and improving roads and rural paths and other initiatives.

These results have only been possible because of the remarkable dedication of the Portucel team, which has been determined and open-minded, ready to try out new ways of doing things, in a setting which is also new and challenging. It is only fitting to pay tribute to the resilience of many people who, in the face of adversity, have stayed focused on the Company's values and business aims.

Sharing value has been one of the guiding principles in the Company's operations. In line with this principle, and having assessed the fundamental conditions needed to generate value, in view of the internal and external challenges faced by the project in 2016 and 2017, the Company decided to suspend work on land acquisition and planting activities in mid-2017.

We consider of great importance to conciliate forestry plantations with agricultural areas, housing and natural forests, without displacing populations or taking over agricultural land.



It nonetheless continued with full maintenance work on the 13.5 thousand hectares planted, and with the Community Development Programme, as well as the communication and the stakeholders engagement programmes. These challenges were seen as an opportunity for the Company to launch a strategy review and assess its targets and progress, as well as evaluating its operational procedures and stakeholder relations.

This review has been conducted on the basis of the international standards followed by Portucel Moçambique's majority shareholder, The Navigator Company, complemented by the recommendations of the IFC, as key shareholder and a partner with long experience of development projects, as well as using information gathered in the field by the Company, its partners and other stakeholders.

The findings from this process pointed to a set of good practices to be adopted and to the need for increased participation by stakeholders - above all households and communities, suppliers and partners - in implementing the project.

AGREEMENT WITH THE MOZAMBIKAN GOVERNMENT

The strategy review concluded in 2017 also enabled us to identify a series of conditions precedent for the project's success, and these formed the basis of the memorandum of understanding that Portucel signed with the Government of Mozambique, represented by the Ministry of Land, the Environment and Rural Development, in July 2018, with a view to carrying forward the 2009 investment agreement, encompassing the forestry plantation and industrial development businesses, under an investment plan worth 2.5 billion dollars, on a revised schedule.

In a first phase, after those conditions precedent are met, the Company will create a forestry base of approximately 40 000 hectares, to supply a mill (to be built) producing around one million tons of eucalyptus wood chip per year for export, with an estimated annual value of more than 100 million dollars.

The results achieved in this first phase, with the construction of the wood chip mill and the reassessment of the market situation, will be crucial for Portucel Moçambique to decide whether conditions are right to press ahead with the large scale forestry plan associated with the industrial project in phase two, which includes planting a further 120 thousand hectares of forest and building a pulp mill with annual production capacity of approximately 1.5 million tons, expected to generate exports of more than one billion dollars a year.

As a first step, the two parties - Portucel Moçambique and the Mozambican Government - agreed to set up a multi-ministerial team that will address a series of conditions precedent to prepare for investment, including multi-ministerial taskforces to address the building of the logistical infrastructures needed to export wood chips, as well as other rural development activities.

The preparations for implementing the project include testing the operating conditions, and a pilot trials was conducted in 2017 for exporting wood, to determine the conditions - as regards human resources, transport, facilities, administrative and legal procedures, taxes, financial charges, duration, etc. - in which it is possible to operate a wood export business.

Looking to the near future, the main challenges facing Portucel Moçambique include the following steps:

- Working with Mozambican Government on implementing solutions to meet the conditions precedent for full implementation of the project;
- Forest Certification, with a view to promoting effective and transparent management and alignment with The Navigator Company's practices;

In a first phase,
a forestry base of
approximately
40 000 ha will be created,
to supply a mill producing
wood chip to export,
with a value of more than
100 million dollars a year.



- Continuous improvement of the Community Development Programme, to make it more effective and gradually extend it to all households and communities in the project areas, especially those who relate with the company in providing land and/or through forest schemes programmes;
- Continuous improvement of the mechanisms and tools for communicating and relating with communities and stakeholders in general;
- Demarcation of DUAT areas, over their full extent and in the two provinces;
- Continued focus on safety issues, building up internal skills in occupational health and safety;
- To Increase stakeholder engagement, by communicating and sharing information, by a more active and regular contribution to the debate on relevant topics in the sector, by an open dialogue with organisations representing civil society, directly and through the Advisory Board.

We are confident that the scale of the challenges we have ahead of us will reinforce the huge ambition we have put in our project in Mozambique.

On the following pages, this Sustainability Report provides a picture of the steady progress made and the Company's contribution to the Sustainable Development Goals, reaffirming Portucel's - and its shareholders' - commitment to developing a venture in Mozambique which is economically and socially sustainable in the short, medium and long term.



Nuno Santos
Chair of the Board of Directors



João Lé
Chief Executive Officer



01.

ABOUT
THIS REPORT



About this Report

This is the first Sustainability Report published by Portucel Moçambique, following on from its previous Environmental and Social Report in 2015. The content of this report has been structured in line with the Global Reporting Initiative guidelines (“Core” option). It is also aligned with the United Nations Sustainable Development Goals.

The material topics have been selected on the basis of an internal analysis, following the model developed by The Navigator Company. This Report seeks to provide information on the materially relevant aspects of Portucel's activities, taking into consideration the opinions, concerns and contributions of its main stakeholders, thereby adjusting the model to the context in Mozambique and also the current phase of the project. These aspects are addressed in the various chapters of the Report (A to F) and demonstrate the company's practices in different areas. Stakeholder engagement takes many different forms and, in this Report, Portucel seeks to provide information on this relationship and on how the Company is responding to the expectations of these groups of partners.

The report starts with an introductory section that describes the company and its value chain, and is divided into five main areas, each with its associated material topics: Our Forestry Project, where we report on integrated management of the value chain and on sustainable management of the forest; Our Environment, which addresses the issues of climate change, protection and conservation areas, water monitoring and waste management; Our People, focusing on valuing local employees and safety at work; Our Communities, with whom we develop a continuous dialog and participation, a Community Development Programme and a regular monitoring; and Our Partners, reporting on our relations with Government, with knowledge and business partners, civil society, the Advisory Board and also our suppliers and service providers.

Portucel Moçambique has responsibly accepted its role in sustainable development and has built its strategy around issues which are of structural importance and generally regarded as international priorities, in particular the Circular Economy, Climate Change, Inclusive Social Development, Biodiversity Conservation and, also, Innovation applied to key business processes.

Portucel Moçambique's operations include a very strong social component, and for this reason its Social Development Programme is illustrated throughout this Report, as it cuts across all issues and forms the basis of most of the work we do.

PERIOD, SCOPE AND LIMITS OF THIS REPORT

This Report refers to activities over the past three years (from 1 January 2016 to 31 December 2018). It includes the Company's activities in Mozambique that contribute to forestry production and management.

Financial information has been presented in accordance with the financial statements, drawn up under the General Accounting Plan - International Financial Reporting Standards.

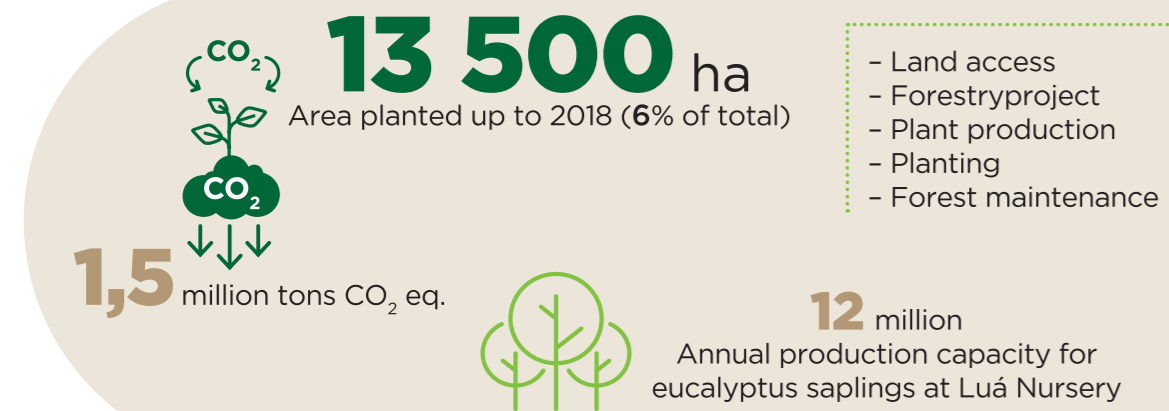
OPINIONS AND CONTACT DETAILS

Your opinion is important to us. For any information or questions, please contact:
sustentabilidade@portucelsoporcel.co.mz



Our Value Chain

Eucalyptus Cycle



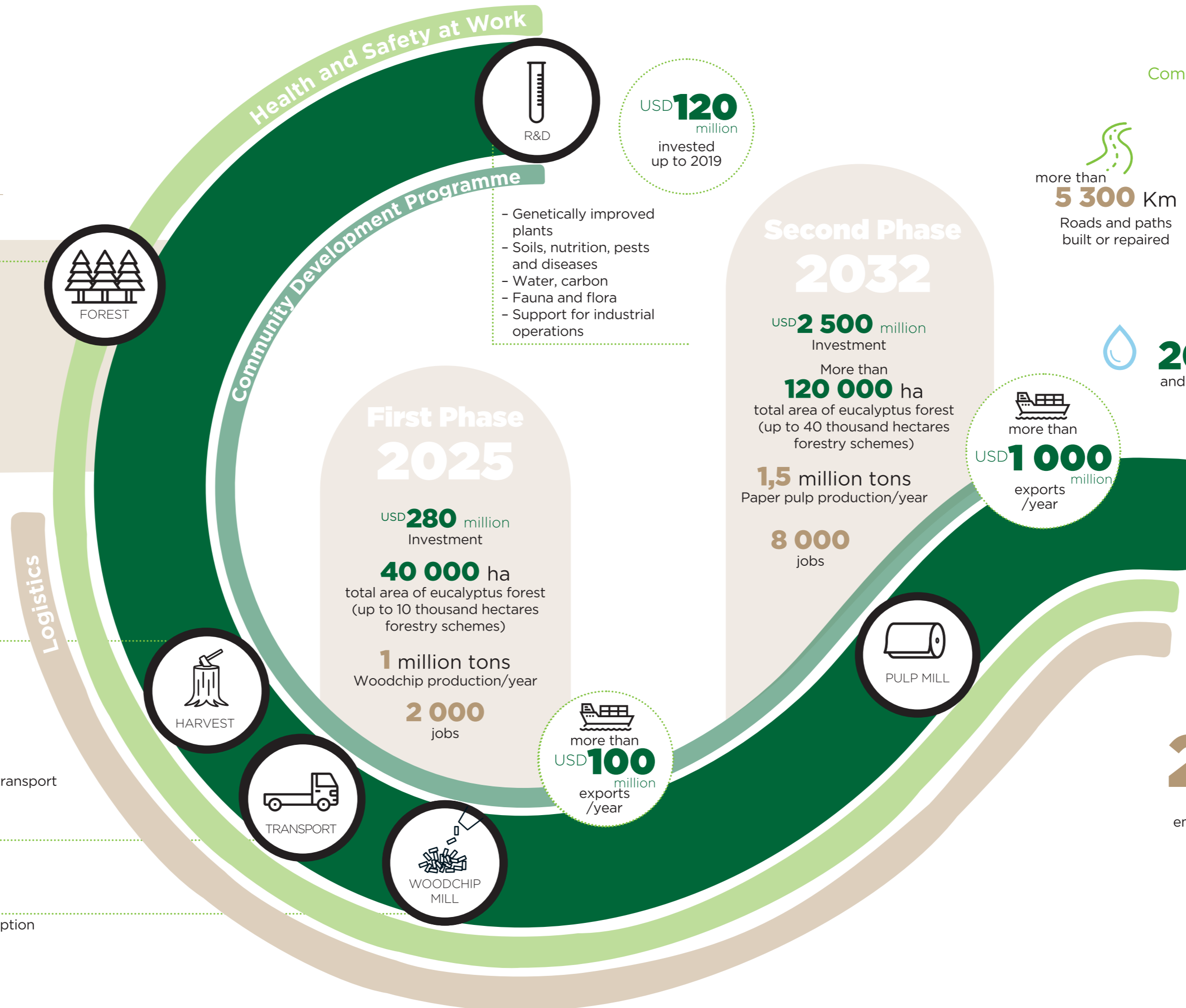
COMMUNICATION AND LAND ACCESS



- Harvesting plan
- Harvest
- Debarking
- Extraction
- Stacking

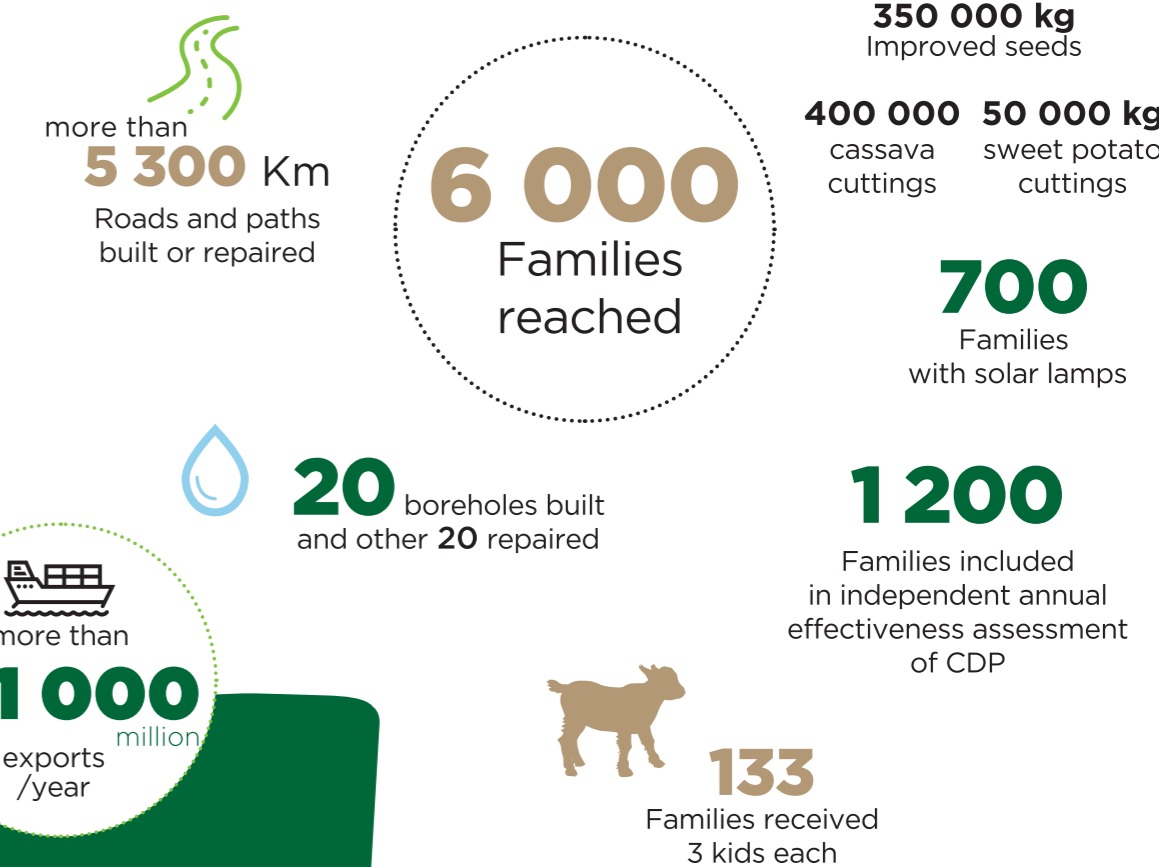
- Sourcing and transport plans
- Loading
- Transport

- Wood reception
- Unloading
- Processing
- Storage

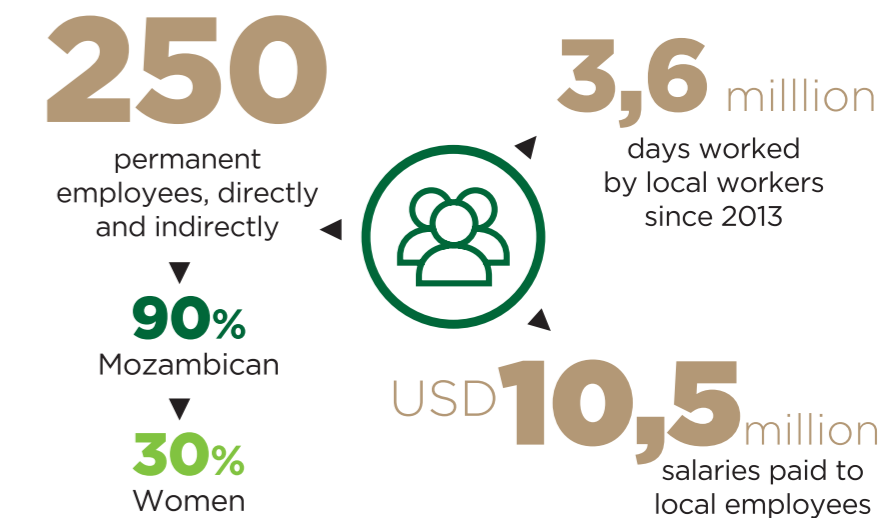


COMMUNITY

Community Development Programme



PEOPLE





A.

PORTUCEL
MOÇAMBIQUE



Portucel Moçambique

1. WHO WE ARE AND WHAT WE DO

1.1. THE NAVIGATOR COMPANY

The Navigator Company is an integrated forest producer, whose end products are pulp & paper, tissue and energy. Its operations are based at modern, large scale industrial units that use state-of the-art technology and are a quality benchmark in the sector. The Company's business model is founded on a prime-quality raw material - Eucalyptus globulus - whose intrinsic characteristics have allowed it to develop a strategy centred on distinctive top-of-the-range products. These are international standard-setters in the industry.

With turnover of approximately EUR 1.6 billion, roughly 91% of the Group's products are sold outside Portugal and shipped to approximately 130 countries. The Company's main markets are Europe (64%), Africa (12%), the Middle East (10%) and North America (9%).

The Navigator Company has pursued a successful strategy of innovation and developing its own brands and premium products, resulting in a market share in Western Europe of 19% in UWF and around 54% in the premium segment. In 2018, mill brands accounted for 69% of the Company's sales.



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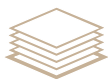
Aveiro	RAIZ	Forestry and Paper Research Institute
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Forest

110 000 ha
forests under certified management, in 165 municipalities

12 million
plants in its nurseries in Espirra, Caniceira and Ferreiras



Pulp

Setúbal and Figueira da Foz <i>(integrated pulp)</i>
Aveiro <i>(pulp to market)</i>

1,6 million tons
(of which 20% pulp to market)



UWF Paper

Setúbal Figueira da Foz	1,6 million tons
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Tissue Paper

Vila Velha de Ródão	65 000 t of finished products	Aveiro	55 000 t of finished products
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Energy

2,5 TWh electricity



Project under way

Mozambique	115 549 ha* in Zambézia province	121 924 ha* in Manica province	12 million* plants at Luá Nurseries
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*NB: The figures indicated are in hectares and correspond to the maximum plantation area in the two DUATs (licensed areas) awarded by the Mozambican Government. The figures for the Nurseries relate to annual production capacity.





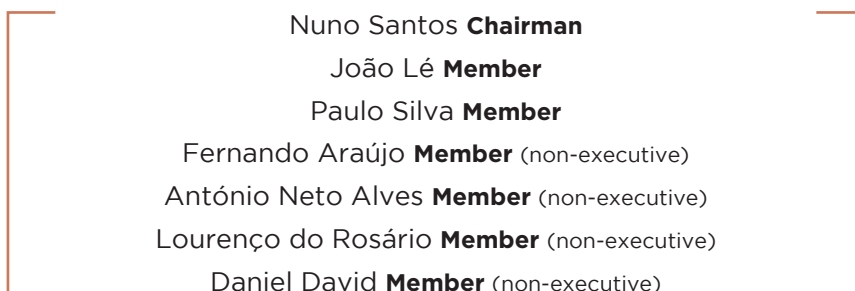
1.2. PORTUCEL MOÇAMBIQUE

Portucel Moçambique was set up in 2009 by The Navigator Company (former Portucel Soporcel group). It is a company under Mozambican law, responsible for setting up the largest integrated forestry, paper pulp and energy project in Mozambique.

In December 2014, International Finance Corporation (IFC), a member of the World Bank group, formalised its intention to acquire a 20% stake in the project, with The Navigator Company retaining 80% of the capital of Portucel Moçambique.

The organisational structure of Portucel Moçambique is as follows:

Board of Directors



Executive Board



Divisions

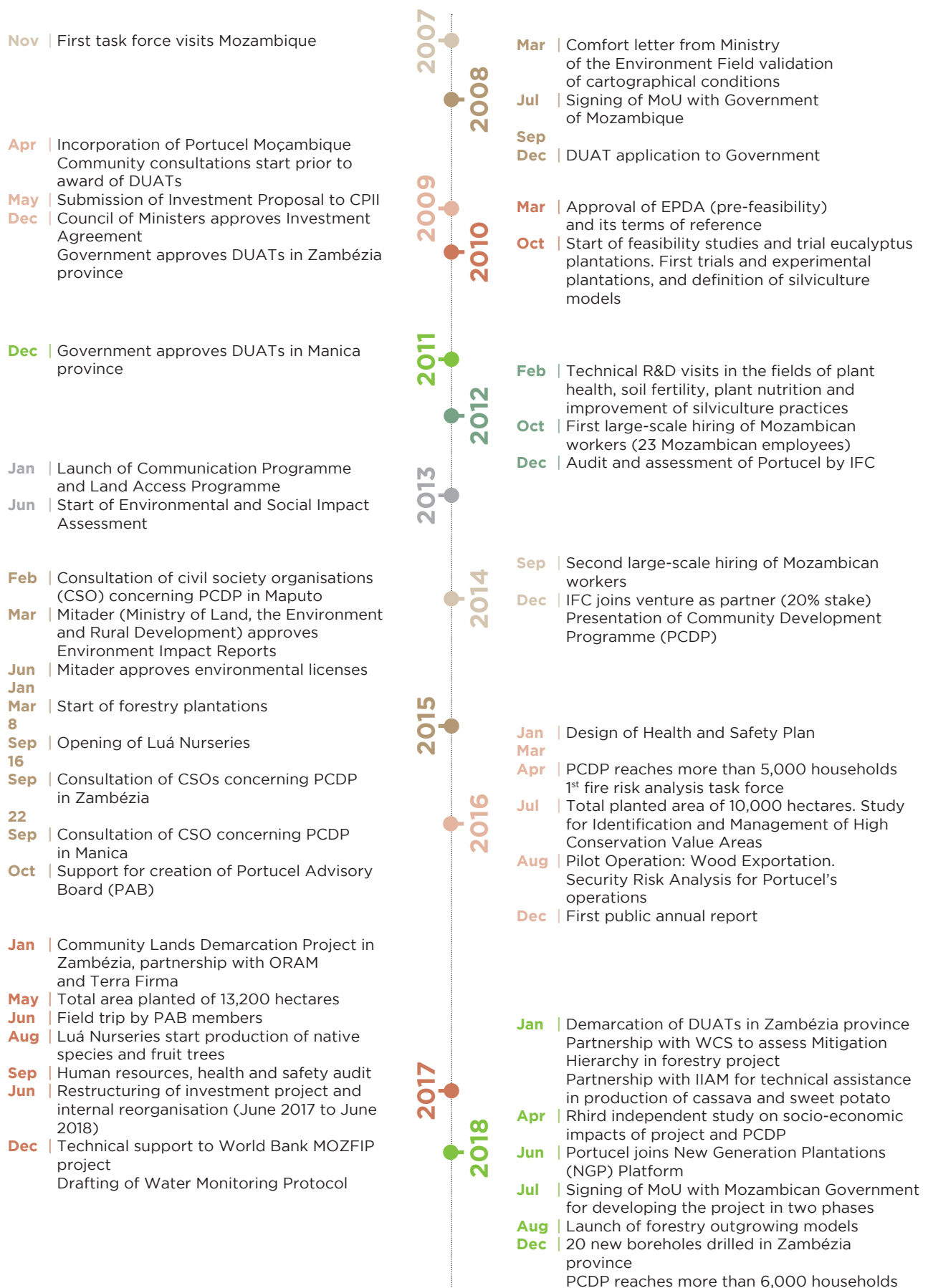


Advisory Departments





Project Milestones





MAIN ACTIVITIES SINCE START OF PROJECT:

Work on the Portucel Moçambique project started in the course of 2008 with the gathering of the fundamental information needed to characterize the areas, shown by soil sampling and climate data to be suitable for cultivating eucalyptus.

This was followed up over the period 2009/2011, with consultation of the communities in the prospective project areas, continued soil sampling, correction of cartographical data and, most particularly, the first plantation trials. More than 50 different clones were tested, through continuous assessments of yields, wood quality, pest and disease resistance and other factors. These genetic materials have been selected over recent years, and Portucel now uses only 5 different clones for its forestry plantations. Monitoring of these planted areas is a long-term task, which must be conducted over a period of at least 8 years - the estimated rotation period (period between planting and harvesting).

Environmental and Social Impact Assessments (ESIA): these were carried out between 2010 and 2015 and mapped out the project's social and environmental impacts and benefits, as well as established good governance guidelines and impact mitigation measures, which are progressively being incorporated into the project execution.

Regular community consultation: The project has been accompanied by regular community consultation, insofar as the DUATs confer the right to interact with communities and households within the areas for the purposes of land access, in order to establish plantations in areas which were not being used by farmers or farming communities. In order to ensure that communities and households are informed and consulted during the venture, which is a long term project, a number of community and public consultation exercises have been carried out.

FORESTRY PROJECT IN MOZAMBIQUE - NAVIGATOR INVESTS IN INTERNATIONAL EXPANSION

Mozambique is one of the markets identified for Navigator's international expansion, within the plan to develop its forestry base. This geographical location combines a number of factors to make this an extremely interesting project in terms of our strategy: high yield forests and greater proximity to one of the main target markets (Asia).

A key feature of this project is a strong commitment to local communities, to which Navigator offers a strong value proposition, based on four fundamental areas: jobs in production, support for increasing yields in their own farming, health and education.

After the political and economic adversity experienced in Mozambique in 2016, 2017 was a year in which the Group's forestry operations stabilised and investment proceeded at a more moderate pace, in keeping with Navigator's decision to take a more conservative approach.

The company signed a memorandum of understanding with the Government of Mozambique in July 2018, under which there shall be joint endeavours to find solutions to meeting a series of conditions precedent, which need to be satisfied in order for a decision to be taken to proceed with the project in a sequence of phases. In the first phase, Portucel Moçambique will create a forestry base occupying 40 000 hectares, to supply a (future) unit producing eucalyptus woodchips for export; exports of around 1 million tons are estimated per annum, with an annual value of more than 100 million dollars.

The results achieved in this first phase, with the construction of the woodchip mill and a reassessment of the market situation, will be crucial for Portucel Moçambique to decide whether conditions are right to press ahead with the large scale forestry plan associated with the industrial project in phase two, which includes planting a further 120 thousand hectares of forest and building a pulp mill with annual production capacity of approximately 1.5 million tons, expected to generate exports of more than one billion dollars a year.



1.3. VISION, MISSION AND VALUES

Portucel Moçambique has naturally adopted Navigator's values, vision and mission, adapting these last two to the reality of the project and the socioeconomic context in Mozambique. Portucel Moçambique aims to be a socially and environmentally responsible company and seeks to promote professional development and job satisfaction for its employees, whilst engaging with stakeholders and taking an inclusive approach to local communities, with a commitment to contributing to Mozambique's sustainable development.



VISION

TO BE A LEADING COMPANY THAT SETS AN EXAMPLE IN IMPLEMENTATION AND SUSTAINABLE MANAGEMENT OF INTEGRATED FOREST-BASED PROJECTS



MISSION

TO PREPARE AND UNDERTAKE IMPLEMENTATION OF THE PORTUCEL MOÇAMBIQUE PROJECT ON A COMPETITIVE BASIS, SUSTAINABLY PROMOTING ECONOMIC AND SOCIAL DEVELOPMENT, CARING FOR ENVIRONMENTAL HERITAGE AND PRESERVING THE GROUP'S REPUTATIONAL STANDARDS



VALUES

TRUST

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

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.

INTEGRITY

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

EXCELLENCE

In our work we focus on quality, efficiency, safety and getting it right.

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.



2. HOW WE MANAGE SUSTAINABILITY

2.1. STRATEGIC APPROACH AND SUSTAINABILITY

GOVERNANCE

Portucel Moçambique's business strategy is based on a number of pillars, in particular its 10 years' experience in the country and interaction with local and international stakeholders, the extensive business and forestry know-how of its mother company, The Navigator Company, and the expertise of one of its shareholders, the International Finance Corporation, in international best practices in the management of development projects.

By pooling this experience and good practices, Portucel Moçambique has developed a strategy for its entire value chain that assigns clear priority to **sharing the value** generated **and to engage with stakeholders**, in the belief that such sharing is beneficial and generates better economic results, transparency and improved welfare for all parties involved.

The strategic approach adopted by Portucel Moçambique is unique in its design, tools and the actions taken, as it seeks to ensure harmonious co-existence between the business venture and its socio-economic and environmental context, as well as incorporating the standpoint of a long-term commitment.

The company accordingly functions as an ecosystem that manages people, natural resources and financial resources in a sustainable way, and this perspective has been adopted as the most structurally sound approach to understanding and interacting with the project's context. Its operations are accordingly conducted on the assumption that a long-term relationship with the different stakeholders is only sustainable if they all share in the benefits generated by the project.

The following are examples of the application of these principles at Portucel Moçambique:

- A **Community Development Program** has been drawn up, based on the baseline situation identified in the Environmental and Social Impact Assessment. The plan has been shared and debated with the Government, civil society and communities, and seeks to provide a focused response to the needs of communities in the project areas, as part of the company's value chain. Both the aims and the modus operandi have been designed to strengthen the value chain, improving the living conditions of households and communities. It is these who provide manpower, will gradually care for more land and forests, can supply supporting services for the company's operations and will in fact derive benefits from the plantations, both in the short term, and in the medium and long term;

- The company prioritises recruitment of local manpower and contracting local service suppliers, provides **training, skills development and specialist expertise**, as well as transferring know-how, alongside with generating income and socio-economic development;

- Portucel **communicates on a regular and effective basis** with central government, provincial government and district authorities, as well as with civil society and communities. The community relationship model has been structured to ensure that there are several channels for communication with the company, and for feedback. Several structures have been implemented to achieve this, including a group of liaison officers appointed by communities, regular meetings, advisory committees in communities, as well as formal procedures for direct communication with the company, which can be accessed by everyone;

- Another example of **stakeholder communication** is the model adopted for Portucel Moçambique's Advisory Board, whose structure was designed through dialogue and on the basis of a proposal from civil society. The Advisory Board is an independent body, most of its members are drawn from civil society, and includes a member of the Government and a representative of the company;

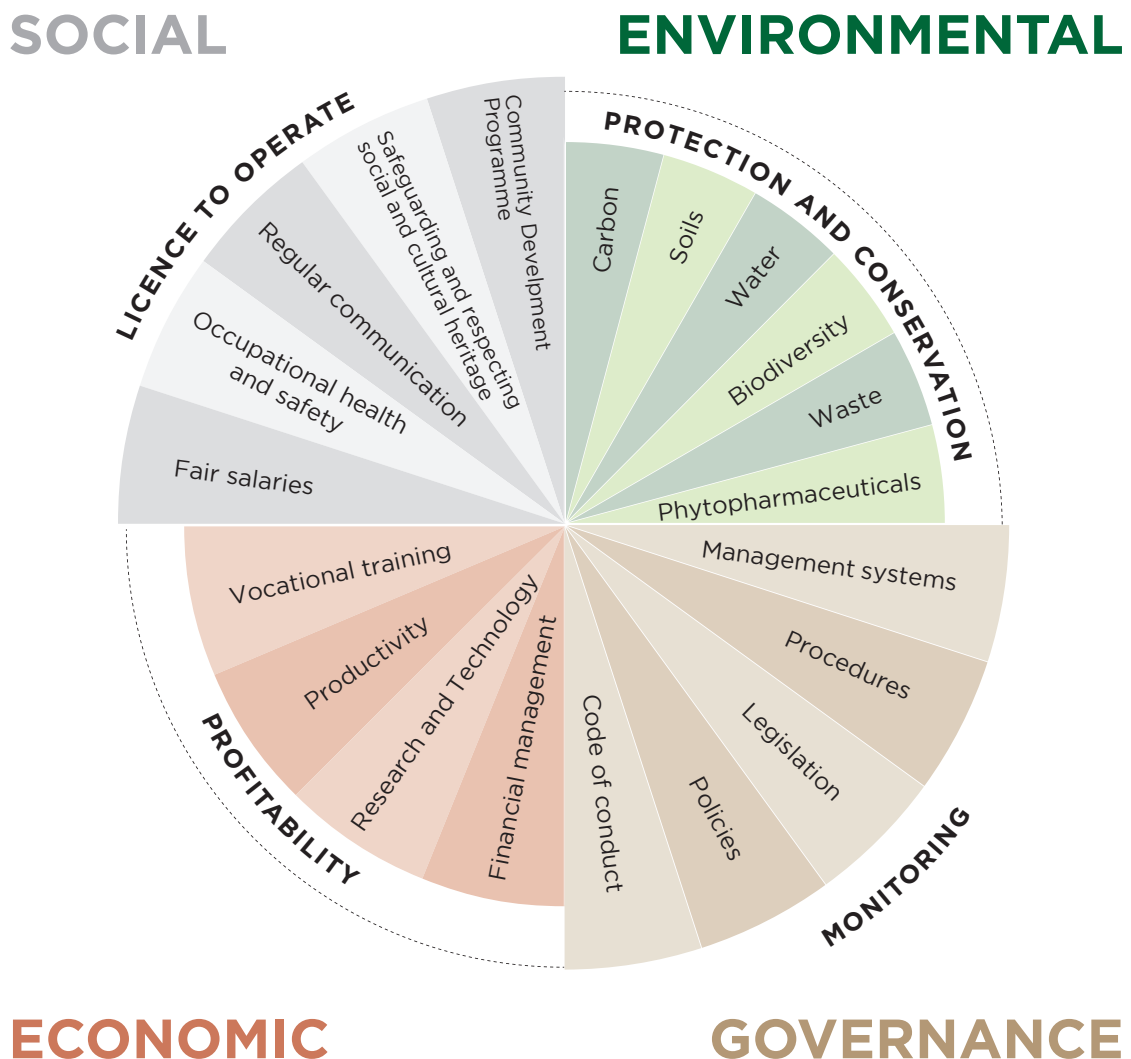


- The **land access model** is based on voluntary signing over of land. There is a full consultation process, both at community level and with families individually, validated by local authorities, as well as other procedures that promote transparency in these relationships, using mechanisms that focus on the sharing of benefits;

- The land organisation and management system is governed by the same principles. The Mosaic Model - creating a patchwork of forest areas, houses, agricultural land, high conservation value areas and other protected uses - is an innovative format chosen by the company as a way of organising land, because it is sustainable over time and protects families against physical displacement. This sustainability governance model forms the basis for the company's operations and is informed by good business practices and good conduct standards. This means that we protect the environment and ensure good social relationships – through stakeholder inclusion and participation – whilst preserving local know-how and generating more value, which is shared with the communities in the project areas.

Principles such as continuous improvement are built into this sustainability governance model, as our teams are permanently focused on creating efficiency, given that resources are scarce, and on measuring impacts and outcomes. IFC's experience in other development projects has been highly important in this area.

In order to put these aims into tangible form, a series of tools have gradually been implemented, including the Communication Plan and the Stakeholder Engagement Plan, the Environmental and Social Management Plan, the Community Development Programme, as well as the systems for Forestry, Financial and Social Management, allowing the company to effectively monitor its activities through a system of documentation (policies, processes and procedures).





Pillars and Aims

PILLAR	AIM	HOW
	Sharing value	Portucel Community Development Programme (PCDP) Technical standards
	Talking to Stakeholders	Presentations Institutional/business events Meetings (employees, management, with services providers, central and provincial Governments) Communication Plan Grievance Mechanism Portucel Advisory Board External Reports (Government/public in general)
	Protecting and Safeguarding of socio-cultural heritage Keep families and agricultural land in their current location (no resettlements), voluntary signing over of land	Mosaic Model Land Access Procedure Identification and safeguarding of sacred sites
	Continuous search for best logistical solutions	Institutional meetings with Government, financial entities and others
	Risk Assessment	Wood Export Pilot Trial
	Professional development and advancement	Training, meetings with employees, sharing documents and technical standards
	Socio-economic monitoring and assessment	Independent annual survey of families (1200 families/year) Grievance Procedure Assessment of workforce performance in the field
	Compliance Checks	External Audits Oversight Visits Internal reporting (Navigator/IFC)
	Research and Development	Annual taskforces (RAIZ) – especially relating to forestry issues Cooperation agreements with local and international academic institutions and research bodies Support and involvement in research and dissertations
	Organisation and gathering of evidence of processes	Implementation of Management Systems Investment in new technologies (Drone, mobile forestry and socio-environmental monitoring apps)
	Occupational Health and Safety	Training Awareness Raising Protective Equipment Technical Standards
	Increased resilience to climate change	Community Development Programme Forestry Project (reduces pressure on deforestation of natural forest and seeks to minimise erosion events) Monitoring Communication



SUSTAINABILITY GOVERNANCE AT PORTUCEL MOÇAMBIQUE IS STRUCTURED TO FUNCTION AS FOLLOWS:



2.2. ENGAGEMENT WITH OUR STAKEHOLDERS

In carrying on its operations, Portucel Moçambique looks for inclusive solutions and promotes value sharing, through regular dialogue with its stakeholders. This participative approach encourages innovation and sustainable management, creates value and prosperity for the company, for its partners, for communities, for the provinces and for Mozambique.

Stakeholders are an integral part of the Portucel Moçambique project and their contributions and involvement are essential to ensuring that everyone benefits, in the short, medium and long term.

In a number of consultation exercises over the course of the project, Portucel has gradually identified all its stakeholders and catalogued the main groups, and has also developed a relationship plan, identifying priority areas for action, formats and frequency of contacts and other parameters, with a view to realising the potential of those benefits.

Stakeholder relations includes the company's fruitful relationship with communities and families in the project areas, as detailed in the chapter on Communities. This grassroots presence is a distinctive feature of Portucel's project, and the company regards it as an important factor for its success.



The following diagram identifies the main stakeholders.





2.3. THE MATERIAL TOPICS AND PORTUCEL MOÇAMBIQUE'S RESPONSE TO THE SUSTAINABLE DEVELOPMENT GOALS (SDG)

Portucel Moçambique has decided to focus its Sustainability Report on the most important issues in its activities over the past three years, with regard to the business it carries on and their impact on the Company's sustainable development.

In the course of its ongoing relationship with each of its stakeholder groups, the Company has therefore identified its material topics and key themes, in the context of its vision and mission, its risks and opportunities; feedback from interaction with the main stakeholders was also key, in particular the beneficiaries of the Community Development Programme. The UN Sustainable Development Goals (SDG) also played a role in structuring the material topics. Where possible, the material topics are aligned with those of Navigator.

MATERIAL TOPICS

1. Forest sustainable management
2. Environmental management and protection
3. People engagement
4. Community engagement
5. Partners engagement

In its various areas of responsibility and operation, Portucel seeks to contribute to the attainment of the SDG targets and has therefore assigned priority to the Goals associated with its main business risks and those which, through the company's activities, have developed and had a positive impact on the company.



The Community Development Programme, designed to improve food security, income generation opportunities and family welfare, contributes to several of the Sustainable Development Goals.



THE PRIORITY SDGS

END POVERTY IN ALL ITS FORMS, EVERYWHERE



Portucel Moçambique's Community Development Programme seeks to combat poverty through a variety of projects relating to local procurement/hiring, promoting agriculture and training.

- Job creation (direct and indirect) and consequent increase in household income;
- Direct and Indirect Investment (by attracting other investment through the presence of Portucel Moçambique), with a significant impact especially in Zambézia province, which is one of the provinces where the poverty level remains a significant challenge;
- Vocational Training;
- Agricultural extension (conservation farming techniques) and supply of seeds and improved varieties of crops;
- Training of rural workforce in communities;
- Land Access Procedure: characterisation of the area corresponding to each household and validation by local authorities, enabling Land Access Agreements;
- Land Demarcation Projects - Terra Firma/Oram;
- Portucel Community Development Programme;
- The Navigator Company's Learning Center.

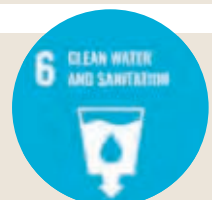
END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE



Our project has developed a Community Development Programme, grounded on a previous survey of the real needs, which has as its first priority food security. Supporting smart agriculture techniques (such as conservation, which is more sustainable) has been one of the privileged actions in implementing this Programme.

- Community Development Programme - agricultural extension, improved seeds (inclusion of horticulture), literacy manual, livestock (kids);
- Increase in average household income through forestry employment (direct and indirect);
- Communication;
- Extreme climate events, more efficient land use.

ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL



Portucel has contributed to improving availability of water to local communities.

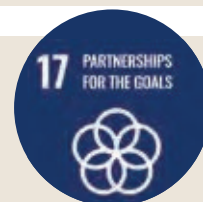
- Community Development Programme - 20 boreholes drilled and another 20 reconditioned (Water Management Committees);
- Water Monitoring in water courses and drinking water springs;
- Monitoring of water quality;
- Protection of bodies of water (Technical standards).



PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

In a context with high rates of land degradation, Portucel's management approach includes measures to protect, restore and promote the sustainable use of terrestrial ecosystems, to combat desertification, to reduce erosion and to reverse biodiversity losses.

- MozFip Development Programme - Reforestation (planted and native forests);
- Community Development Programme - Conservation Farming Techniques;
- Identification, correction and monitoring of erosion occurrences;
- Participative approaches/methodologies for assessing the existence of areas of exceptional biological value;
- Community awareness raising in relation to poaching, deforestation of precious species and uncontrolled burns;
- Technical rules for the control of invasive species.



STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT

Portucel is an active member of groupings in its sector, nationally and internationally. In collaboration with its stakeholders, the company has been establishing partnerships throughout its value chain. Research and Development, technical assistance and sharing suggestions with our supplies has brought about substantial improvements in how business is done responsibly.

- Attraction of investment to the areas where the project is under way (MozFip, PAAF - IFC; DFID - Dams, Demarcation of Community Land);
- Multi-sectoral support and recommendations disseminated at public or internal events, and also sharing suggestions for improvement, in particular in the existing regulations;
- Encouragement of development and research programmes - RAIZ and IIAM;
- Implementation of Management Systems with mobile apps, harnessing technology to monitor operations more efficiently.



2.4. RISK MANAGEMENT

Risk management increasingly plays a fundamental role in the Company, which has been implementing a systematic approach, across the organisation and its processes, to the risks affecting each operational area and to identification of the internal control activities relating to each situation. This process is designed to ensure that the risks involved in the Company's business are accepted in full awareness of their impact and that mitigating activities are undertaken in line with the Company's management guidelines.

Portucel Moçambique's risk analysis matrix focuses on four levels: strategic, financial, regulatory and operational. Several different time horizons are also considered.

It is important to note that a large number of the risk factors cannot be fully controlled by the Company, including market factors which can potentially undermine its operational and financial performance. Analysis of business sustainability takes into consideration the context and the main international trends, the political and socio-economic context, analysis of regulations and strategy and stakeholder expectations. An example of this are the risks associated with adverse environmental conditions, shortages of water or raw materials.



The Luá Nurseries is one of the sites where risk management is conducted at different levels.



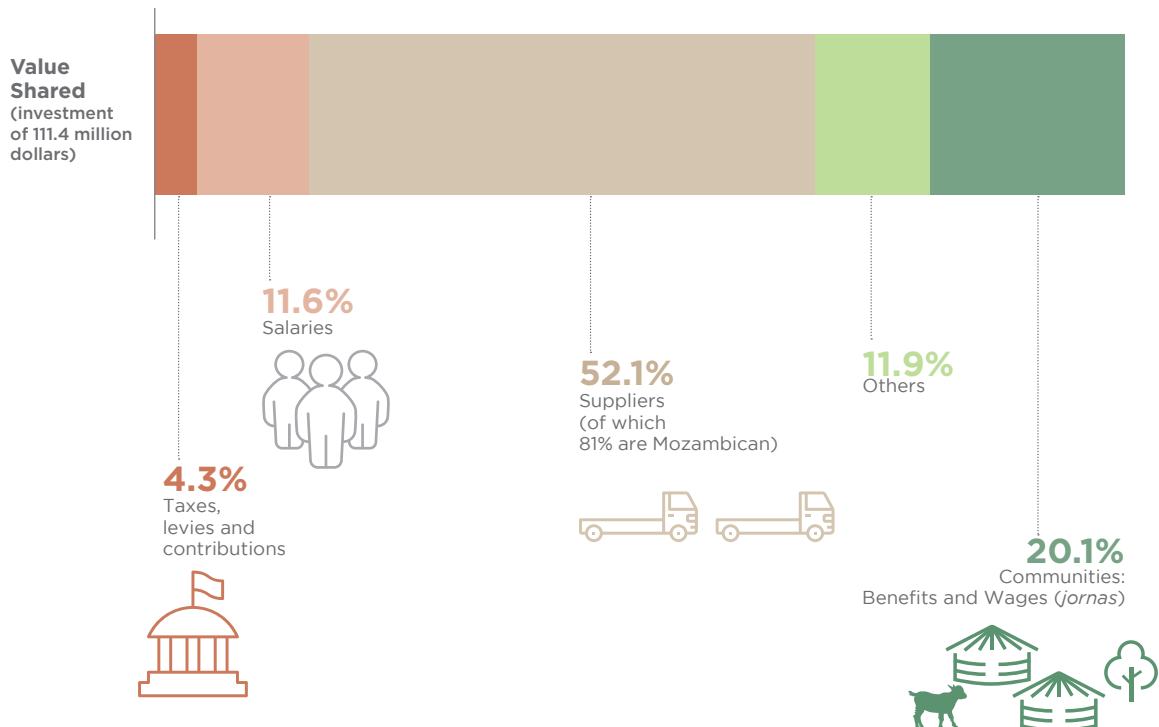
3. HOW WE SHARE VALUE

Value sharing is one of the cornerstones of the Portucel Moçambique project, as is immediately clear from the business model that has been implemented – which assigns priority to Mozambican suppliers and service providers, domestically sources products and also jobs and occupational training for Mozambican people – thereby maximising incorporation of national value added and keeping a good part of the wealth created in the country, improving the virtuous circle of the value chain. Another clear example of value sharing is the Community Development Program, which works to improve living conditions for communities in the project area (involving investment to date of USD 5 million, out of a total of USD 40 million for the whole project). Value sharing can also be seen in the construction and maintenance of a series of infrastructures that have brought significant benefits for communities and local livelihoods in the project areas. Examples of these are the more than 5,000 km of roads and paths, bridges and boreholes, among other things.

The economic impacts of the project up to 2018 include payment of wages and salaries totalling around 425 million meticaïs (around 10.5 million US dollars), part of this corresponding to work done by community members (3.6 million in daily wages since 2013), with a real impact on income generation. Up to 2018, the company paid 230 million Meticaïs (4.6 million US dollars) in social security contributions and taxes.

The following table presents a breakdown of the various economic contributions made by Portucel's investment, in line with the value sharing priorities described above.

Value Sharing





B.

OUR FORESTRY
PROJECT



Our Forestry Project

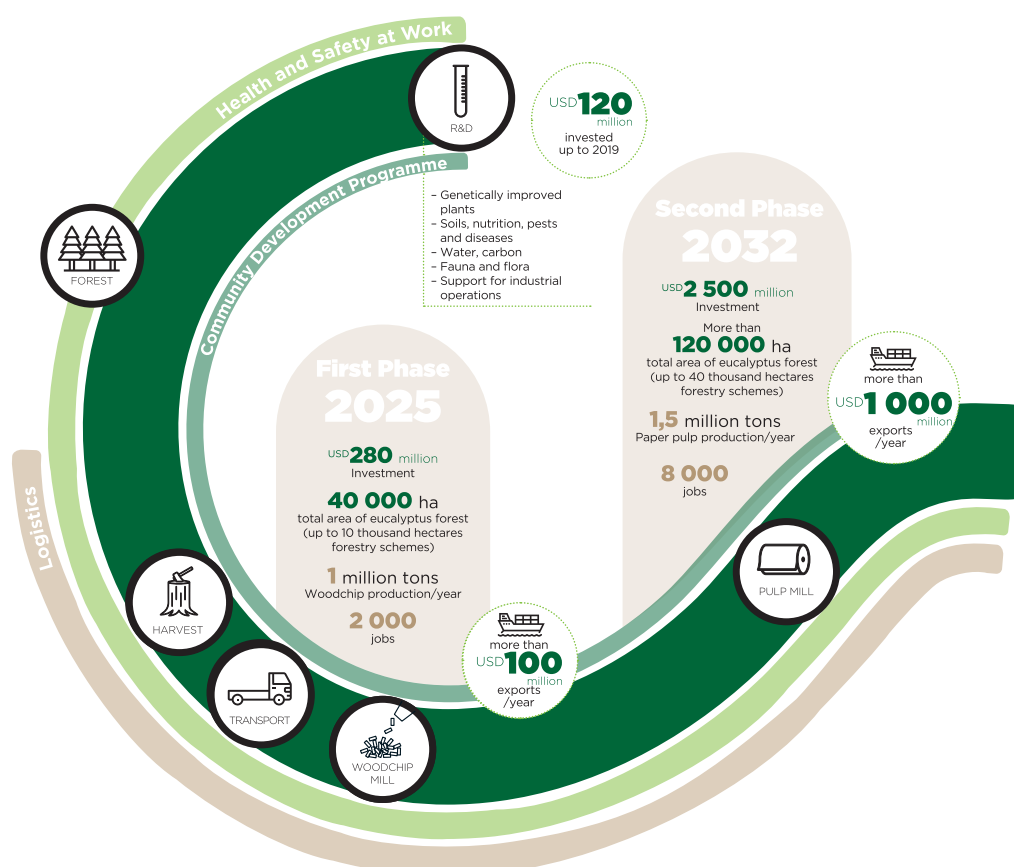
The forestry venture is the first stage of the investment in Mozambique, comprising up to 40 thousand hectares of plantations and a woodchip mill. After the conditions precedent are met, the project will then continue with the planting of a further 120 thousand hectares and investment in a pulp mill. Portucel is fully committed to a sustained implementation of its forestry venture, over the different stages of the value chain.

1. INTEGRATED VALUE CHAIN MANAGEMENT

One of the first phases/activities - but one that continues over the whole lifetime of the projects, as it seeks to bring continuous improvement of production processes - is (1) **research and development**, which supports subsequent (2) **Forestry** activities. The forestry phase comprises a series of operational activities which are the key to the success of sound forestry stands. These include: production of plants, identification, selection and assessment of constraints (environmental, social and cultural) on areas for future planting, planting and maintenance of planted areas, including nutritional needs (fertilisation and insecticides), regular monitoring of potential pests and diseases, as well as forest fire defence.

The subsequent phases, consisting of (3) **harvesting**, (4) **transporting** and (5) **processing wood**, are activities not yet being undertaken by the company, and so are not presented in detail in this report. The following diagram illustrates the process.

Implementing the sustainability of the value chain is a way of improving risk management and enabling the company to create strategic ties and alliances with business partners, as well as encouraging joint development of innovations in processes and products, geared to sustainable development.





1.1. RESEARCH AND DEVELOPMENT



Genetic Improvement



Soil, nutrition, pests and diseases



Water, Carbon



Fauna and Flora



Support for Industrial Operations

The research and development work behind the Portucel Moçambique venture is supported by the experience and know-how accumulated at RAIZ, The Navigator Company's in-house research institute for the forestry and industrial sectors. It also aims to support and use the expertise existing in Mozambique, namely that of institutes and universities working in agricultural development.

The company's recent acquisition of expertise on tropical silviculture in Mozambique has been a research challenge, above all because it involves working in a new and different context regarding genetic materials, climate, types of pests and diseases, fertilisation, rotation times and other aspects.

This is also why we have been eager to pool resources and establish joint learning programmes with local research and development institutions, in particular the Eduardo Mondlane University (UEM) and the Mozambican Agrarian Research Institute (IIAM), and also expanding and sharing experience with others, such as the Zambeze University (UNIZAMBEZE).

In the field of forestry, the most significant work has been:

- Development of forestry plantation areas worked on a 100% manual basis, to assess yields with different forestry specifications in the development of clones;
- Mini-cutting plant production trials at the Luá Nursery;



Plants produced in the mother plant park at the Lua Nurseries present good levels of vegetative vigour. Success rates are very encouraging (on average 80%), and with one of the clones a success rate of 92% has been observed.



- Pests and diseases, together with allelopathy, were analysed during the first months of plant growth (IIAM, 2017);
- Donation of an autoclave to IIAM for its forestry research centre in Marracuene (IIAM, 2018);
- Presentation of company and its operations in Mozambique (Unizambeze, 2016)
- Laboratory water and soil analyses (UEM 2016, 2017);
- Support to Master dissertations – “Assessment of impact of termites on Portucel Moçambique plantations” (UEM, 2017);
- Assessment of nutritional state of eucalyptus stands, focusing on younger plantations;
- Review of fertilisation programme;
- Development of a soil fertility points web, on the basis of soil analysis conducted on Portucel Moçambique DUAT;
- Inventories drawn up in order to estimate yields of stands in the two provinces;
- Quality analysis of wood from plantations;
- Support to the development of management indicators for “Carbon Balance Sheet”;
- Development of a protocol for monitoring soil sampling network for environmental purposes.

Portucel’s R&D priorities also include the development of agro-forestry systems, seeking to test cohabitation of forests with farming.

- Analysis of Ceasefire tool and its applicability at Portucel Moçambique for creating alerts and, if necessary, repositioning of the firefighting structure on the ground, in line with fire risk conditions (Instituto Superior de Agronomia, University of Lisbon, and Instituto Dom Luiz, 2017-2018).

In a wider research context, the company has set up partnerships at local and international level, in order to achieve its aims relating to environmental monitoring, sharing of methodologies and experience in the land sector, and obtaining better and more comprehensive results in the activities of the Community Development Plan, especially with regard to improved food security, with development of new variants of cassava, corn, sweet potato (orange flesh) and other crops.

In this area, our contributions and cooperation have consisted of the following:

- Support for the MIDLAND project, funded by the European Union, which aims primarily to develop and test propositions that can explain the main land use systems (UEM, Université Catholique de Louvain, 2017);
- Support for development of Portucel Moçambique Water Protocol (UEM, 2018);
- Developing of Literacy in Forestry Handbook, in a partnership with ActionAID (2018);
- Establishing fields for sesame seed production and multiplication, together with follow-up and advice for managers of demonstration fields for new cassava varieties (IIAM, 2017, 2018);
- Workshop on learning platforms and knowledge sharing in inclusive businesses, relating to land management and food security (2017, Shared Value Foundation, CIFOR, Netherlands Land Academy and Food & Business Knowledge Platform);
- Partnership for a research project into “Effects of large capital projects on rural areas in Mozambique” (OMR, 2016-18);
- Establish rapid cassava propagation fields and testing of new cassava varieties in Portucel’s intervention areas, to assess their specific suitability to different environments (IIAM, 2017, 2018).



1.2. THE FOREST



**Land
Access**



**Forestry
Project**



Nurseries



Planting



**Forest
Maintenance**

Forests are a natural resource which is crucial to the balance of life on Earth, and they play a fundamental role in retaining carbon and in preserving soil quality and biodiversity. At a time when the consequences of climate change are increasingly visible, with drought and forest fires causing negative impacts, Portucel Moçambique wants to be an active part of the solution. The company has built its business on sustainable management of its forests. It promotes the woodlands' renewability and improvement, protecting wildlife and our social and cultural heritage. Preparing for forestry certification is one of the company's priority. Forests managed by Portucel Moçambique are estimated to have retained carbon equivalent to 1.5 million tons of CO₂, in plantations established up to 2018.

BRIEF DESCRIPTION OF VALUE CHAIN ACTIVITIES

The forestry value chain starts when the company obtains access to the land, in other words, when the family and/or community areas are identified as available for development of forest stands, on the basis of the procedure described below and also of a communication process, an activity found throughout the whole value chain. When the available areas have been identified and surveyed, an environmental and socioeconomic assessment is conducted of the site, at the phase known as Forestry Planning.

It is only after the area actually available for planting has been identified, and the areas of environment, social or cultural value have been excluded, that the number of plants needed to establish the stand is defined. The nurseries are duly informed to proceed with production.

When the number of plants needed has been established, and delivery planned, work starts on establishing the plantation (from land preparation through to planting), followed by maintenance (through to harvesting).

1.2.1. LAND

Land in Mozambique is owned by the State, which awards Land Use Rights (DUAT) for given periods of time. Families and communities which have lived on land for a given period of time have the respective usufruct rights, even when not formalised in a DUAT certificate.

Land management

In 2009 and 2011 Portucel Moçambique received two authorisations from the Council of Ministers of the Mozambican Government to manage 246 thousand hectares of land for a period, renewable, of 50 years, in the Provinces of Zambézia and Manica (Resolutions 86/2009 and 70/2011).

On the basis of the rights awarded to Portucel by the Mozambican Government, the company has interacted with the communities and families living in these areas, for land access, in order to establish plantations on areas signed over by families or communities. In order to ensure that communities and families are informed and consulted during this investment, which is long term, community consultation has been carried out at three different



levels – i) In connection with the DUAT award process (known as community consultation), ii) In connection with environmental and social licensing (known as public consultation) iii) And internally, when Portucel implements the land access procedure (regular consultation with the community).

In the DUAT award process, community consultation meetings were held in a process wholly managed by the Mozambican State authorities, at national, provincial and district level, in the whole project area of influence, as one of the requirements established by the State. Various communities and small villages were consulted in several locations, both in Manica province and in Zambézia. These community consultation meetings were recorded in minutes, signed by the parties (government and communities), and were also attended by the company in order for the investment project to be presented. Messages were disseminated in these consultation processes concerning the project aims and the main benefits and impacts that the project could bring for communities.

After the community consultation phase, the forestry project obtained its two Environmental Licenses (one for each province) from the Ministry of Land, Environment and Rural Development (MITADER) in 2015, after a further extensive public consultation process at community, district, provincial and national level, which involved 7,000 people at 71 meetings, with participation by more than 130 villages in Manica and Zambézia provinces. A series of specialist studies were conducted on hydrological, socioeconomic, biological issues, among others.

LAND ACCESS PROCEDURE

Access to land for planting forests is preceded by agreements with communities and families, in a voluntary process. These agreements are witnessed by traditional leaders and administrative authorities and then are archived. Through compliance with the rules of free, prior and informed consent, the company has a stronger and more robust Land Access Procedure, which complies with the Land Law, Environmental regulations, IFC standards and community consultation rules.

At the end of 2018, the Company had concluded agreements with around 3,500 families.

Portucel's land management is over areas where explicit consent has been obtained from communities and agreements were concluded with families, not over the entire DUAT area.

The land managed includes both areas used for production and others for environmental purposes. The ceded areas are first analysed before any activity goes ahead; protection and conservation areas are defined at this stage, along with areas where stands will be established.

The process of confirming the boundaries of the DUAT areas, as in all DUAT award procedures, involved defining the need to accommodate a series of actions of particular importance in this project: i) seeking to accommodate the interests of the communities living in the DUAT areas and bordering areas; ii) execution and development of the integrated project as initially envisaged by Portucel Moçambique; iii) redefining the boundaries of certain parcels on the basis of natural boundaries, in order to facilitate territorial, operational and community management.





Land access procedure



Project Presentation and Community Consultation

- About Portucel;
- What is the forestry project and what is eucalyptus for?;
- Positive and negative impacts;
- What is expected from families and communities?;
- What is the Community Development Programme?;
- Consultation to identify interested communities (required condition) and families.



Identification of interested families

- Minimum requirements for ceding land:
- Area available and not occupied by other activities or traditional uses;
 - Classification of "vulnerable" family;
 - Non-disputed area.



Visit to family and respective area

- Confirmation of land possession with family making it over (two spouses and of-age children) and by the various local leaders;
- Ensure that the family has sufficient land for its usual farming activities;
- Demarcation of the area signed over using GPS;
- Consultation of neighbours prior to demarcation.



Information Survey

- Reading and translation of Land Access Agreement into local language;
- Signing of Agreement with families, with the presence of two spouses and off-age children, witnessed by neighbours, local leaders and village chief;
- Photographic survey;
- Socioeconomic assessment of the family;
- The family has a cooling-off period to confirm its intention of signing over the land.



Implementation of benefits

- Portucel Community Development Programme
 1. Food security and income generation;
 2. Opportunities for economic growth;
 3. Support for household welfare;
- Income improvement - Waged work;
- Vocational Training.



Monitoring and dialogue

- Incident management (complaints, enquiries, information);
- Community advisory committees;
- Community liaison officers;
- Monthly village meetings.



SHARING EXPERIENCE OF LAND MANAGEMENT MODELS

Shared Value Foundation

In June 2017, two researchers from the Shared Value Foundation, together with local researchers, spent seven weeks visiting different locations and investment projects, gathering information on community experiences with the different companies and on how they could all share experiences and good practices and develop opportunities and priorities for socioeconomic development, as well as increase cooperation among all the stakeholders.

Portucel was one of the private sector companies that was involved, sharing the lessons it had learned, as well as future objectives on issues relating to community development.

More info at: <http://www.sharedvaluefoundation.com/portfolio-item/learning-platforms-mozambique/>

Interlaken Group

Portucel Moçambique was invited to take part in a study to illustrate how the company is implementing its project based on best international practices relating to land rights. The development and capacity building of different ways of dealing with land tenure rights, and also communication procedures, were seen as good experiences by the authors, so that they could be replicated or serve as examples in similar cases.

This study is entitled “Emerging Corporate and Investor Practice to Support” and may be consulted at: <https://rightsandresources.org/en/publication/emerging-corporate-and-investor-practice-to-support-community-land-rights/#.XkUv2W5ulaF>

Legend Project

This is a project for demarcation of family community land, carried out in a partnership between ORAM (Rural Mutual Aid Association), Terra Firma and Portucel Moçambique, in Portucel Moçambique’s DUAT areas in Zambézia province.

This project seeks to put together a simplified land register of family and community land, providing simple tools for the first phase of planning land use by communities and making responsible investment possible.

The main aims of this project are: to set up 20 community land ownership association to administer land and natural resources; to create 20 land use plans for each of the associations set up; to encompass around 14,000 families possessing land certificates; providing a local, legitimate and comprehensive land administration system within concession areas.

Further information at: <https://landportal.org/partners/legend/project/oram>

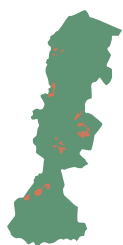


The numbers



Maximum plantation area
Up to 237 473 ha

Planted area (Dec 2018):
13 468 ha



MANICA PROVINCE

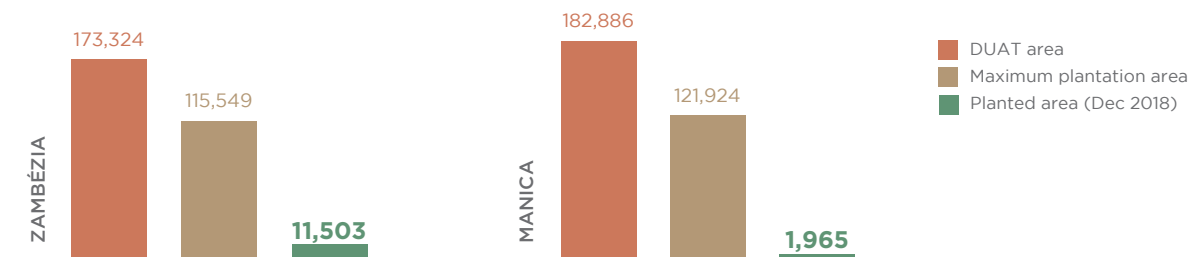
DUAT area: 182 886 ha
Number of DUATs: 22
Year of award: 2011
Plantation area: Up to 121 924 ha
Planted area (Dec 2018): 1 965 ha
Districts: Bárue, Gondola, Manica, Mossurize, Vanduzi and Sussundenga



ZAMBÉZIA PROVINCE

DUAT Area: 173 324 ha
Number of DUATs: 21
Year of award: 2009
Plantation area: Up to 115 549 ha
Planted area (Dec 2018): 11 503 ha
Districts: Ile, Namarrói, Mulevala e Alto Molocuê

Areas under management (hectares)



This graph illustrates the still early stage of progress in the project, with plantations on 1.6% of the maximum plantation area in Manica province and on around 10% of the maximum plantation area in Zambézia province.



1.2.2. SAPLING PRODUCTION

The nursery at Luá, in the district of Ile, Zambézia province, is integral to Portucel Moçambique's sustainable forestry management. The nurseries meet the needs of plantations, with capacity to produce 12 million plants each year, as well as producing fruit trees and native trees for communities and for reforestation in conservation areas. The nursery is also home to a school for employees and a training and professional development centre.

ACTIVITIES

In addition to producing eucalyptus clones, a number of other activities relating to operations are based at the nursery:

- Production of species other than eucalyptus, especially native species such as Umbila, Umbaua, Chanfuta and Panga Panga, for conservation areas and supply to communities; production of fruit trees, such as mango, papaya, orange, lemon and avocado trees, for communities in the region, and to reinforce the aim of the Community Development Programme of contributing to improved food security;
- Testing of water quality for irrigation, combination of substrates, fertilisers and production of plants using the minicutting technique;
- Analysis of the success rate of the clones used;
- Development of a plan for selection of the existing clones, and identification of other potential clones, for testing, in a project undertaken in partnership with RAIZ (see Research and Development tab).

In addition to the core activities of the Plant Production Department at the nursery, the company has run a number of activities relating to operations, as well as others relating to welfare concerns, including:

- Development of Occupational Health and Safety Programme;
- Drilling of a borehole for human consumption for workers and residents in the surrounding area (with monitoring of quality for human consumption);
- Implementation of an awareness raising campaign for all workers to apply for ID documents;
- Creation of community vegetable gardens on land belonging to the nurseries;
- Participation and incentives for the literacy programme, which takes place at the premises of the Luá nurseries (canteen);
- Medical unit with capacity for doing minor curative treatments, malaria tests and also a fortnight presence of a doctor for medical consultation.



THE NUMBERS

NURSERY OUTPUT

TYPE OF PLANT	2016-18
Eucalyptus	11 034 127
Native Plants	1 324
Fruit trees	8 877

The number of plants dispatched in 2016 was significant, in excess of seven million. There was a drop in output in 2017, following on from the company's decision to suspend planting operations in new areas in the first quarter of 2017, as described above. Production also remained low in 2018, for the same reason.

It was precisely during this downturn in activity and in response to the lower demand for eucalyptus trees that the company invested in diversifying and improving the processes in place and also in new projects, such as production of native and fruit trees. The Luá nursery currently employ **63 Mozambican workers, of whom 50% are women**, having had a larger workforce (164, of whom 75% were women) prior to the strategic slowdown implemented by the company.

STAKEHOLDER ENGAGEMENT

Recognised as being a valuable infrastructure, the Luá Nursery was officially opened by the Mozambican President, Filipe Nyusi, in 2015. The nursery welcomed visitors from a wide range of foreign and also Mozambican bodies between 2016 and 2018, including the following: district authorities, Portucel Moçambique Advisory Board, the National Directorate of Agriculture and Forestry, the Provincial Directorate of Land, the Environment and Rural Development of Zambézia, Faculty of Science (University of Lisbon), the National Fund for Sustainable Development, Indufor (Finland), the Education Institute of Farming of Gurué, Higher Institute of Agronomy (University of Lisbon), International Finance Corporation, the Ministry of Land, the Environment and Rural Development, Mozambique Leaf Tobacco, the Rural Environment Observatory, SEMAPA (Board of Directors), National Union of Farming and Forestry Workers, The Navigator Company (Board of Directors) and Eduardo Mondlane University.



The official opening of the Luá nurseries was attended by the President of the Republic, Filipe Jacinto Nyusi, and a number stakeholders and official entities



FOCUS - LITERACY EDUCATION FOR LUÁ NURSERY WORKERS

The Luá Nursery Literacy project is designed to raise the level of educational attainment of its workforce and aspires in future to ensure that they complete at least the 5th grade of education.

As at December 2018, all full time staff had attended school, and the company's aim is to introduce 6th grade classes, followed by 7th grade.

The literacy programme started in 2015, with 3 groups being taught after working hours by teachers from the Socone Educational Area. Since the start of the programme, the results have been as follows:

- **Classroom 1 (1st and 2nd grade in the official education system) – attended by 96 students; 58 students completed successfully;**
- **Classroom 2 (3rd and 4th grade in the official education system) – attended by 26 students; 18 students completed successfully;**
- **Classroom 3 (5th grade in the official education system) – attended by 57 students; 47 students completed successfully.**

Jointly with the Socone Educational Area, 57 students were given the opportunity to take the national 5th grade examinations. Of these, 47 passed and graduated from the year 5th of the national educational system, receiving the official certificates.

Education of the Luá nurseries staff, as well as vocational training, has been one of Portucel's key objectives, in an area where skilled labour, and accordingly skilled employment, is in short supply.

As a result of its strategy of promoting the education of its workforce in the region, in December 2018, around 65% of its employees had grade 5 qualifications or higher.



At year-end 2018, all full time staff had attended school, and the company's aim is to introduce 6th grade classes, followed by 7th grade.



1.2.3. THE SILVICULTURE MODEL IN FORESTRY MANAGEMENT

The Silviculture Model adopted involves a set of activities in three main phases of forestry operations:

- Establishing Forests
- Forest Maintenance
- Harvesting

The Navigator group has extensive know-how and experience in this model and in the different activities it involved. In Mozambique, we only have practical experience of phases 1 and 2, given that we have yet to proceed to harvesting any plantations. However, with a view to gaining know-how of the entire process and the necessary activities and to achieving efficiency, training and the availability of service providers and the local communities, establishing the legal processes and determining the costs of all these procedures, the company undertook a pilot project in exporting wood (which included harvesting, transport, storage at the port and dispatch by sea). This process is described at a later stage in this report.



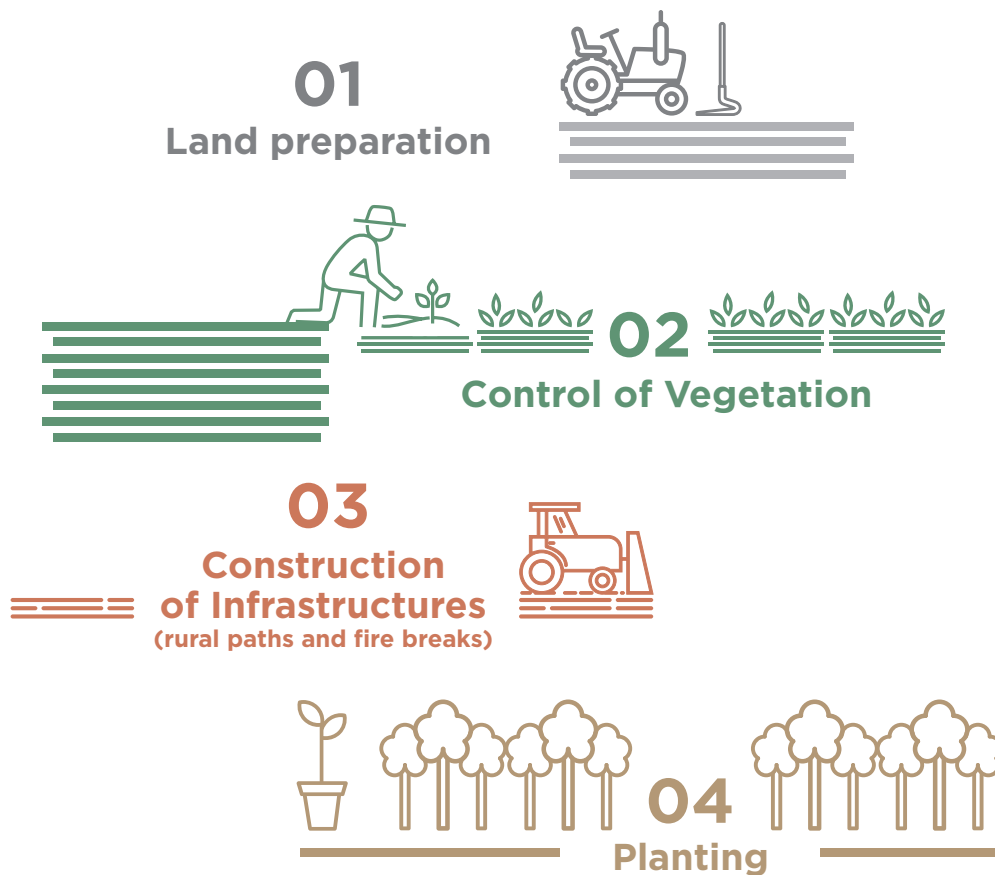
The tasks involved in stages of establishing and planting forests are carried out essentially by local workers.



1.2.3.1 ESTABLISHING FORESTS

The first phase of setting up a plantation is known as establishment, and consists of all the activities needed from preparing the area through to the actual planting.

This stage frequently requires special care to avoid possible environmental impacts, essentially on the soil and water, and on disturbance of ecosystems of conservation value, archaeological sites and sites of historical/cultural or recreational value.



In its **Planting** activities between 2010 and 2018 (including the phase of eucalyptus clone trials up to 2015), Portucel Moçambique has planted 13.5 thousand hectares, equivalent to 4% of the total DUAT area and around 5.6% of the maximum authorised plantation area. The pace of planting was slower than planned, due to the land access process and also because of the need to train silviculture employees and service providers. Since the end of the first quarter of 2017, planting operations and access to new areas have been suspended, except in certain areas in Manica province.



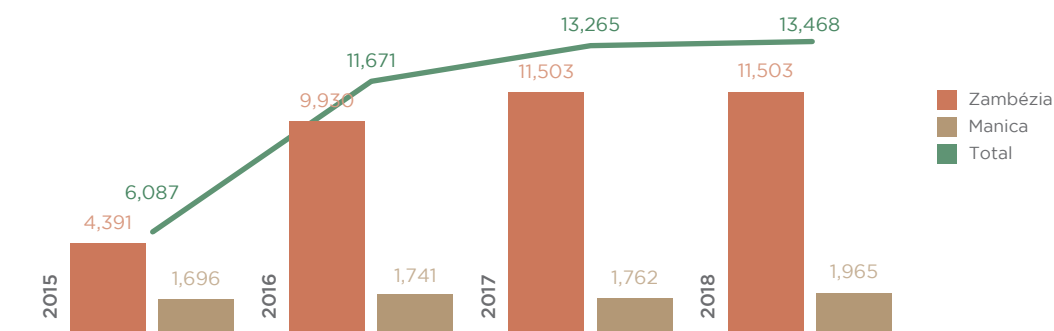


AGE OF STANDS

The most recent stands are approximately 6 months old (the result of replanting areas affected by burns), and the longest established are 8 years old. This means that, in the rotation cycle planned by the company, some stands are close to the harvesting stage.

THE NUMBERS

AREA PLANTED (in hectares, to date)



NEW TECHNOLOGIES IN PLANNING AND FORESTRY PROJECT

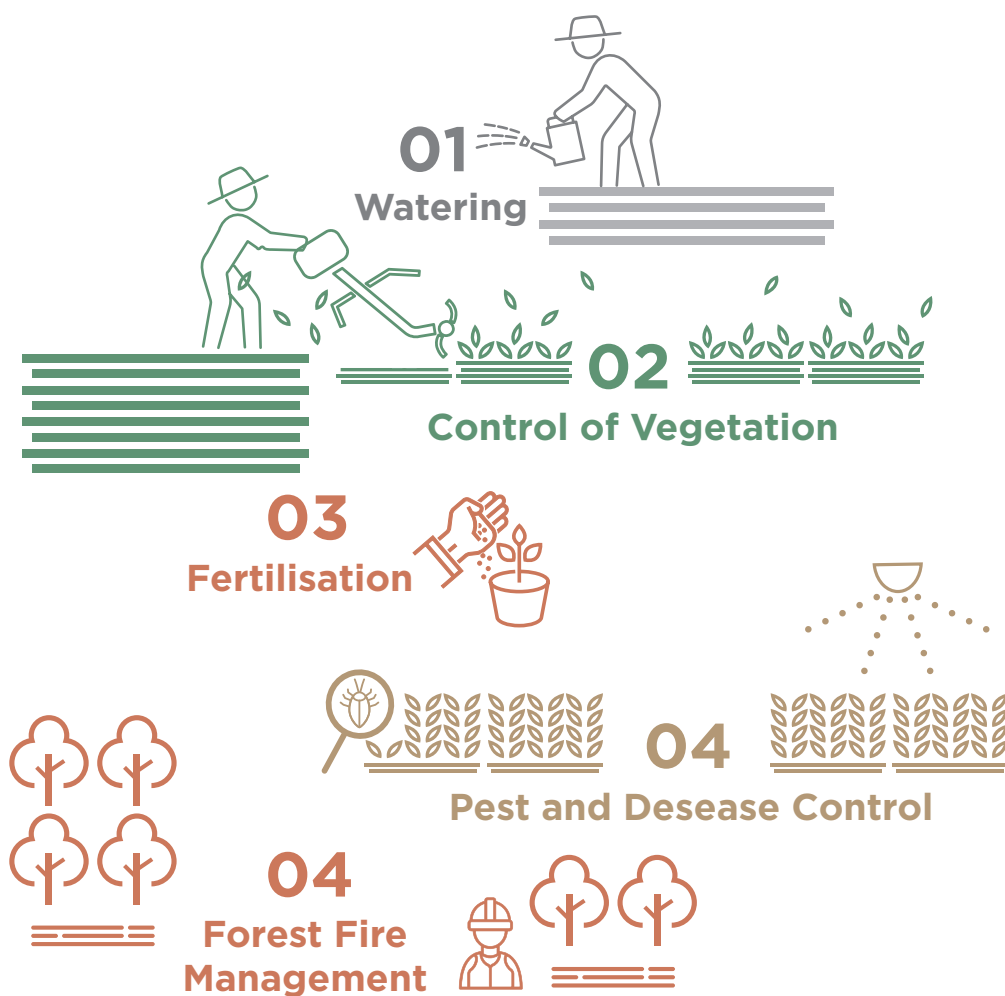
In late 2017, the company started using a drone as a tool with great potential for supporting planning and the forestry project. By late 2018, Portucel had undertaken flights, still at the trial stage, over around 4,000 hectares, in order to gain flight sensitivity and also to assess image quality, topography and constraints.

We are committed to investing in new technologies and look for tools that help us to gather the best possible information, especially in areas where there is no baseline information and where areas are large and difficult to access. This is accordingly a tool that enables us to be more rigorous, more efficient and more effective in planning forestry operations.



1.2.3.2 FOREST MAINTENANCE

The maintenance phase can be defined as management of the forest stands after establishment, or as from felling when the stand is managed on a coppicing basis (selection of coppice shoots after felling) and a new rotation/cycle is started, returning to the stage of establishment. As the name suggests, it involves all the silviculture practices and infrastructure upkeep works, fertilisation, irrigation, vegetation control, plant health and forest fire defence in order to maintain or improve the yields and vitality of the plantations established.





FOREST FIRES, INVESTMENT IN PREVENTION

Forest fires resulting from the way communities use fire are a concern for Portucel, which has been adopting preventive measure and internal fire-fighting capacity, although the prime focus is on prevention.

The measures implemented (which involved investment of more than 16.5 million meticaís over the period 2016-2018) included:

- Creation of a fire reporting system with internal channels for regular reporting;
- Acquisition of specific personal protective equipment for fire-fighting;
- Acquisition of rapid response firefighting kits;
- Adjustment of forestry model operations to support reduction of fuel at ground level (grass, branches, leaves), such as harrowing with incorporation of biomass;
- Introduction of controlled fire in selected locations;
- Implementation of daily reporting, allowing for more effective analysis of trends observed;
- Creation of fields with annual crops around forestry stands;
- Inclusion of a series of social benefits that allow for synergies between the community and the company, such as the installation of beehives;
- Intensive training provided to company employees and service providers;
- Inclusion of this topic in village meetings, for awareness raising;
- Awareness raising aimed at local government;
- Hiring of forest wardens to ensure a greater human presence (control and prevention) in the more critical period of burns near forest stands.

However, this problem is by nature multifaceted and an effective approach requires the involvement of various stakeholders.

Portucel has contracted a specialist consultancy firm, as part of a wider awareness raising project involving other entities, including Government and other civil society organisations, to be implemented in the future.



1.3. HARVESTING, TRANSPORT AND EXPORT

Although Portucel Moçambique has not yet arrived at the harvest, transport and export phase, in 2017 it carried out a pilot project consisting of exporting a quantity of wood. This allowed it to gather important information data to support better future planning of the whole harvesting and transport operation.

Forestry harvesting involves a series of operations ranging from felling of timber in the forest and collection and processing of biomass, through to preparing the products for transport. Forestry transport involves the various operations needed to move the wood from the forestry stand (source) to its destination. Wood is normally stacked near the stand (log yard), although the operation may also consist of direct loading (logging) onto trucks.

PILOT EXPORT OPERATION

In 2017, Portucel Moçambique conducted a trial run of exporting certified eucalyptus wood to Portugal, through the Port of Nacala, located in Nampula province, in Mozambique.

Following all the legal, taxation and operational stages, from acquisition of wood at source - through to delivery at the end destination - this operation started in October 2016 and allowed the company to acquire important know-how for its operations in Mozambique.

In particular, Portucel Moçambique acquired know-how concerning the legal framework for licensing the exploitation of forestry products in the country, and the related logistical issues.

This experience has also made it possible to demonstrate that the Project will generate a value chain that energises the economy, with impacts at various levels, including more employment, more opportunities for service providers and increased tax revenues.

Exporting planted wood is equally an important factor in reducing the pressure on natural forests in Mozambique.



In 2017, Portucel Moçambique conducted a trial run of exporting certified eucalyptus wood to Portugal, through the Port of Nacala.





2. SUSTAINABLE FOREST MANAGEMENT

MATERIAL TOPIC: SUSTAINABLE FOREST MANAGEMENT

Why this is important...

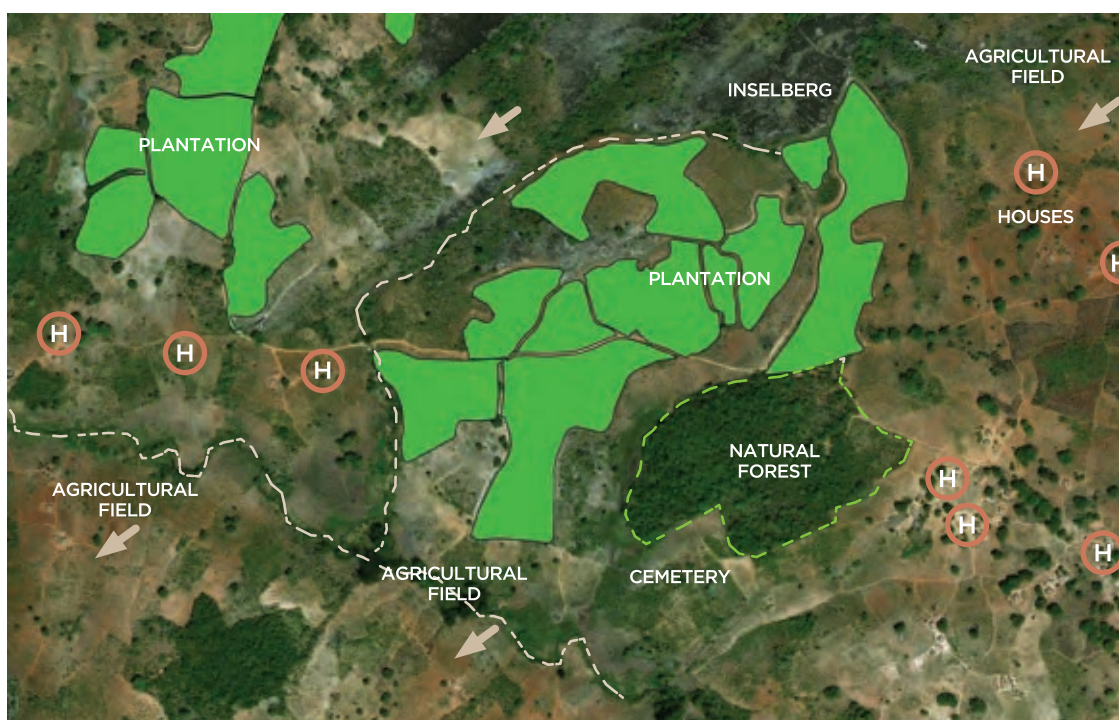
The forest is a very important part of the way of life of rural communities, being a source of energy, building materials, medicinal plants and a spiritual refuge. That is why it is important that sustainable forest management respects these uses, that it guarantees ecosystem services and at the same time meets the requirements of a planted forest project, thus aiming at certification of forest management.

As part of its sustainable forest management policy, Portucel Moçambique has adopted the mosaic model, which allows intersperse planted areas with residential areas, sacred sites, natural forests, protection and conservation areas, agricultural areas and others indicated by the communities in the same landscape.

Additionally, the Company develops programs and activities that promote the preservation of the forest, such as the identification (and subsequent preservation) of environmental and socio-cultural values, considered by the communities as exceptional, implements and disseminates a set of techniques in conservation agriculture and supports with agricultural inputs with the objective of obtaining better productivity, providing more efficient stoves, promoting the replanting of native trees as well as other activities that can be observed in this report.

Good practices and sustainable management implemented by Portucel Moçambique, combined with an investment in fire management, reduce exposure to associated risks.

2.1. MOSAIC MODEL



Location: Community of Nhoela, District of Ile, Zambézia Province



The mosaic model is the format chosen by Portucel Moçambique for implementing its forestry venture on the ground. This is an approach based on combined functions for rural areas, integrating plantations with land that communities and households retain for their own use. This is an innovative format that respects residential areas, sacred and religious sites, natural forest, protection and conservation areas, agricultural and other areas indicated by the communities. One of the great advantages is that households are not physically displaced, i.e. resettlement is avoided.

This choice of this model took into account the size of the project, the socioeconomic characteristics of the DUAT areas, positive experience of this system in other countries, such as Vietnam and Portugal, and other factors.

As access to land is agreed with each family, it is decided between the parties at that stage which areas the families are signing over for plantation. This process, described in more detail in the chapter on land access, is accompanied by a wider public consultation process, involving communities, local and national authorities and the families signing over the land.

The mosaic model simplifies the implementation of business ventures throughout the territory and contributes to diversification of the Mozambican economy.

In the process of interaction with communities and families with a view to land access, Portucel has sought to involve external partners, which has increased transparency and helped to provide information. The company has also used these partnerships as a way of listening to local communities. One instance of this has been the task of demarcating family and community land, which has been carried out by Terra Firma and ORAM. For Portucel, one option under consideration is the development of forestry promotion models, opening the way for family farmers to become outgrowers. This would enable them to share in the prosperity generated directly by forestry plantations.

The mosaic model increases productivity in rural areas and generates greater prosperity, insofar as degraded and marginal land can be used more productively; this also makes it possible to align development with the global cause of promoting the role of forests as a solution for the problems of climate change.

People who live in rural areas can find work closer to home and can also set themselves up as service providers. Project monitoring surveys have shown that average household income has increased over the past two years, at the same time as the percentage of people living under the poverty line has dropped.



The mosaic model increases productivity in rural areas and generates greater prosperity.



2.2. FOREST CERTIFICATION

The meaning of sustainability has evolved over time. The term was previously less wide-ranging than it is today and its three pillars - economic, social and environmental - had different weights.

However, the recent attention paid to sustainability is not limited to products, and now takes in the whole natural system and human life.

All and any development should permit good quality of life, and also ensure this for future generations, presupposing quality of life not just in the economic sector, but also in the social and ecological domains.

As well as being viewed as a key sector for major international issues (such as climate change or biodiversity), forestry is a sector where interaction between people and forests makes it possible to envisage scenarios with a different relationship between the three dimensions (economic, social and environmental) of sustainability.

It is widely recognised that forestry resources must be managed so as to provide for these three pillars, seeking to achieve development, conservation and well-being.

These three goals can only be attained in a balanced way if there is sharing and transparency of information between stakeholders, sound planning and implementation, and monitoring of impacts, so as to make adjustments to forestry management.

Forest Certification is a way of providing evidence of sound forest management, based on compliance with a series of principles based on the three pillars of sustainability.

The Navigator Company manages approximately 120 thousand hectares of forests on a responsible basis, and was the first operator in Portugal to obtain certification simultaneously under the two main forestry certification schemes, applicable to eucalyptus plantations, for the pulp and paper industry, and also to cork woodlands.

Portucel Moçambique has been acquiring the expertise and implementing these good practices in managing its forests in Mozambique, aiming in the medium term to have its plantations certified under the same schemes. These endeavours have been based on a commitment to finding appropriate solutions for developing the project, many of them innovative, and on raising awareness and educating employees and the project's main stakeholders about the need to work on several paths, such as:

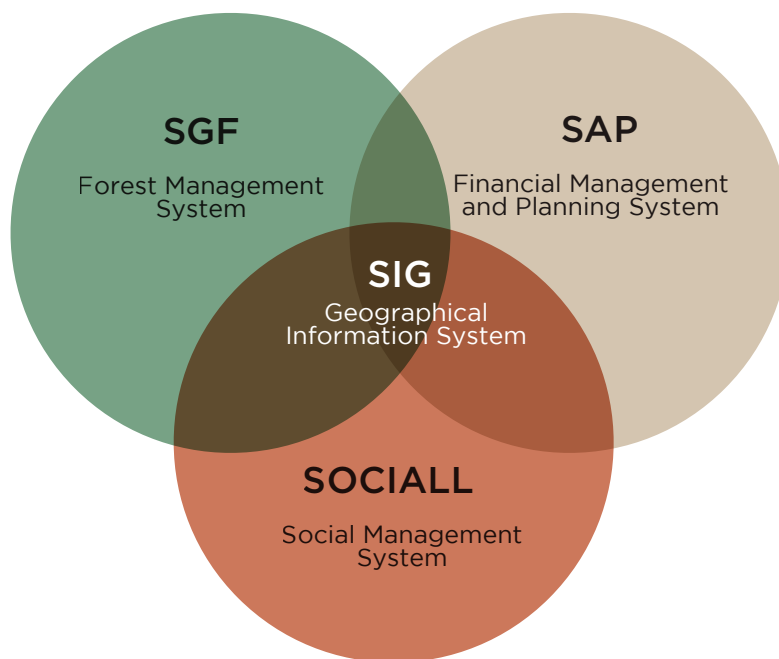
- development of tools permitting regular two-way communication;
- creating and improving technical and operational standards that can reduce the potential negative impacts;
- investment in new technologies that allow for improved quality control of the operation;
- acquisition of expertise in tropical silviculture, through research and development;
- analysis of the different impacts of the measures of the community development programme.

These are a few of the many activities in which the company is working in partnership with other organisations (for further information see the chapter on partnerships and cooperation).

2.3. INTEGRATED MANAGEMENT SYSTEMS (SGI)

The company has been perfecting the tools that allow it to have effective and interconnected management systems, using technological advances and providing significant support to management and decision making, as monitoring is fundamental to improving performance and quality.

In 2017, the company recognised the need to make integrated use of a range of management support tools at different levels: financial, operational and environmental/social.



SOCIAL MANAGEMENT SYSTEM (SOCIALL)

The SOCIALL – social management system is a management tool that allows controlling, analysing and monitoring of social and environmental issues, as well as social investment projects.

The tool keeps record of the relations with stakeholders, namely aid requests, interactions with communities and families, and also managing relations and grievances, allowing to sort the data by history and frequency, following the work developed by the operational areas, and also enables several outputs, such as different profile reports of the community meetings location.

FOREST MANAGEMENT SYSTEM (SGF)

The forestry management system (SGF) is an integrated system for managing operations and supporting forestry decision-making, designed to plan and control forestry activities as an efficient, competitive, profitable and sustainable business.

This is a tool that provides for planning forestry operations and detailed budgeting, presenting the different operations to be carried out, broken down by:

- Location;
- Date;
- Resources needed (including manpower or inputs);
- Technical specifications.



FINANCIAL MANAGEMENT AND PLANNING SYSTEM (SAP)

SAP (System, Applications and Products) is an information management, processing and planning system for several business supporting areas, such as Accounting, Human Resources, Logistics and supplier management (Procurement).

SAP is a critical tool for supporting management and decision-making and has brought added productivity and effectiveness to the company's processes, as well as to its supplier relations.

GEOGRAPHICAL INFORMATION SYSTEM (SIG)

SIG (Geographical Information System) is a system that keeps georeferencing records of all action taken by the company, in its various operational areas. It is the fundamental underlying information system for ensuring high standards in all forestry activities, producing maps, records of ages, forms of occupation, roads and paths or protection and conservation areas.

A close-up photograph of green reeds or grasses with white, fluffy seed heads. The reeds are in sharp focus, while the background is blurred, showing more reeds and a hint of a body of water under a bright sky.

C.

OUR ENVIRONMENT



MATERIAL TOPIC: ENVIRONMENTAL MANAGEMENT AND PROTECTION

Why this is important...

Environmental management and protection is fundamental to Portucel Moçambique, because it involves a wide range of key issues, as compliance with the legal framework, alignment with the voluntary schemes to which we are committed in connection with forestry certification, and with the requirements of our partner, IFC.

In addition, it is an excellent tool for cost reduction and helps to minimise (the scale) of accidents, in addition to playing an important role in raising awareness, empowerment and adaptation in developing a stronger environmentally responsible culture within the entities and communities with which we deal. It also responds to the growing environmental awareness within society, which has become more sensitive to these issues and increased the pressure on the business community, demanding greater transparency in its practices.



Portucel Moçambique's business is intrinsically connected to the environment. When we talk about forestry production, the full range of environmental issues are involved, from protection and conservation of natural areas, to soils, carbon retention, water resources and even waste management. These are all topics with which we deal in our value chain.

We are well aware of the great challenges of climate change and the risks they represent to business, but we also know the important role that our forests play in storing carbon and, consequently, contributing to minimize the adverse consequences of climate change.

For all these reasons, managing and protecting the natural resources is fundamental to our business.

The Company has been pursuing a wide range of measures, aware that, although a lot has already been done, there is still much to do and this change will be implemented gradually. The principle of continuous improvement underlies all these initiatives and the modus operandi of all our employees, in a context of an intensive learning process for everyone, in relation to socioeconomic and environmental issues. Measures already under way include:

- Awareness raising and presentation of the advantages and risks of the project to communities - Environmental and Social Impact Assessment;
- Raising awareness for our employees, service providers and suppliers, in order to have an ethical conduct and comply with a series of rules aimed at avoid, mitigate and minimise potential environmental and social risks;
- Creation of a set of fundamental documents (procedures, working instructions, guides, protocols, etc.) that define what, when, how and with whom, in order to monitor the company's activities;
- A permanent search for new information technologies that can lead to greater efficiency (time, actions and also traceability), in monitoring environmental and social issues (such as geographical information systems or development of new apps);
- Participation in national and international events in order to learn with other projects' experiences, envisaging the continuous improvement of the system.

1. CLIMATE CHANGE

The challenges posed by climate change are in today's agenda of global decision-makers, and there is now greater awareness of the consequences for the countries of Southern Africa. In Mozambique, which belongs to this region, family livelihoods are sustained, for a large percentage of the population, by itinerant agriculture and the use of wood as fuel for cooking. Both these activities involve deforestation, rendering the country significantly vulnerable to the effects of climate change. Although the region represented by the Southern Africa Development Community (SADC) makes only a small contribution to the emissions of greenhouse gases, the region, and Mozambique especially, has felt a strong impact from changes in temperatures and rainfall patterns, as well as extreme climate events, such as the devastating cyclones that hit the country in early 2019.

The establishment of forests in areas that are increasingly degraded from over-exploitation (as a result of sharp population growth and a shortfall in solutions for producing/using energy, which is obtained above all from vegetable biomass) has clear advantages for countering the negative effects of factors such as wind, high temperatures, poor water absorption in soil and impoverishment of the soil as a result of erosion (especially in view of the heavy rainfall patterns of Mozambique).

There is a widespread consensus that climate change tends to have a more acute impact on socio-economically more vulnerable groups, as they lack the tools needed (and available) to take preventive measures and to protect themselves from these effects.

The geographical areas and the communities in which Portucel operates correspond to this description, as stated by the environmental and social impact assessments. This is why the



company's significant social investment, above all in measures to improve food security, is directly related to the aim of fighting climate change. Wages from work in forestry operations and the activities of the Community Development Programme both contribute to increasing and diversifying household income, to improving the means of subsistence and promoting more resilient farming techniques, as well as improving other areas such as health and education, helping to create greater economic and social resilience in the face of these climate events.

It should also be noted that the nature of forestry operations, for which the basic requirements are soil, water and light, is part of the solution for climate issues, insofar as they use renewable natural resources to make products which are in themselves a recyclable alternative for millions of people around the world, as well as contributing to carbon retention in the forests created.

Accordingly, in order to anticipate and mitigate the potential impacts of climate change and extreme weather events, in particular on forestry ecosystems (and others) - which provide communities with a range of resources - Portucel Moçambique's strategy is also based on activities intended to boost climate resilience, including those highlighted below.

MAIN ACTIVITIES TO COMBAT CLIMATE CHANGE:

- Mosaic Model – In the management and diversification of the landscape (interaction between social and natural areas and forestry management systems) (chapter B – Our forestry project);
- Agricultural Programmes based on conservation farming techniques, with the main aim of improving the efficiency of each land unit used, of preserving soil nutrients and avoiding nomadic farming. (chapter D – PCDP);
- Development of methodologies for identifying High Conservation Value Areas (HC-VAs) adapted to the local context (chapter C - Conservation);
- Pilot schemes for empowering Natural Resources Management Committees (NR-MCs), seeking to create community groups that raise awareness among families and monitor the community's natural resources (chapter D - PSDP);
- Development and improvement of technical rules designed to minimise the necessity and intensity of soil mobilisation, as well the use only of plant protection products used and/or recommended by forestry certification schemes;
- Construction of community infrastructures (water crossings, paths and others) that improve mobility, access to markets and income generation.

Carbon stock to date: approximately 1.5 million tons/CO₂.





2. PROTECTION AND CONSERVATION AREAS

Integrated management of natural resources includes a series of practices which are fundamental for sustainable development, balancing economic, social and environmental aims. This form of management is complex and requires constructive dialogue between the different stakeholders, with development targets, programmes and action plans which must be designed on a participative and inclusive basis, with the involvement and consideration of the aims of the different players related to the forestry project, so that a balance can be established between production and conservation assets, and also other social areas.



It is natural resources such as water, soil and biodiversity that constrain and permit access to ecosystem services, which are fundamental to human survival. Both production and conservation forests have a fundamental role to play in relation to these resources. For this reason, careful and rational management of these resources is fundamental and it is from this perspective that Portucel Moçambique has in recent years developed a series of tools, permitting it not only to assess the risks of its activities - thereby preventing potential impacts which are identified in advance - but also to monitor operations and, when necessary, make the necessary improvements.

In a context of over-exploitation of existing natural forestry resources - with the constraints referred to above, which lead to intensive deforestation, combined with patterns of highly intense rainfall, typical of tropical climates - the measures adopted in recent years seek, via increasing the forest cover, to have a positive impact on infiltration and supply of water to water tables, as well as on areas of significant erosion and soil degradation.

Next we describe the main measures taken in the area of protection and conservation.



DEVELOPMENT OF A METHODOLOGY FOR IDENTIFYING AND MANAGING HIGH CONSERVATION VALUE AREAS (HCVAS), ADJUSTED TO THE MOZAMBIKAN CONTEXT

The creation of “High Conservation Value Areas” is regarded as fundamental in the sustainability of forestry operations. Methodologies for identifying these areas depend greatly on biological diversity and quantity, and also on the dependence (and existence) on certain natural resources by the communities. This tool is a key component of the company’s general policy and is a mandatory requirement in the forestry certification process. In order to design this tool, the company consulted specialists in the fields of ecology (flora and vegetation, birdlife and aquatic environments) and of socio-economics.

These areas of exceptional biological, socioeconomic and/or cultural value are identified at the previously to the stages of forestry activities, when the forestry project is being created. The main aim is to safeguard this heritage, making it part of the mosaic and seeking to ensure that, in a partnership with communities, the latter are able to understand their importance and develop procedures for managing these areas.

DEVELOPMENT OF OPERATIONAL RULES WHICH PREVENT IMPACTS ON RESOURCES, SOIL AND WATER, AND ALSO ON BIODIVERSITY

On the basis of documents, good practices and other technical guidelines, rules have been created which make it possible to identify and define buffer zones to protect certain elements in the landscapes in which we operate (water courses, inselbergs, cemeteries, fruit trees and others of sociocultural value of the community in question).

Changes have been made to the procedures for certain activities, with a view to preventing environmental risks, such as erosion.

COMMUNITY DEVELOPMENT PROGRAMME TAKING INTO CONSIDERATION THE (SUSTAINABLE AND INDEPENDENT) DEVELOPMENT OF THE STAKEHOLDER MOST CLOSELY INVOLVED WITH THE PROJECT

The Community Development Programme has been designed to have a significant socio-economic impact on communities. But the impact on the environment is also significant, as one of the initiatives under the Programme is training to achieve increased efficiency per unit of land, what results in a reduction in the land needed for subsistence farming, which in turn reduces the need for deforestation. At the same time, conservation farming techniques add greater protection to the soil, and this protection has direct effects on water infiltration capacity in the soil and on the supply of ground water. In addition, the opportunity of income sources from assets within forestry areas (such as beehives) is an incentive for communities to protect those assets and, indirectly, the forest areas.

PROJECT TEAM

The forestry project team assesses a number of environmental and socio-economic factors in the areas previously to the forestry operations.

The forestry plan is a key document in operational planning and should identify and describe the activities relevant to the success of a forestry plantation, identifying and defining protection measures to safeguard the elements of the local environmental, social and cultural heritage.

The company maps these elements on the basis of a participative model with the communities and methodologies developed by experts.



INVESTMENT IN INNOVATIVE GEOGRAPHICAL AND DATA ANALYSIS TOOLS THAT ARE USEFUL FOR STRATEGIC MANAGEMENT

Because of the very wide area over which we operate and the lack of a land register, this work has to be done by the company on each unit in the area operated. This means that the capacity to obtain a picture of these areas on a macro scale and the opportunity of including further information allows us to take more appropriate strategic decisions. Investment in tools (training, apps, equipment, etc.) has enabled us to make the data base more reliable.

PLANTING OF NATIVE AND FRUIT TREES FOR FUTURE REFORESTATION PROJECTS AND FOR THE COMMUNITY

In addition to producing eucalyptus saplings, the Luá nursery has started to produce native and fruit trees, seeking to support conservation of “blocks” of native forests (mostly riverside forests) still in a good state of conservation, and also to support the Community by distributing trees to produce a range of different fruits.

DEMARCATION OF COMMUNITY AND FAMILY AREAS

Portucel Moçambique has conducted a project in partnership with Terra Firma and Oram, in order to formalise demarcation of the area held by each family/community, allowing them to know in advance the location and portion of land belonging to them, on the basis of an external source of the forestry project. This also serves to reduce potential land disputes. This project has also resulted in demarcation of the area of each community and the creation of community associations, which facilitates inclusion in efforts to disseminate information, resolve disputes and simplifies management activities (related to forestry operations or to Community Development Programme).

As a result, it has been possible to demonstrate that the overlap between demarcated areas and the areas signed over the Portucel is significantly low (0.77%), demonstrating the broad agreement and understanding with communities and families in the areas under management by the Company.

FOREST INVENTORY

The Forest Inventory is the procedure of obtaining quantitative and qualitative information on the forests existing within a given geographical area. This activity, conducted on a regular basis, also enables us to monitor its developments.

The following work has also been carried on: Creation and operationalisation of a Water Protocol, addressing quality and quantity, and also research and development projects (see Chapter A).

SOILS

Overall growth in demand for wood, as a result of the increasing population, has driven deforestation. This fact is even more visible when the main means of subsistence is itinerant farming. We believe that the establishment of planted forest stands is a good alternative for reducing the impact on native forests, when combined with a number of other practices and programmes that take effect at landscape level on an integrated basis. Examples of this are social development activities and a number of operational practices, which seek from the outset to minimise environmental impacts on the soil, water and air. Eucalyptus species are used around the world due to the rapid growth, low nutritional demands and great capacity for recycling nutrients in the soil.

The existence of forests, whether native or planted, provides protection for the soil, minimising areas of soil loss and erosion, caused by the rainfall pattern in Mozambique, which not only affects surface layers of the soil (generally the most important), but also increases



the surface flow to water courses, entailing losses in the quality (and quantity) of water resources.

It is therefore necessary to create, execute and monitor procedures that make it possible to control soil conditions. In addition to all the rules on the establishment and maintenance of forest stands – already drafted and continuously reviewed towards mitigating and/or minimising potential impacts on the soil – Portucel Moçambique has adopted forestry planning rules which stipulate the protection buffer areas around the forest area, uses phytopharmaceuticals permitted by forestry certification schemes (i.e. on the basis of a risk assessment), and has also adopted procedures that facilitate the identification and resolution of areas of erosion. The company has a procedure for monitoring the soils at different stages of the stand's life (from the year of planting through to that of harvesting)

3. WATER MONITORING

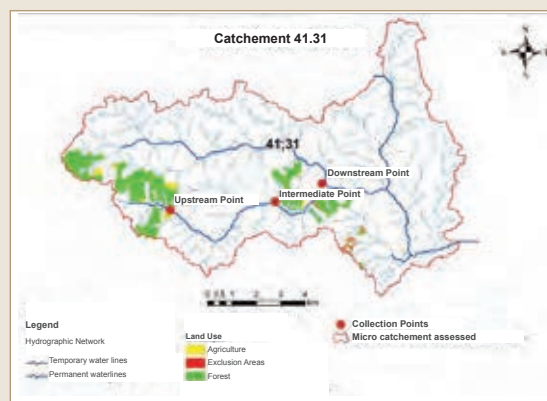
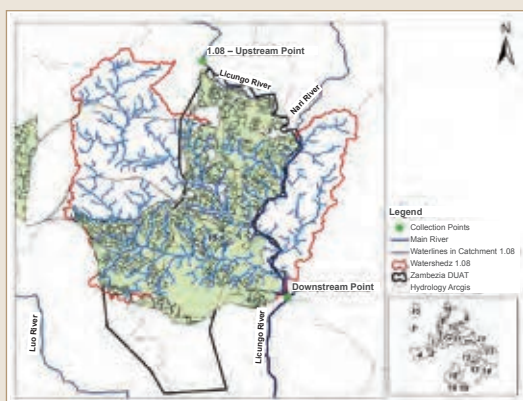
Water quality monitoring in watersheds is an important requirement for assessing the environmental performance of the forestry project, making it possible to verify the impact of the activity on water resources over time. The parameters and indicators selected by Portucel Moçambique are intended to monitor and assess the hydrological balance of watersheds under the influence of forest management operations.

THE WATER PROTOCOL

A water protocol has been created to establish the methodology for quality monitoring of water resources in watersheds subject to forest management, setting criteria for selecting the watersheds, analysis parameters and frequency of monitoring.

To ensure that this protocol is duly implemented, three subdivisions have been defined in the macro-watersheds and their overlap with the company's DUAT areas down to a smaller scale, at the level of micro-watersheds (25 micro watersheds mapped in Zambézia and 47 in Manica).

These micro-watersheds are then collated with the forest areas under management by Portucel Moçambique, leading to the identification of monitoring points in the largest water course in the selected micro watersheds.



The findings from water monitoring have so far revealed no negative alterations in the various parameters assessed, between water samples taken further upstream, when compared with the downstream points of the main water course in the micro watersheds studied.



4. WASTE MANAGEMENT

Waste management at Portucel Moçambique follows the rule most commonly accepted in the mitigation hierarchy illustrated in the diagram and, in addition, there is a preliminary “product selection” process at the top of the chain, consisting of a careful choice of products which, in addition to considering efficiency and cost, also enables us to reduce environmental risks and to maximise the environmental safety of the product itself.

The forestry sector does not present intensive waste generation. It generates essentially plastic waste (from damaged trays and tubes) and packaging of inputs, also in plastic, which has a different use, as the associated risk is also smaller.



This strategy involves the need for continuous improvement in the rules in place, monitoring of their implementation and also selection of equipment and materials that can reduce waste generation, whilst also making beneficial and careful reuse of waste.

Our waste management system, which comprises all the phases illustrated in the diagram, seeks to derive maximum advantage from our waste, which is still regarded as useful by some stakeholders, thereby extending the useful life of the product involved.

Selection/ Procurement:

The purchase of any plant protection product is subject to a series of requirements set out in internal regulations, ensuring that the following requirements are met: (i) the product is duly licensed in Mozambique; (ii) it is a product accepted by the voluntary certification schemes by which Portucel is governed (e.g. Forestry Certification) and (iii) it is accompanied by the certificates and safety data sheets for the product.

Reduce:

Research and development also seeks to improve efficiency in our activities. We are constantly seeking to be more efficient (production vs. resources) and a good example was the alteration to our fertilisation programmes, resulting in an improvement in the quality of our stands, reducing investment, price and also the weight/volume resulting from the type of packaging used.

Reuse:

One of our challenges is to increase the useful life of products because what for us may effectively be waste, may be useful materials for another operator. Products are reused with the necessary precautions, because we have to ensure that their reuse is not prejudicial for the community or for the environment.



INTERNAL REUSE OF TRAYS AND TUBES AT THE LUÁ NURSERIES

The trays and tubes used at Portucel Moçambique's nurseries were designed to allow plants to develop as well as possible, but also so that, after having been used in the field, it can be reused for producing new plants. This design minimises the use of plastic in large quantities.

PLASTIC BAGS PROCESSED INTO OVERALLS OR "WATERPROOFING" FOR HOUSE ROOFS

Thin plastic bags (from 50kg of substrate) are mostly reused to make overalls. These overalls are made by the employees of Portucel Moçambique to help protect against rain and irrigation on our premises. There are also cases in certain communities around the nurseries that use these bags on the roofs of their houses, providing better waterproofing and protection of interiors in rainy weather.

Other products, such as used tyres still safe for use, have been donated to social institutions.

Recycling:

Whenever there is no possibility of reuse, the next option is recycling, so that a new product can be created, thereby extending the useful life of the material.

However, there is still a lack of logistically functional facilities to take in this waste and then recycle it.

RECYCLING PLASTICS

In the last three years, Portucel has established a partnerships with a company in Quelimane (Incala) and another in Beira (3R), making it possible to recycle a series of plastics - non-reusable tubes from plants purchased in Brazil and South Africa. These plastics have been recycled and transformed into buckets, chairs, tables and other products.

408 m³ TO QUELIMANE

9.328 Kg TO BEIRA





Energy Recovery is an option that has not yet been tested due to the lack of viable cost-effective and logistical infrastructures..

Landfill disposal:

When it is impossible to channel the waste produced to the phases described above, the last option is final disposal at an authorised and licensed site.

In the reporting period, approximately 3.2 tons of hazardous waste (packaging for plant protection products, working clothes, others) and around 8 m³ of non-hazardous waste (domestic waste, substrate packaging, trays, etc.) was transported. All waste is segregated into these two categories.

In short, waste is managed at Portucel Moçambique in a responsible manner, whenever possible along the associated value chain described above. In connection with this operation and the consequent monitoring, awareness raising activities are organised in the field of Occupational Health and Safety, seeking to provide information on the rules in force to the stakeholders most closely involved in operational activities, in particular service providers and local communities.

This process is constantly being improved, both internally and externally, seeking to have a positive influence on other actors for the construction of waste management infrastructures in areas where the project is located.



The Nurseries is one of the locations where a number of materials are reused or recycled.





D.

OUR
PEOPLE



MATERIAL TOPIC: ENGAGEMENT WITH PEOPLE

Why this is important...

Human capital is the foundation for the development of all undertakings and one of their most valuable resources. The way the Company promotes the development and the communication within its human capital is increasingly important, in a society facing significant socioeconomic challenges.

Portucel Moçambique has the opportunity to contribute to the development of its workforce through their jobs, training and promotion of occupational health and safety, not just for those in its direct employment, but also for its service providers.

Engagement with the people who work with us is the foundation for the success of the operations in our forestry-based project.



1. MANAGING AND PROMOTING HUMAN CAPITAL

Portucel Moçambique has generated skilled employment in Mozambique, as well as promoting technical-vocational training, professional recognition and knowledge transfer, contributing to the economic and social development of the country and the provinces in which it operates. The Company regards this as part of its mission.

One of the tools that the company uses to pursue this strategy is its Human Resources Policy, which sets guidelines in order for its employees to achieve professional self-fulfilment and economic satisfaction. This policy is in line with the company's general objectives: economic and financial viability, profitability, competitiveness and job creation.

PORTUCEL MOÇAMBIQUE'S HUMAN RESOURCES POLICY

- Offer employees personal and professional development, making the most of their capabilities;
- Adapt and develop the organisation and management in order to achieve the objectives set;
- Work for the social and economic advancement of its employees and to develop positive relations, based on mutual respect, compliance with laws and clear and impartial action;
- Directly promote commitment by individuals and working teams, in order to achieve the Company's objectives, promoting meritocracy;
- Provide job opportunities on a preferential basis to residents in the regions where the Company is based;
- Assign priority to hiring Mozambican employees.



The Company has generated skilled employment in Mozambique, promoting training and technical and professional development.



Employees perform their duties at the Company's different locations, in Manica and Zambézia provinces, and in the city of Maputo.

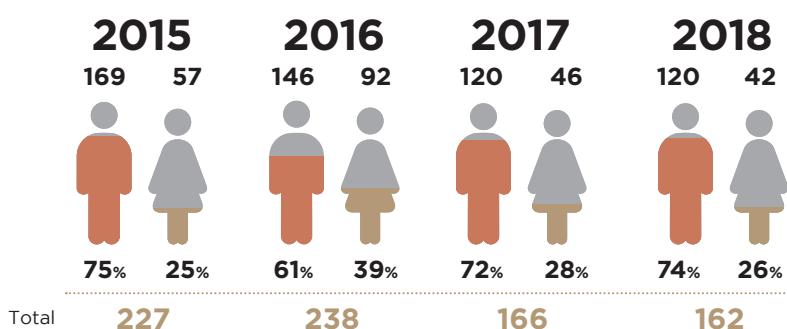
In 2016, the company had the same number of employees, 226, with an increase in the female workforce. This increase was due above all to an increase in the staff numbers at the Luá nurseries, in the district of Ile, Zambézia province. In 2017, as a result of the process described above (as from the first quarter of 2017, plantation operations and access to new areas were suspended), there was a reduction in the number of permanent employees, to match the revised pace of operations and level of activity.

For the same reason, there was also a reduction in the number of days' work contracted by the company.

In 2018, the situation in forestry operations was similar to 2017, reflected in stabilisation of human resources.

GRI 404-3

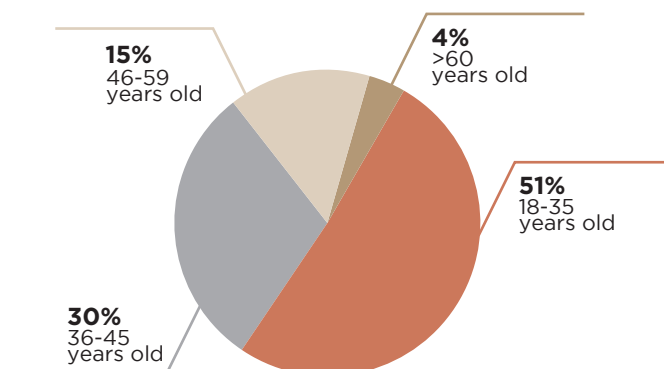
Evolution of workforce, direct employment



Evolution in the workforce numbers by gender changed in 2017 in relation to what had been the growing trend prior to that. This happened again in 2018, and is partially explained by suspension of work on planting new areas, which had an impact on operations at the nurseries where the skilled employees are mostly women.

The breakdown of the workforce by age range shows that more than half the employees are aged under 40 years, which reflects the company's commitment to younger people and to providing them with training and vocational skills.

Workforce by age range





COMMITMENT TO MANUAL LABOUR MEANS JOBS FOR FAMILIES

In order to provide a higher level of employment for local families, with priority for those who make over part of their land to the project, Portucel Moçambique has decided to prioritise manual labour, rather than mechanised labour, whenever possible, even if the cost may be higher.

Jobs which can be done manually are land clearance, planting, irrigation and fertilisation. Other occasional activities that provide jobs include construction and renovation of infrastructures that support forestry operations.

In the early years of its operations, because of the specific characteristics of the work and the need to train and create skills locally, Portucel Moçambique contracted temporary/casual labour directly, while in subsequent years this work started to be contracted from service providers, whilst maintaining the option of ensuring maximum employability for the different communities where the company operates, in both Manica and Zambézia provinces.

Portucel carries on its operations in the provinces of Manica and Zambézia and it is therefore in these areas that a significant proportion of its human resources are concentrated. Manica province was negatively affected in recent years by increasingly adverse conditions, unconnected to the Portucel venture, which has also resulted in a larger number of permanent employees being concentrated in Zambézia, to the detriment of Manica in the reporting period.

JORNAS CONTRACTED BY PORTUCEL MOÇAMBIQUE BETWEEN 2014 AND 2018

3.6 MILLION
JORNAS
425 MILLION
METICAIS
(10.5 MILLION USD)

WHAT IS A JORNA

A day's work (8 hours) is called a jorna. The wage paid for a jorna is calculated on basis of the national minimum wage for agricultural work, divided by the days of the month. In 2016, each jorna was worth 127 meticaís, in 2017 this rose to 140 meticaís, and in 2018 to 160 meticaís. This amount is defined by specific legislation for agricultural sector.



TRAINING

In strict compliance with The Navigator Company's policy, Portucel has invested in developing its human capital, which is fundamental for the success of its business and also for the ability to inspire its teams to adopt attitudes and behaviour in line with the organisation's strategy and to share knowledge across the company.

Training is a crucial area by offering the chance to mitigate and minimise any shortfall in professionals at intermediate level, as well as (still) the lack of vocational education to respond to the company's needs and requirements.

In practical terms, the phase and activities involved in the Portucel Moçambique venture led, in 2016-2018, to heavy investment in training in both operational and cross-cutting areas such as: Human Resources, Forestry operations, Communication, Safety, Information systems, Environment and Certification.



Year	Participants	Total no. of training hours	Average no. of trainees/ training session
2016	379	1284	14
2017	264	1320	19
2018	262	1457	15

2. OCCUPATIONAL HEALTH AND SAFETY

It is a priority for Portucel Moçambique to ensure the safety of its permanent and temporary staff at their place of work, in line with the national rules, the Navigator guidelines, with its corporate responsibility and as part of the preparations for future certification of all its activities.

Between 2016 and 2018, the company undertook a wide range of initiatives designed to make improvements in this area and to create procedures and mechanisms to prevent, train and react to situations of need.



Ensuring the safety at work of its permanent and temporary staff is a priority for Portucel Moçambique.



2016: ACTION TAKEN

- Implementation of the fundamental measures in the Occupational Health and Safety Plan (HSP) for the organisation:
 - Production of documentation to complement the HSP (Safety Procedures, Safety Equipment Files, etc.);
 - Creation of materials for Safety training, across all activities in the organisation;
 - Training activities in various areas, such as Occupational Health and Safety, Defensive Driving, Storage and Handling of Phytopharmaceuticals.
- Acquisition and distribution of Personal Protective Equipment (PPE) to technicians and workers, in line with the risk analysis conducted under the HSP;
- Implementation of the accident investigation procedure, in line with the Navigator standard, producing reports and implementing action plans with measures to mitigate and prevent similar situations/accidents;
- Creation of an Emergency Response Procedure;
- Creation of Control Procedures for external visitors;
- Recruitment of a senior-level officer to support the OHS Department;
- Adaptation of service provider contracts to comply with Portucel Moçambique's OHS requirements.

2017: ACTION TAKEN

- Development of a policy of provision of personal protection equipment (PPE) and respective implementation for casual workers;
- Preparation of a Forestry File for each forestry production field officer, containing, among other things, the safety data sheet for each product used, operational procedures, list of PPE for each activity and a list of emergency contact numbers;
- Distribution of 1,500 PPE kits (rubber boots, vest and hat) to be provided to forestry workers;
- Weekly visits to work fronts and respective safety reports;
- Drafting and implementation of Waste Management Procedure;
- In-depth management of Portucel Moçambique's fleet, redefining the rules on use and respective notifications/control, with consequent accountability for any infringements;
- Start of blood alcohol testing on field visits;
- Implementation of collective signage at Luá Nurseries;
- Audit to analyse risks relating to safety (OHS) and human rights.



2018: ACTION TAKEN

- Increased distribution of PPE kits, to around 4,500 direct seasonal workers and service providers;
- Start of joint Health and Safety meetings with service providers, in order to listen to their questions relating to field work and to look for solutions for the challenges found in the course of operations;
- At the end of the year it was possible to have the findings of the 2017 OHS audit, producing an action plan with improvement measures for implementation;
- Through periodic analysis of vehicle driving, it was possible to ensure a framework of better safety conditions for workers and to reduce the risks of accidents in the course of their work.

Prevention of accidents at work is a priority component of the company's work in the field of Occupational Health and Safety, and we assess its effectiveness by the number and degree of severity of any accidents that might occur.

Records for the past three years point to a reduction in serious accidents, although the number of road incidents remains an area for improvement.

The company has identified road safety as a priority, because of the state of the road network and infrastructures, the large number of pedestrians and the low level of driving experience of some employees.

The main prevention measures include training in defensive driving, in order to prevent further accidents, and also the use of a fleet management system that monitors speed limits and vehicle locations.



Year	Number of accidents at work	Number of road accidents
2016	4	9
2017	7	10
2018	2	5



E.

OUR
COMMUNITIES



MATERIAL TOPIC - ENGAGEMENT WITH COMMUNITIES

Why this is important...

Communities are a fundamental part of the project that Portucel has for Mozambique. Without the Communities, the project will not be able to develop and, to that extent, it was structured to respond to this challenge.

For example, the mosaic model of land management was adopted to frame and accommodate communities' ways of life and their land uses in a way that is sustainable for all parties.

The Portucel Community Development Program (PDSP) also seeks to respond to the needs of the communities, which were duly identified when environmental and social impact assessment were carried out. These needs are monitored and adapted continuously and in a very capillarity manner, through a set of liaison officers, periodic meetings and other communication formats.

In this sense, the company promotes the dialogue, conducts community consultations and has formal and accessible grievance mechanisms.



1.DIALOGUE AND PARTICIPATION

Community dialogue and consultation exercises, which are regularly conducted, are two components of the land management model that Portucel has been implementing in a process that takes a balanced view of the interests of the different stakeholders.

The company has procedures for communication with Communities and for receiving their feedback, including monthly village meetings, a total of 40 liaison officers and 22 community advisory committees in operation. A series of procedures have been established to ensure transparency and equal treatment; examples of this include the Land Access Procedure, the Communication Plan and the Stakeholders Engagement Plan. Dialogue is conducted with government authorities at all levels. The specific work of community liaison workers is to be a bridge between communities and the company at various levels. Liaison workers have been operating since mid-2016. In 2016, the company introduced a new approach to community relations, featuring in particular:

- Use of images (graphic handbook) to communicate about the project;
- Training of liaison workers in communication, work front assessment, as well as reporting and receiving complaints, requests and suggestions from communities;
- Consolidation of community advisory committees.

These efforts are reinforced by a policy of hiring Mozambican staff to work with the communities.

In our relations with government authorities, priority is given to monthly meetings and contacts, as well as presentations of the project at district government sessions. As regarding civil society, the company has adopted the recommendations presented at the provincial meetings organised by the company in Chimoio and Mocuba in 2015, attended by more than 75 participants.

In 2017, the company stepped up its village meetings in order to provide information on the project, and also to resolve concerns presented by families and communities. More than fifty village meetings were held.

Alongside this, the company made family to family contacts, through a network of forty liaison workers, providing information on the project.

District meetings have been held every three months, reporting on progress on the project and focusing on the main challenges and opportunities. Twice-yearly reports are also issued at provincial and district level.





RELATIONSHIP MANAGEMENT SYSTEM

In addition to the various communication channels already in operation, the company has a formal relationship management system, open and available to all, and is currently investing in updating the system and also increasing the team resources for assessing all possible occurrences in an appropriate timeframe.

At the Navigator Group level, a whistleblowing (reporting of irregularities) mechanism has been set up and is available to all stakeholders, including employees and service providers. This system allows people to report or warn of possible irregularities in relation to the policy set out in the company's internal regulations.

The reporting system can be accessed through Portucel Moçambique's website, and reports are received at board level. Persons making reports have to choose the subject (communication of irregularities) and the country, and reports can be made anonymously.

In addition to this Group-wide system, Portucel Moçambique has a Grievance Management System that can be used in both provinces, in order to establish high-quality interactive and permanent communication between the project and communities and families. The system offers ten categories of complaints: land disputes, donations, opportunism, human resources, payment of wages, financial compensation, social benefits/PCDP, community relations, information and others.

From January to December 2016, a total of 235 complaints were recorded, of which 200 have been closed, and the others referred to entities which have ceased to work with the company, and have therefore ceased to be active. Employment related complaints are divided into the following types: financial compensation, donations, information, opportunism, payment of wages, human resources and community relations. A total of 55 complaints were recorded in this area.

Out of the total complaints recorded in Zambézia province, payment of wages was the most frequent topic.

Portucel Moçambique is accordingly assessing the best options of making payments, as many employees do not have access to bank accounts (a large number did not even have identity documents), and the amounts involved in the payments are not easy to withdraw from the closest bank branches.

In Manica province, most of the complaints are centred on social benefits, in connection with the agricultural component of the project. Planting started in 2015, and the largest planted area was in Manica province.

In 2015, 126 complaints were closed, divided into 62 complaints in Zambézia province and 64 in Manica. The company is implementing improvements in the record system of complaints, in order to upgrade controls at the end of the process, recording for all complaints the date on which they are effectively closed.

All the steps taken to resolve complaints have been informed by dialogue with the complainant, and Portucel Moçambique only closes a case when agreement is reached between the parties, which it seeks to achieve as quickly as possible. The actions taken includes direct contact with the complainants in the communities and the involvement of local leaders, the recording of complaints in the grievance management system, coordination between the several company departments, depending on the type of complaint, notification of the response to the complainant and, if this is accepted by the complainant, closing the procedure with the signing of a resolution agreement.

The acceptance rate has been 88% in Zambézia and 97% in Manica.



2.COMMUNITY DEVELOPMENT PROGRAMME

Portucel's capital venture in Mozambique has been built since the outset on the premise that a robust community programme would be implemented, intended to empower local people to get involved in development of the forestry project and share in the economic and social progress directly and indirectly brought about by the company, in the belief that only sharing value would make the business venture sustainable in the medium and long term.

With support from local and international organisations, Portucel Moçambique has designed and is implementing an integrated approach to working with communities in its project areas. Its priorities and actions are based on the recommendations of the Environmental and Social Impact Assessment, and on the experience of the company and its partners in the early phases of implementation. Portucel's Community Development Programme (PCDP) has been implemented over phases since 2015 and covers the entire project period. Its three priority aims are described below.

In order to implement the various PDSP initiatives, Portucel has so far invested approximately five million dollars.

Portucel has made a commitment to the Mozambican government to invest 40 million dollars to improve the living standards of approximately 25,000 families living in the DUAT areas, over the lifetime of the project. Between 2015 and 2018, a total of 6,000 families benefited from the PCDP.

OUR FAMILIES



MANICA PROVINCE

Number of families in DUAT area (est.): 11 401

Food insecurity: 32%

No-income families: 13%

Families with annual income below 57 USD: 34%

Stable production of cassava / corn: 68% / 99%

Families owning livestock: 42%

Adult illiteracy: 32%

Schools with access to drinking water: 55%

Cases of malaria per year per child (0-4 years): 2.7



ZAMBÉZIA PROVINCE

Number of families in DUAT area (est.): 12 754

Food insecurity: 32%

No-income families: 22%

Families with annual income below 57 USD: 62%

Stable production of cassava / corn: 93% / 76%

Families owning livestock: 22%

Adult illiteracy: 52%

Schools with access to drinking water: 23%

Cases of malaria per year per child (0-4 years): 2.2

Source: Baseline information prior to project start-up, obtained from Environmental and Social Impact Assessment conducted in 2013-14.



2.1. FOOD SECURITY

AGRICULTURAL TRAINING FOR 6,000 FAMILIES

- Adoption of more efficient agricultural techniques, such as conservation farming;
- Support for agricultural extension officers;
- 2 800 families have benefited from training in horticulture.



DEMONSTRATION PLOTS

- Introduction of plots to demonstrate agricultural techniques and the main produce varieties, such as beans, corn and other crops;
- Implementation of 190 new Demonstration Plots.





DISTRIBUTION OF SEEDS

- 350 000 kilos of improved seeds distributed – corn, beans, soya and sesame;
- 400 000 cassava stems distributed;
- 50 000 kilos of sweet potato cuttings distributed.



2.2. OPPORTUNITIES FOR ECONOMIC GROWTH AND INCOME GENERATION

LIVESTOCK FARMING

- 400 kids distributed. Each family receives 3 **kids**, in order **to breed and share** the first two offsprings;
- Programme for increasing **protein** and income.





2.3. SUPPORT FOR FAMILY WELFARE

IMPROVED ACCESS TO ENERGY

- **700 families** have received solar lamps, in a solar energy programme for households;
- The solar lamps improve safety, allow **children to study after the sunset and can also be used to charge devices such as mobile phones.**



ACCESS TO DRINKING WATER

- **20 new AFRIDEV boreholes** drilled and another 20 repaired;
- **Some communities given access to drinking water for the first time.** Independent laboratory analyses confirm that the water is fit for human consumption.





IMPROVED BARNs

- Construction of improved barns;
- These barns reduce the losses caused by rodents and insects by up to 30% and make it possible to store cereals in good conditions for longer time, often until the next harvest, thereby improving food security.



The Community Development Programme also envisages a series of activities that cut across the three main areas, focusing in particular on good governance and raising community awareness of a number of significant issues for their daily lives, in health, education and in general in their quality of life, through protection of the environment.

An example of this, with a special focus on the environmental dimension, was the pilot scheme run by Portucel in 2016-2017 to empower Community Natural Resources Management Committees. The main aim of this pilot scheme was to establish governance standards, principles and approaches to natural resources management capability at local level, on the basis of inclusive and participative methodologies, seeking benefits for three parties: Community, investor and Government.



3. MONITORING

Surveys conducted for the second year running by independent researchers for IFC questioned more than 1,200 families in the project implementation area and show that, as a result of permanent and occasional employment, and of the initiatives under the Community Development Programme:

POVERTY HAS FALLEN



The SWIFT poverty rate, a World Bank methodology that measures the percentage of households living below the poverty threshold, fell from 55.1% to 42.1% in Zambézia province, between the 2015 and 2017 agricultural seasons. In Manica province, it fell from 44% to 34.6%.

HOUSEHOLD INCOME INCREASED



Over the same period, the SWIFT estimate of income rose from 34.3% to 42.8% in Zambézia province and from 39.7% to 46% in Manica province.

NUTRITION INDICATORS IMPROVED



The HDDS (Household Dietary Diversity Score), that looks at the number of food groups consumed by household members in the past 24 hours, out of a total of 12 food groups – rose from 3.73 to 4.59 between 2016 and 2017 in Zambézia and from 2.75 to 3.80 in Manica.

FOOD INSECURITY FELL

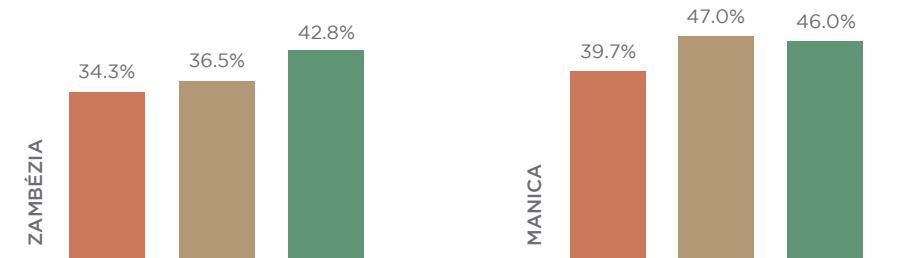


The HFIAS (Household Food Insecurity Access Score), a tool used to assess the degree of difficulty experienced by households in gaining access to food in the 30 days prior to the survey – fell from 16.39 to 8.11, between 2016 and 2017 in Zambézia and from 12.54 to 11.38 in Manica, over the same period.



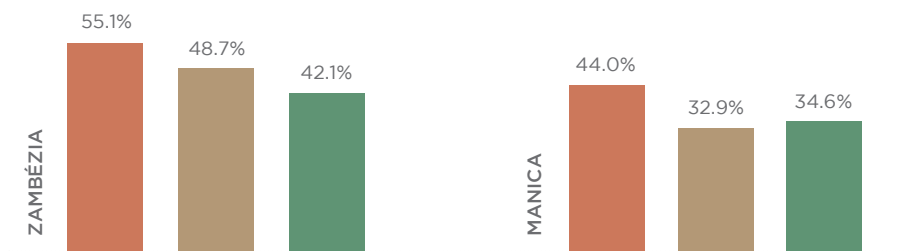
HOUSEHOLD INCOME HAS INCREASED AND POVERTY RATE HAS FALLEN IN ZAMBÉZIA AND MANICA* PROVINCES SINCE 2015

SWIFT Income Estimate



SWIFT poverty rate

Percentage of families living below the poverty line



Developed by the World Bank, SWIFT uses several assertive statistical methods to measure income (or expenditure) from 10 to 15 simple questions, on the basis of the Household Budget Survey 2014-2015

2015
2016
2017

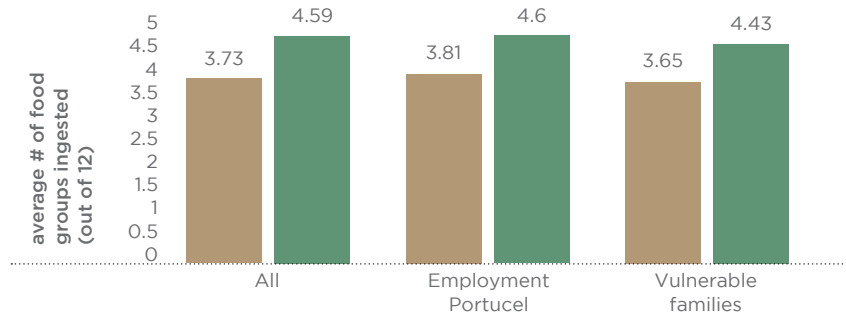


Employment and the Community Development Programme have brought improved conditions to families.

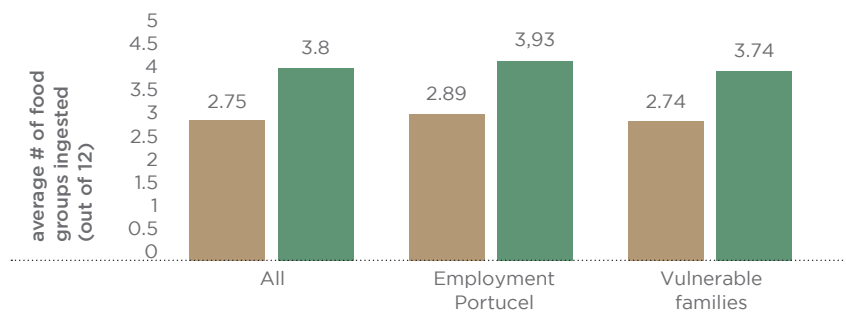


FAMILIES IN ZAMBÉZIA AND MANICA* HAVE IMPROVED FOOD DIVERSITY FROM 2016 TO 2017

HDDS - Zambézia



HDDS - Manica



The HDDS (Household Dietary Diversity Score) looks at the number of food groups consumed by household members in the past 24 hours, out of a total of 12 food groups

2016
2017

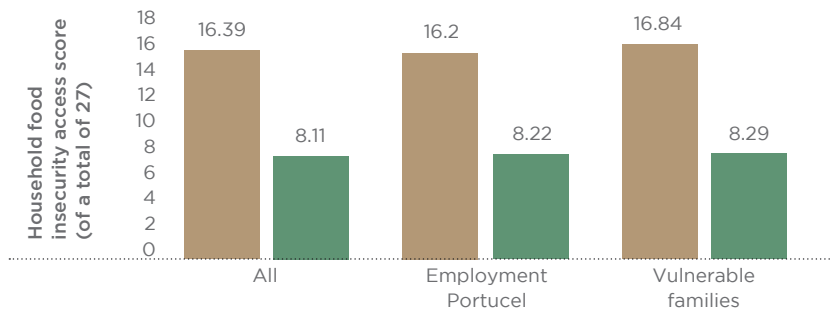


Corn is one of the staple foods.

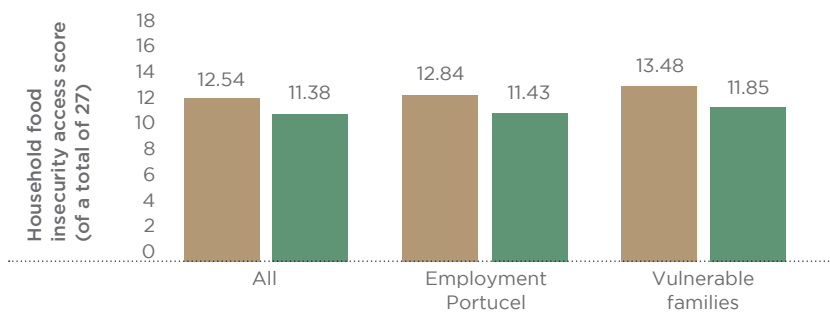


HOUSEHOLDS IN ZAMBÉZIA AND MANICA* RECORD REDUCTION IN HFIAS, INDICATING IMPROVED FOOD SECURITY IN 2017 IN RELATION TO 2016

HFIAS - Zambézia



HFIAS - Manica



The HFIAS (Household Food Insecurity Access Score) is a tool for assessing the degree of difficulty experienced by households in gaining access to food in the 30 days prior to the survey, using a scale of 0-27. Higher figures mean greater food insecurity

2016
2017

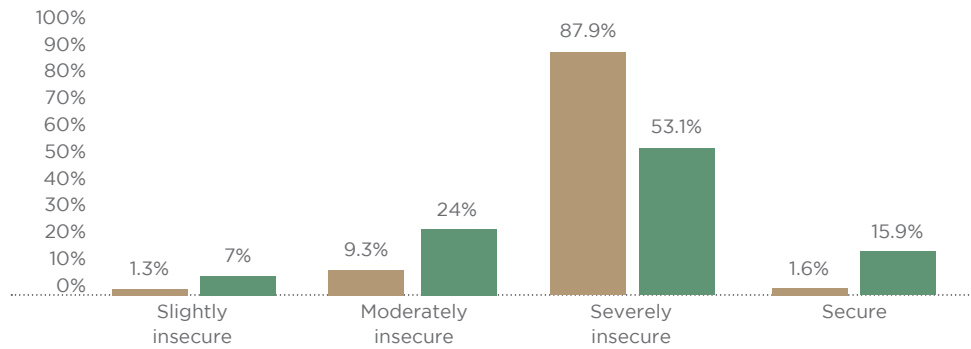


Distribution of kids has contributed to food diversity.

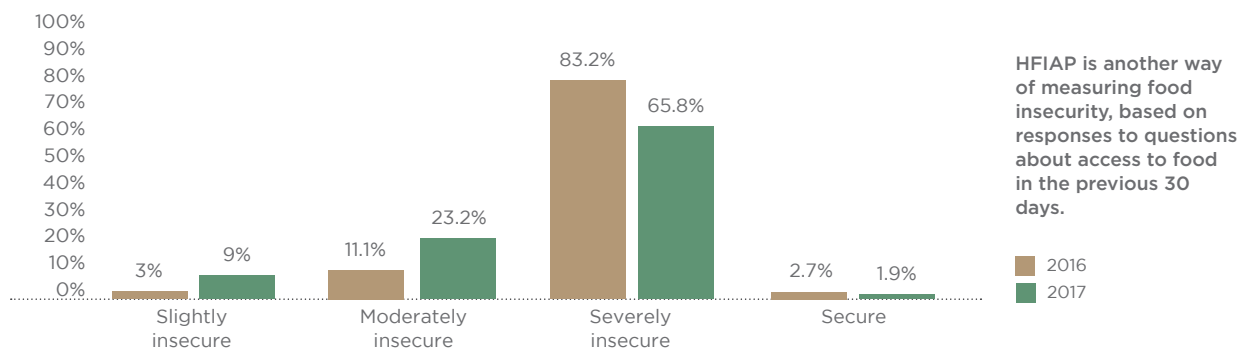


THE NUMBER OF HOUSEHOLDS EXPERIENCING SEVERE FOOD INSECURITY FELL, IN BOTH ZAMBÉZIA AND MANICA, MOVING TO SITUATIONS OF SLIGHT OR MODERATE INSECURITY

HFIAP - Zambézia



HFIAP - Manica



Source**: Survey conducted by International Finance Corporation "Portucel annual livelihood survey, 2017 update" Survey conducted in project areas.
*Manica province was negatively affected in recent years by adverse conditions, unrelated to Portucel project.



Barns make it possible to store cereals better and for longer, often until the next harvest.



F.

OUR
PARTNERS



MATERIAL TOPIC - STAKEHOLDER ENGAGEMENT

Why this is important...

Stakeholders are fundamental throughout the value chain and allow us to implement the project in a more efficient and socially responsible way.

Portucel Moçambique has established partnerships with different stakeholders with a view to greater engagement and sharing of knowledge, and also to ensure better implementation of the entire Community Development Programme.

Partners are stakeholders with whom we share our work and with whom we can grow towards sustainable development. This ranges from more institutional relations with Government or with suppliers, to those with civil society and organisations with which we cooperate. All these are part of our network of partners.



Below we identify our main partners, as well as the ways we have related and engaged through projects and other initiatives over the past three years.

1. GOVERNMENT

Portucel Moçambique has regular contacts with the government authorities responsible for areas related to the company's activities. These contacts occur at different levels in the company, involving technical and administrative sectors, as well as at the level of institutional relations.

This relationship with the Government is part of the process of implementing the project (i.e. to include contributions from all the stakeholders) and is conducted at central government levels, as is the case of relation with the Ministry of Land, the Environment and Rural Development (MITADER) and the Ministry of Agriculture and Food Security (MASA).

The company also conducts regular institutional relations in the provinces of Manica and Zambézia, where the project is being implemented. There is permanent two-way communication with the Governors of the two provinces, with the district administrators, the heads of the Administrative Posts, local community leaders, Chiefs and other administrative and traditional structures representing the communities in the project areas.

Activities in the period 2016-2018 were focused on reporting progress on the project, by sharing information, through meetings and reports, and on gathering contributions. This included:

- Meetings with ministerial bodies and with the Minister for Land, the Environment and Rural Development; Meetings with ministerial bodies and with the Minister for Agriculture and Food Security;
- Corporate presentations at sessions of the Manica and Zambézia provincial governments;
- Meetings with the Governors of Manica and Zambézia provinces;
- Meetings in Zambézia province with the district governors of Ile, Mulevala, Namarrói and Alto-Molócue; Meetings in Manica province with the district governors of Gondola, Manica, Vandúzi and Sussundenga;
- Meetings with all the heads of administrative posts and local community leaders in Manica and Zambézia provinces;
- Participation in events organised by the Government, such as the 1st Technical Silviculture Meeting, held in the city of Chimoio, Manica province on 8 December 2017.
- Other government meetings;
- Sessions of the provincial government;
- Working meeting under the MOU signed with MITADER, involving several ministries and State departments.





2. PARTNERSHIPS

Partnerships have been a prime form of working to develop Portucel's project in Mozambique. The know-how of our partners and the engagement of our stakeholders have made it possible to achieve more ambitious results for all.

The following are examples of partnerships developed by Portucel:

LEGEND Project - demarcation of common land

As part of the LEGEND project for demarcating community land, ORAM (Rural Mutual Assistance Association), in partnership with the company Terra Firma and with collaboration from Portucel Moçambique, has implemented a programme for participative planning of land use and regularisation of land rights within the company's forestry license areas, in the districts of Namarrói and Ile in Zambézia province, at the Socone and Ile Sede Administrative Posts. A pilot project was first carried out successfully in the Malalo community, in Namarrói district, mostly outside Portucel's licensed areas.

The LEGEND project started up in October 2016, and had a duration of 30 months. It has made it possible to set up 20 community land management associations, to establish community land use plans in these 20 communities, and also to demarcate and formalise the land ownership rights of 14 000 families, in a context where the vast majority of rural land is not registered.

Portucel is very interested in taking part in this project, as the absence of formalisation of land tenure is a challenge for its business activities.

The following project findings may be highlighted:

- **66 657 hectares demarcated (in the entire Legend project, which includes areas inside and outside Portucel's DUATs);**
- **42 469 hectares demarcated within Portucel Moçambique's DUATs;**
- **28 316 hectares registered in the name of women;**
- **20 community associations created;**
- **10 369 parcels demarcated;**
- **0.77% is the percentage of overlaps between demarcations effected by Terra Firma with families/communities and demarcations effected by Portucel Moçambique.**

The low figure for overlaps points clearly to the fact that Portucel's land access procedure is recognised and built on consensus with families and communities. This work by Terra Firma/ORAM is important to the company, as it helps to strengthen the processes which have been used and points to the way ahead.

IIAM

Portucel Moçambique has worked in partnership with the Mozambican Agrarian Research Institute (IIAM), under two cooperation agreements signed with the Central Zone Centre and the North-East Zone Centre, for:

- development of cassava clones resistant to the mosaic virus;
- eucalyptus trials, with plants provided and monitored by Portucel Moçambique (in Manica);
- development of agro-forestry pilot schemes (in Manica);
- acquisition of seeds of native species (used at Luá Nurseries).



WCS - Combo project

In late 2017, Portucel signed a memorandum of understanding with the Wildlife Conservation Society, Forest Trends and Biotopo, to join the Combo project (Conservation, impact Mitigation and Biodiversity Offsets in Africa). This project aims at conciliating economic development in Africa with conservation of biodiversity and with ecosystem services.

The aim is to carry out a pilot project, in 5 spots in Mozambique, to identify good practices in assessment of application of the mitigation hierarchy (avoid, minimise, restore, offset) and also to develop guidelines on how to apply offsetting, where applicable, seeking to avoid net losses in biodiversity, or even to obtain net gains.

NGP - New Generations Plantations

NGP (New Generations Plantations) is a platform founded by WWF in 2007 with the vision of contributing positively to the welfare of communities and to advocate for the non-substitution of any natural forests and/or other ecosystem services and/or assets, in association with sustained economic development, so that the growing need for wood in world markets can be met.

This platform is based essentially on study visits, workshops and conferences, and plays a fundamental role in improving forestry management around the world. These are the tools for sharing knowledge on good plantation practices and learning from the examples of others. It functions as a means of exerting positive influence on companies and governments, leading them to adopt environmentally and socially responsible options and decisions.

This was Portucel Moçambique's motivation for starting to follow these events (as The Navigator Company already did), looking to find new ideas and new approaches, as well as to share opportunities, challenges and good examples of successful practice in its project in Mozambique.

In 2018, Portucel Moçambique took part in a field visit in Uganda, on the topic of "Plantations for prosperity for Africa".



NGP - New Generation Plantations is a platform founded by WWF in 2007.



MOZFIP

MozFip is part of Mozambique's Sustainable Development Programme and of the "Floresta em Pé" project, aiming to promote integrated development in rural areas, prioritising action to reduce deforestation, through sustainable use of forestry resources, land organisation and environmental management.

This programme seeks to improve governance and institutional capability, with a view to restoring degraded areas in order to improve incomes and ecosystems through reforestation. It aims to reduce pressure on forests through sustainable use of biomass, and to achieve income diversification and job creation in rural areas, as well as increasing resilience to the impacts of climate change.

Portucel Moçambique has supported FNDS (the government agency in charge of the project) in its successful pursuit of these aims, in relation to the first component of the programme (Integrated Landscape Management), with a special focus on the work of the Forestry Promotion and Agro-forestry Systems Scheme. The existence of a facility like the Luá Nurseries, the company's technical know-how and its expertise in the criteria to be met for certification of forestry management have together allowed it to contribute to the plan, providing inputs (plants), operational support in drawing up forestry projects, and in the technical requirements for smallholders to establish successful forest plantations.



Training session given by a member of Portucel's technical staff for the workers of a beneficiary of the MOZFIP programme.

Participation in:

Tanzania - New Approaches for Smallholder Certification

In 2017, Portucel Moçambique attended a workshop in Dar es Salaam, which had the main aim of developing the right solutions and an environment in which smallholders could achieve forest certification.



3. CIVIL SOCIETY

In keeping with its policy of stakeholder engagement, Portucel Moçambique holds regular meetings and undertakes a series of initiatives with bodies representing civil society, in order to report on the progress in its project and to answer any questions that arise.

Portucel takes a systematic approach to the matters raised by civil society organisations, which includes analysing all issues taken up by these organizations or that the company itself identifies, in its public meetings or through other channels. A meeting is then arranged if necessary with the entity that raised the question, in order to look into the specific matter and to examine the situations identified, applying its procedures and ascertaining whether the questions are legitimate. If corrections need to be made, the company draws up an action plan for this purpose, and the entity raising the issue is informed both of the plan and of the results from monitoring its implementation.

The company has built up its resources for effective communication and to enable it to respond promptly to these requests. The website is one of the channels available for interaction with the company, which is open to all entities or individuals who seek to contact it. Community liaison workers and regular community meetings are both communication vehicles for the civil society to play its important role.

In the course of this work, Portucel seeks to take part in the main forums for debate, which include:

2016:

- Land Forum for participation in Public Consultations for demarcation of 9 Agricultural Associations in Gondola, Manica province;
- Community Land Initiative (iTC), Seminar on Findings and Lessons Learned in Manica province;
- Provincial Meeting on Implementation of Priority Agricultural Crops, Zambézia Provincial Government;
- 1st National Scientific Agro-Forestry Conference, Unizambeze, Mocuba, Zambézia province;
- Seminary “Improving the Investment Climate in Forestry Plantations”, World Bank, Maputo;
- “BCI Agribusiness: Challenges and Prospects for the future”, conference in city of Quelimane, Zambézia province;
- Talk on Climate Change: Threats and Challenges for Mozambique, Community Development Foundation, Maputo;
- Official Launch of 2016/2017 Agricultural Year, Provincial Department of Agriculture and Food Security, Zambézia province;
- Launch of two studies “The Advance of Forestry Plantations on Peasant Land in the Nacala Corridor: the case of Green Resources Moçambique” and “Portucel – the Land access process and the rights of local communities”, Environmental Justice, Maputo.



2017:

- Conference on Land, organised by Civil Society Alliance against Land Grabs (ASCUT), held in Maputo;
- Meeting for presentation of recommendations for the preliminary draft of the Agriculture Law and launch of the Land Profile in Mozambique study, ASCUT, in Maputo;
- Panel discussion on Challenges in achieving Gender Equality in Access to Land and other Natural Resources, iTC (Community Land Initiative), held in Quelimane, Zambézia province;
- Meetings with various organisations, including: Academic Action for Development of Rural Communities (ADECRU), Rural Environment Observatory (OMR) and Environmental Justice (JA);
- Participation in the first Silviculture Technical Meeting, organised by the National Department for Agriculture and Forestry, Ministry of Agriculture and Food Security;
- 15th Annual Private Sector Conference: “Doing Business in Mozambique: Regulatory framework and role of relevant actors”, Confederation of Mozambican Business Associations;
- Zambézia Province Opportunities Fair, District of Maganja da Costa;
- Participation in Presidential visit to Manica province.

2018

- Seminar presenting the MozBio project implemented in the Chimanimani National Reserve, District of Sussundenga, by the National Conservation Areas Authority, Ministry of Land, Environment and Rural Development;
- Seminar for the Relaunch of Major Forestry Projects, Agrarian Development Fund, Ministry of Agriculture and Food Security;
- Participation in Meeting on “The Employment we want - Social Innovation in Mozambique”, organised by FUNDE, Fundação “La Caixa” and Fundación Ayuda em Accion, Maputo;
- Conference presenting the Directory of the Portuguese-Mozambican Chamber of Commerce (PMCC), Maputo;
- Ceremony for presentation of the Strategic Plan of ActionAid Mozambique and celebration of its 30th anniversary, Maputo;
- Licungo Basin Committee Meeting, Central-Northern Regional Water Authority, Western Watersheds Management Unit, Mocuba, Zambézia province;
- Ceremony launching the project of Support for Stronger Communities on the law and sustainable use of land and natural resources, in the localities of Nhambonda and Am-tongas sede, district of Gondola, Manica;
- Participation in Presidential visits to Zambézia province;
- Workshop presenting current status of Chitima-Moatize-Macuse rail-port structures, Zambézia Provincial Government;
- Meeting on Forest Certification and Development of forest management in Mozambique, Verde Azul, Maputo;
- Community Management of Natural Resources, Ministry of Land, Environment and Rural Development, Maputo.



4. ADVISORY BOARD

In line with the suggestion made by several civil society organisations, Portucel Moçambique, with cooperation from IFC, has supported the creation of an Advisory Board, an independent body to monitor and advise the company about the impact of its operations on communities within its forestry project, in the social, cultural and environmental spheres and with regard to human rights. The Advisory Board represents a fresh approach and has an essential role in promoting transparency and brokering cooperation between the Government, civil society organisations, communities and Portucel Moçambique. The body will monitor the company's procedures and practices, drawing up internal reports and organising public events to present its findings.

Set up in 2015, the Advisory Board was officially launched in December 2017. The Advisory Board comprises five civil society entities: ActionAid Mozambique (which holds the chair), Ajuda de Desenvolvimento de Povo para Povo (Development Aid from the People to the People, ADPP), Associação Rural de Ajuda Mútua (Rural Mutual Aid Association, ORAM), Pressão Nacional de Direitos Humanos (National Human Rights Pressure, PNDH), Plataforma da Sociedade Civil Moçambicana para a Protecção Social (Mozambican Civil Society Platform for Social Protection, PSCMPS), a representative appointed by Government (MITADER) and a representative of Portucel Moçambique.

Over the course of 2017, the Advisory Board held five meetings that looked at the status of the investment, progress of the project, and at the main challenges ahead.

Also in 2017, the Advisory Board visited the project operations in Zambézia and Manica, and had meetings in each provincial capital with local civil society organisations; a report of these visits was drawn up with the following conclusions:

The company has shown itself to be open to searching for solutions to the concerns presented by the communities;

The company has made significant social investments, such as improvements to access roads, construction of bridges, provision of agricultural extension services, distribution of improved seeds and drilling of boreholes for potable water;

The company's operations involve no violation of human rights, at a physical level (torture or forced labour), child labour or sexual harassment.

The Advisory Board also made the following recommendations:

- A code of conduct should be drafted to guide the actions of the Advisory Board members;
- The company should scale up communication activities in communities and also with civil society, at provincial level;
- The company should work to prevent disputes related to its project;
- The company should publicly share its achievements in the social sphere;
- The company should encourage income generation activities (such as production of honey, chickens, etc.) throughout the year.



5.SUPPLIERS AND SERVICE PROVIDERS

Portucel has been developing a relationship approach to its suppliers and service providers, in order for its actions to be aligned with the company's principles and values that it shares with its parent company, The Navigator Company. The standards to which Portucel subscribes are those in force in the group, relating to environmental and social issues, to efficiency in transport, as well as respect for human rights, non-discrimination and compliance with employment laws in force in Mozambique. Monitoring and assessment of the performance of suppliers and service providers, in view of the operational and reputational risks, as well as training and empowerment for these groups, are among the objectives toward which the company is currently working.











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