

2014 REPORT

SUSTAINABLE AFFORESTATION

UPM Forestal Oriental

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UPM Forestal Oriental

UPM Forestal Oriental was set up in 1990 under the impetus of the Forestry Promotion Law developed at the time in Uruguay. This law attempted to integrate afforestation into other agricultural activities, enhance productive areas, develop a new industrial sector and generate employment in rural areas.

Over nearly 25 years of activity, the company has achieved these objectives. Today it has planted more than 170,000 hectares and provided almost 3400 jobs throughout the productive and logistics chain, facilitating the construction of a pulp mill located in Río Negro which has been in operation for the last 7 years.

Since 2009, Forestal Oriental has belonged to the UPM Group, one of the largest companies in the sector at a global level. Its activities mainly cover the coast, the north and some central-southern areas of the country, closely interacting with nearly a hundred communities that coexist alongside the company's forested areas and Associated Producers linked to the Fomento Programme.

The company is part of non-governmental associations such as the Forest Stewardship Council[™], the Society of Forestry Producers (SPF), the Chamber of Commerce of National Products, the Union of Exporters of Uruguay and CREA [Regional Consortiums for Agricultural Experimentation], among others. It is also associated or has entered into agreements with academic institutions such as the Institute of Forestry Research and Studies (IPEF) of Brazil, the University of the Republic (UDELAR - Agronomy Faculty) and the National Agricultural Research Institute (INIA), among others.



MISSION

To ensure a sustainable supply of timber for pulp through a good relationship with the client and at a competitive cost.

COMMITMENT

UPM Forestal Oriental respects people, the community and their surrounding environment, building long-term, mutually beneficial relationships with these parties. The main elements of its philosophy allow UPM Forestal Oriental to steer its activities in a balanced and coherent way. Social development forms part of all of its actions, seeking to contribute to the growth and care for the communities affected.

VALUES

At UPM Forestal Oriental, the values that guide our behaviour determine our attitude to our work and the people with whom we interact on a daily basis.

Trust and be reliable:

Take responsibility and be accountable, keep our promises, respect others, embrace diversity, participate and involve others, trusting in their ability, promote transparency, honest communication and dialogue.

Joint achievements:

Actively supporting and developing team spirit, creating joint goals and committing ourselves to these goals, taking responsibility for the results, sharing our ideas through the organisation and learning from others, supporting and challenging each other.

Innovate with courage:

Accept risks and learn from mistakes, have a global vision, be open and learn new things, challenge the state of things and take the initiative, be proud of our work

Adapt to changes

The open air activities carried out such as afforestation are constantly affected by the weather and the challenge of any operation is to remain independent from this in order to be efficient.

This year has seen a very particular rainfall pattern, not only due to the abundance of rainfall (34.3% above the historical average for the last 30 years), but also due to the higher frequency of rainfall events reducing the operating time to almost 3 days per week.

However, the measures taken based on what we learned in 2010 from an abundant rainfall pattern, coupled with better strategic and operational planning, allowed us to carry out our logistics and logging activity very closely in line with our targets.

I believe that this aspect of the events from the past year shows that UPM Forestal Oriental is a company that is always learning and that has the right attitude to implement actions quickly. This is a feature that ends up being the difference in results between companies.

We have set out a commitment to the safety of all employees working throughout the forestry chain and we managed to reduce the accident frequency by 42% compared with 2013. We have shown that a culture of productivity and competitiveness can be created, at the same time maintaining a culture of responsibility toward safety, the environment and the community.

We have been able to better align the interests of all parties in the harvest itself, creating a better space for the operators to reflect their skills and strengths. We again introduced the third harvest shift. Challenged by the weather, the transportation process reviewed the most important variables affecting productivity, generating greater awareness in order to be able to cover more ground and make better use of the capacity to bring in wood from more sensitive circuits. The implementation of the assets process allowed us to focus more on the field and we were able to make significant progress together with the Complementary Products process in the grazing of all non-forest areas, generating revenue and at the same time reducing the risk of fire.

Due to climatic factors, in addition to a major health issue at the beginning of the year, the goal of planting 17,000 ha could not be achieved, falling 1000 ha short of the target. However, these results do not reflect the significant progress made in weed control, which would have been a huge problem in a year like this.

Finally, we have changed the vision of routine tasks, looking to automate them by using advanced technology. Examples include the mass use of smart phones with a growing number of applications that make our administrative tasks more efficient, as well as the use of LIDAR technology to create large-scale GPS tractor inventories in order to carry out more thorough remote monitoring.

It has been a year of intense transformations, with the company seeking to adapt to another context of challenges of competitiveness, and in the process we have realised that our company has a great capacity to adapt to these changes.

don Javier Solari

VP Plantations Operations



UPM Forestal Oriental is a company that is always learning and that has the right attitude to implement actions quickly







WHO IS UPM AT A GLOBAL LEVEL?

As a leading company of the new forest industry, UPM is leading the integration of the bio and forest industries towards a new, sustainable and innovation-driven future. Our products are made from renewable raw materials and are recyclable.

The structure of UPM consists of the following business areas: UPM Biorefining, UPM Energy, UPM Raflatac, UPM Paper Asia, UPM Paper Europe and North America and UPM Plywood.

The company is present in 45 countries, has production plants in 13 countries and employs approximately 20,000 people around the world. UPM's annual sales exceed 10,000 million Euros and its shares are traded on the Helsinki Stock Exchange (NASDAQ OMX).

INTEGRATED MANAGEMENT SYSTEM

UPM Forestal Oriental has implemented an Integrated Management System (IMS) for the development and implementation of the plans, methods, actions and reviews of all of its operations, ensuring compliance at all times with standards relating to quality, occupational health, safety and the environment.

Through this system, the company acquires an organisation through interrelated processes focussing on the customer, both internal and external. Forestry operations are governed by three fundamental processes: Management, timber availability and timber supply.

The IMS also actively integrates all staff and creates a decisionmaking model based on records and measurements and on the integration of suppliers; in such a way as to create value and implement a system of continuous improvement.

The IMS includes and consolidates the plans, methods, actions and revisions of the following systems through a unique working methodology:

Quality Management Systems (ISO 9001:2008) Environmental Management Systems (ISO 14001:2004) Occupational Health and Safety Management Systems (OHSAS 18001:2007) Forest Management (FSC® and PEFCTM) Chain of custody (FSC® and PEFCTM)

Our assets

Our customers' operations, especially the pulp plant in Fray Bentos, forces us to plan a short-, medium- and long-term supply strategy. This involves professional management of the resources and assets according to the product's characteristics.

Forest assets form the basis for the sustainability and competitiveness of the business, based on which the supply strategy for the plant and the export of logs and chips to their external customers are planned.

Caring for resources is fundamental to the sustainability of the business.

This is why the company devotes extensive efforts to this end and defines the most appropriate use of the land, endeavouring to conserve biodiversity, as well as protecting soils and water and preserving natural forests. Around eleven thousand seven hundred hectares are covered by natural forests and six thousand three hundred hectares are delimited and voluntarily declared as protected areas.

These areas, which include natural forests, palm groves, sand dunes, wetlands and other environments, are managed and monitored depending on the management plans developed in conjunction with specialists, and form the basis for studies of flora and fauna and a visiting site for educational centres.

65% of the area is set aside for planting 35% of the area is managed for livestock activities, conservation of natural resources and infrastructure **234,051** is the total number of hectares that make up the assets of UPM Forestal Oriental.

This area is located mainly in the west and north-east of

the country



AREA IN TERMS OF POSSESSION

Type of possession	Total area (ha)	Plantable area (ha)
UPM FO	234,051	143,445
Leases*	56,891	45,099
TOTAL	290,942	188,544

* Incluye arrendamientos totales y área plantable de arrendamientos más 5%

FORESTED AREA BY GENRE

	Eucalyptus	Pinus	Salicáceas	Otros	TOTAL
UPM FO	129,912	1,962	1,112	390	133,376
Leases*	35,489	17			35,506
TOTAL	165,401	1,979	1,112		168,882

DID YOU KNOW?

In 2005 UPM Forestal Oriental crea ted the "Fomento Programme", which added the management of forests on third party land to the management of its own forest plantations.

Natural and forestry resources are fundamental to the success of our activity. Therefore, in 1991, 1996 and 2007 multidisciplinary Environmental Impact Studies were carried out, the results of which have allowed us to continue improving the responsible management of these resources, seeking to balance environmental, economic, social, technical and operational factors.

Commitment to the responsible management of resources

Prior to the implementation of any planting or land-use change process, the company's specialists thoroughly planned each particular case and assess the potential impact of the company intervention within a framework of respect for and preservation of environmental conditions.

At UPM Forestal Oriental, 35% of the area is not covered by forest plantations due to environmental, technical or legal considerations or because the areas are occupied by roads.

The biophysical environment, social and cultural resources and their direct environment are reviewed. This process allows us to identify productive areas, areas that are important for conservation and/or areas of potential management conflict, as well as those areas that are suitable for other uses or productions such as livestock or fodder production. This information is processed and used to correctly manage the area, to develop biodiversity conservation programmes or programmes of actions within the community.



DISTRIBUTION OF AREAS BY USAGE

	Total Area	Plantable area	Natural fields and other grazing areas	Infrastructure	Native Forests	Other natural ecosystems
Area (ha)	290,942	188,544	65,451	22,233	11,706	3,008
%		64,8%	22,5%	7,6%	4,1%	1,0%

Note: This includes total and partial leases. Land use would be 61% if we exclude partial leases.

PLANTABLE AREAS

These are defined on the basis of their aptitude for growth of the crop and on the land use criteria determined by legal regulations.

UNPLANTABLE AREAS

These are areas that are not suitable for afforestation. They are characterised and categorised based on the different types of environment, including natural drainage systems, low-lying areas or other areas: riparian areas, ravines, escarpments, buffer zones, rocky ledges and flattopped hills, as well as any area occupied by natural forests. Each type of environment is included in the geographic information system. They are also categorised according to their potential use, which includes: livestock, cultivation of fodder species, strict conservation and biological corridors, among others. In all cases where a productive use is pursued, requirements are maintained for the responsible use of resources.

PLANTABLE AREAS SET ASIDE FOR CONSERVATION

These are potentially plantable areas that are not forested due to the existence of native ecosystems of relevance to the conservation of species or environments such as natural fields of high value, palm groves, sand dunes, scrubland, areas occupied by populations of endemic species (for example the Río Negro tuco-tuco - Ctenomys rionegrensis), among others. They also include quarries, sites of archaeological or historical and cultural value, visual basins, etc.

Our environment

On average, 65% of the land is cultivated, less than 10% is affected by infrastructure (roads, fire areas, etc.) and the remaining 25% is maintained in similar conditions to the previous usage. The productive blocks are not necessarily all together, but are distributed depending on soil types.



BIOLOGICAL DATA

Classification of types of environment

Natural environments are the result of the interaction between the climate, geology, soils, flora and vegetation of a region or area and therefore vary depending on these characteristics

To classify the types of environment, UPM Forestal Oriental uses a methodology based on the use of satellite images, information about soil groups and a digital terrain model, generating basic analysis units that are grouped together and classified according to their similarity.

On the one hand, this methodology allows us to classify types of environment according to their degree of threat at a national level, facilitating the management and conservation of those considered most vulnerable and, on the other hand, it allows us to analyse the internal and external connectivity between environments with a greater degree of naturalness, as well as reconsidering the location and size of the company's reserve areas.

Biodiversity

UPM Forestal Oriental promotes much more than the planting of eucalyptus. Through our work we seek to create spaces so that pre-existing natural or semi-natural environments can maintain their characteristics and become appropriate areas for supporting various environmental uses, including biodiversity.

A forest plot is in reality an area where productive areas with a high intensity of use coexist alongside interconnected natural areas. The latter are often productive but also maintain their traditional use of livestock farming.

Biodiversity, understood as the richness of species and the presence of different types of environment, is analysed and evaluated in accordance with the scale and distribution of the company's plots.

The analysis ranges from the general (large bio-regions in the country) to the specific (the plot) and identifies those plots and sites that are most relevant from the point of view of the presence of species and, in particular, rare, threatened or endangered species.

These sites are where conservation and monitoring efforts are focussed.

After nearly 25 years of different studies and surveys, we can see that for both plants and native tetrapod fauna, around 50% of the species are recorded on the company's plots.

These species are mainly present in the company's unplanted areas (be they reserves or not) and to a lesser extent also within the planted areas. This means that the plots operate as a large network of natural or semi-natural areas where native species find the right conditions for their development, perfectly complementing the official conservation areas. UPM Forestal Oriental's assets include 997 km of natural water courses, in which the following have been identified: 104 streams

123 ravines 4 rivers

DISTRIBUTION OF TYPES OF ENVIRONMENT IN UNPLANTED AREAS AND BODIES OF WATER

Type of environment	%
Shrubs	0,3
Marshlands	2,7
Park Forest	6,5
Forests	5,2
Lentic bodies of water	0,4
Lotic bodies of water	0,4
Palm groves	1,1
Rolling Meadows	14,3
Flat Meadows	69,1
Highland Meadows	O, 1

Geology:

UPM Forestal Oriental's forest plantations are located within a wide range of geological formations, although mainly on those from which soils with good forestry aptitude may be derived. The predominant geological formations are the Guichón, Mercedes, Asencio, Fray Bentos, Aluvium and Salto along the coast, and San Gregorio, Melo, Yaguarí, Cuchilla del Ombú, Tacuarembó, Rivera, San Gregorio, Tres Islas and Crystalline Basement.

Hydrology:

Water courses intended for the preservation of fish in general and other water flora and fauna, or the irrigation of crops whose product is not consumed in natural form or, in cases where it is consumed in natural form but the irrigation system does not water the product.

Soil:

torest aptitude and priority (according to Law 15,939 and its regulatory decrees) with the predominant use of the following soil groups and types: 9.1 (Argisols), 9.3 (Argisols and planosols), 09.3 (Argisols and brunisols soils) and 7.32 (Luvisols).

GEO CLIMATIC DATA

Average daily temperature: Between 12°C and 25°C

> Average annual rainfall: 1.300 mm

DID YOU KNOW?

With regard to flora, around 1200 species have been detected. This is equivalent to saying that about half of the species that make up all of the country' flora are present in the company's fields, representing the most diverse biological types (trees, shrubs, grasses, epiphytes, etc.).



Flora and vegetation

The main types of existing natural vegetation are: different types of natural grassland, sand dune vegetation, alkaline soils, general riparian forests, Chaco park forest, flat-topped hill forests; palm groves of Butia yatay and Trithrinax campestris, scrubland, wetlands and stubble.

All of these vegetation types are considered special either because they represent types of vegetation that are in decline or endangered or because they are home to rare species or species with restricted distribution in Uruguay.

These include some forests in Chaco park, Yatay palm trees, ravine forests and flat-topped hills and certain types of natural grassland.

The aim is for the majority of the types of threatened vegetation, as well as the types of environment, to be represented in the company's reserve areas.

The most significant findings include the first recorded sighting in Uruguay of the species Chloraea bella (Orchidaceae), Conyza lorentzii (Asteraceae), Leptochloa chloridiformis (Poaceae), Ipheion tweedianum (Alliaceae), or species new to science, as in the case of Cereus sp. (Cactaceae). Other findings confirmed the presence of rare, endangered and endemic species, as well as a large number of more common species.

The presence of these rare species is verified and monitored periodically in the main areas of conservation. The most relevant results are presented in the chapter on Environmental Monitoring.

Fauna

Field surveys have been carried out to determine the composition of the wildlife present on different company plots. Tetrapods basically comprise four zoological classes: Amphibians, reptiles, birds and mammals. The table shows the number of species according to their class found at a national level and how these are distributed in the regions where UPM Forestal Oriental carries out its activities.

As you can see, more than half of all species recorded for the country, excluding marine species, have been registered on UPM Forestal Oriental plots and, in some cases, the distribution of previously known species has expanded.



TETRAPOD SPECIES DETECTED

Amphibians 46 26/25 22/21 Reptiles 43/43 43/26 61* Birds 258/258 248/219 367* 70* Mammals 49/45 44/39 (9 introduced) 544* Total 375/371 357/305

Proportion on UPM Forestal Oriental plots compared with the potential presence for each region (Coast and Tacuarembó) * Excluding marine species More than 65,000 hectares remain as areas of natural meadows and fields, hosting species of flora and fauna typical of this plant formation.

Our actions -Responsible Forest Management

The main objective of UPM Forestal Oriental's forestry management is the production of wood for pulp, in particular meeting the demand of the Fray Bentos pulp mill, one of its main customers.

MAIN SPECIES FOR THE PULP MILL

In this context, those species that have demonstrated a greater adaptability to the site through the testing network of the company's Genetic Improvement Programme are cultivated. Within these, Eucalyptus grandis, E. dunnii and E. benthamii are species that can be grown in pure form. Other species were also identified that are used in the hybridisation programme through controlled crossing.

The use of hybridisation between species allows for the combination of the best features of the parent species (for example growth, wood density, resistance to cold, etc.) in the resulting hybrids

OTHER SPECIES

In addition to the forest plantations of Eucalyptus, there are areas planted with other genera, such as Pinus, Salix and Populus.

In most cases, these are forest plantations that were already part of the assets purchased from other companies or owners.



Although they are marginal species in terms of the area they occupy, once they are incorporated they are included in the company's operational plans. Those cases where age and low volume per hectare determine a low commercial value are reconstituted and forested with species of Eucalyptus in order to include these areas in the company's production goal. The areas of pine trees with a promising commercial volume in the shortterm are kept standing to be harvested and sold to other local or regional industries (sawmills, biomass power generation plants, drying ovens, etc.); or as part of a business exchange of raw materials with other forestry enterprises.

Occasionally and in very specific cases, forest management is carried out in order to obtain wood for sawlogs and/ or peelings. In these cases, some stands in specially selected facilities will have a final age of 20 years, applying intermediate forestry interventions such as pruning and thinning. ALVARO FITIPALDO Director of Finance and Forest Control



At UPM, we seek to innovate in search of results that enable us to be more productive. For this reason, continuous renovation is crucial to achieving the best results in both the short and the long-term in such a way as to remain competitive suppliers for the pulp mill



2014 in Forestry Code

TECHNICAL DEVELOPMENT AND PLANNING

The company has been implementing its Genetic Improvement Programme for almost 25 years. The primary objective is to select and bring to the forest plantations new genetic material that provide a greater timber yield and fibre quality combined with better adaptation to the company's forest sites.

The focus of its continuous improvement strategy consists of selecting superior genotypes, performing controlled crossings and propagating these in vegetative form, mainly those of the species Eucalyptus grandis, Eucalyptus dunnii and their hybrids. Through this process we seek to access the most productive materials, better adapted to the soil and climate, with the characteristics required by the pulp and paper industry.

The San Francisco Nursery located in Paysandú and the Santana Nursery in Guichón have the most advanced Eucalyptus plant production technology in the country. The production capacity of both nurseries is 35 million seedlings per year for our forest plantations and those of Associated Producers linked to the Fomento Programme.



PRODUCTION

Forestry

In 2014, there were a total of 19,379 ha of forest plantations, of which 3513 were assigned to regrowth management. The complex context, since it was an historic year in terms of the rainfall quantity and the distribution thereof, left very few working days.

Taking this into account, 2014 has been a positive year

In this context, the 2.2% reduction in TUP*, the percentage of time between removing the wood and planting again, has been significant.

*Temporary Unplanted



MIGUEL VERA Production Manager

Integrated strategic planning and learning from the experience gained in previous years has allowed us to overcome the harsh weather conditions and be able to successfully supply the Fray Bentos plant.

Micropropagation Laboratory (ML)

The ML has two main objectives. Firstly, it seeks to reduce the time required to obtain mother plants from new clones and thus begin their operational production in the shortest possible time.

Secondly, it aims to physiologically rejuvenate the mother plants to increase the rooting percentage of the cuttings that they produce.

By starting the pre-multiplication process for the most promising clones in the lab early, we have reached a point where the mother plants of all new clones incorporated operationally come from the same source.

In 2014, more than 27 million plants of different species of Eucalyptus were shipped, primarily from the species E. grandis and E. dunnii.

San Francisco Nursery

Production area 50,575 m2 Personnel involved: 135 people Quantity of plants shipped: 19.1 million seedlings, (E. grandis, E. dunnii).

Santana Nursery

Production area: 55,050 M2 Personnel involved: 120 people. Quantity of plants shipped: 7.8 million seedlings of E. dunnii.



RICARDO METHOL Technical Development and Planning Manager

The achievements made through our Genetic Improvement Programme have been significant. This has been key to the increase in terms of cellulose per hectare, which has almost doubled since we started our programme almost 25 years ago.

Intensive work in the SMS Strategy (Synchronise - Mechanise - Simplify):

UPM Forestal Oriental is constantly searching for ways to simplify the forestry process and make it more efficient. Through this work, we have identified new combinations of products that allow us to control weeds through fewer interventions, using fewer chemicals per hectare and also requiring fewer resources.

At the same time, new technologies have been identified and developed that will enable us to get better results both in terms of soil preparation and as regards planting, especially in years with excess rain.

Transmission of knowledge:

In 2014 we continued the training of Service Provider Companies (SP) with regard to courses on Weed Control Strategy and the Use of Agrochemicals. We made 17 trips to the field with staff from the SPs and supervisors and rangers from UPM Forestal Oriental. These training sessions facilitate a very good implementation of the weed control strategy.

HARVESTING

Harvest Extraction Rate

The annual harvest and extraction rates are determined based on the demand for supply (Fray Bentos Plant, exports, etc.) and production evolution in our own forests. Based on this information, the Planning department determines the annual extraction rates in our fields, defined as the proportion of the area harvested out of the total planted area.



DID YOU KNOW?

- At UPM Forestal Oriental 100% of the harvest is carried out through mechanised processes.
- As well as making the activity more efficient, this allows us to reduce the risk of accidents in the workplace.
- In 2014, the harvest extraction rate was 9.11%.



NICOLÁS ELENA Forest Controller The use of new technologies applied to the operations and information management allow for instant access to the information provided by service providers and thus increase analysis potential. In 2014, we harvested **3,636,878 m3** of timber We worked on 12 mechanised harvest fronts, of which 9 were hired and 3 were our own. CARLOS TRAMBAUER Strategic Development Manager



AVERAGE YIELDS

The search for continuous improvements in processes through the introduction of followup and operation control mechanisms allows us to be more responsive and flexible when making changes.

TOTAL HARVEST (m³)

Total harvest	FO+UW	Third parties (flight)	TOTAL
E. grandis	1.798.564	343.244	2.141.808
E. dunnii	847.532	44.234	891.766
E. maidenii	493.784	11.288	505.072
E. globulus	7.991	90.241	98.233
TOTAL	3.147.871	489.007	3.636.878

	Coastal Region	North Region	Central- South
E.grandis	24 - 32	26 - 34	22 - 28
E.dunnii	20 - 28	24 - 30	22 - 26
E.maidenii	15 - 20	16 - 23	16 - 20
E.globulus	7 - 12	7 - 11	12 - 18
E.viminalis	15 - 20	15 - 20	18 - 24
Pinus sp.	12 - 16	15 - 20	12 - 16

(m³/ha/year) by species

AVERAGE YIELD EVOLUTION E. GRANDIS

(commercial volume without bark)





DID YOU KNOW?

In 2014, UPM Forestal Oriental invested more than USD 3 million in rural roads and national routes.

WORK	INVESTMENT
Agreement with the Río Negro Administration Office for a channel to divert heavy traffic and thus preserve the bridge of Paso de la Cruz.	USD 25,000
Maintenance of 178 km of rural roads and national routes to facilitate the transportation of timber from Tacuarembó central-south.	USD 1,200,000
Signing of an agreement the between UTE Durazno Administration Office and UPM for the recovery of the Tala road.	USD 110,000
Stabilisation using Portland cement of 2 km of rural roads in Araujo, Paysandú.	USD 75,000
Construction of a 100 m wooden bridge across the Lechiguana River in Arévalo, which will be part of a rural road.	USD 220,000
150,000 solid cubic metres of timber were guarantees in main roads stabilised with cement.	USD 351,000
Construction of a new stockyard in Cuchilla de Peralta.	USD 60,000
Signing of an agreement between the Tacuarembó Administration Office, UPM and Weyerhauser for the construction of a road leaving the Zulma forest, avoiding passing through the Ipora resort.	USD 500,000
Installation of a bridge in conjunction with the National Army to resolve transit by rural roads when a bridge is out of action due to heavy rainfall.	USD 25,000

ROADS

In 2014, 251 km of roads were built on our fields and those of Associated Producers linked to the Fomento Programme.

This represented an investment of USD 6.4 million.

Furthermore, this year maintenance and improvement work was carried out on 404 km of rural roads, in conjunction with municipal governments.

ROAD SOIL MATERIAL ANALYSIS LABORATORY

In order to generate information that enables objective decision-making in evaluations relating to roads and road quality, the soil analysis laboratory in 2014 managed to:

-Determine the quality of the quarry materials used in the company's works. For this, we analysed 193 samples.

-Follow up and support the construction of works by determining the percentage of compaction as the construction of roads progresses. We analysed 21 works.

-Inspect the quality of the final dimensions of the works (width, thickness, roundabouts, sewers, bypasses). We were therefore able to generate information to feed into the contractors' evaluations. This began to be implemented from August 2014. 23 works were inspected

-Deployment of geocells in field. These are semirigid three-dimensional structures, built out of high-density polyethylene. They are robust, flexible and durable. By confining the material inside, it stabilises, thus ensuring the correct distribution of loads on weak soil. **30% reduction**

in APMK (accidents per million kilometres) compared with 2013. A rate of **26% below** the 2014 target APMK was achieved



TRANSPORT

- 788 people attended courses on handling HGVs (heavy goods vehicles)
- 1645 attendees at safety talks
- 1472 psycho-technical committees
- **2369 tracking procedures** of the movement of forest transport units
- 2045 check-lists to assess the condition of the units
- •

Technology used

We continued with the implementation of the articulated lorry, consisting of two semi-trailers

linked and towed by a tractor unit. This method strictly complies with current regulations and its advantage is that it has a greater force/tonne ratio and integrated ABS brakes for the entire unit. Weight control of the load and a lightening system when leaving the forests with online submission of information and automatic information control.

Road Safety Programme

Six years ago UPM Forest

Oriental implemented a Road Safety Programme in order to promote responsible management, knowledge of transit rules and safety among all those who have any kind of link to the company: employees, forest transport entrepreneurs and their drivers, communities and public and private institutions. Among the actions forming part of the programme are:

- Call Centre line (4562 7710), open every day.
- CEPA Inspections (Centre for

the Prevention of Accidents) and reports on accidents.

- Quarterly Road Safety talks for drivers.
- Psychotechnical reviews.
- BTW courses.
- Monitoring on route.
- Check-list of the units.
- GPS tracking of trucks.
- Monthly reports from the CEPA.
- Bimonthly Safe Driver Newsletters.
- Monthly CEPA Road Safety Tips.



MAURO REAL DE AZÚA Logistical Infrastructure Manager

Over the years we have contributed toward the process of growth, maturation, professionalisation and consolidation of freight transportation in general. We are continually working to improve the sector.



DID YOU KNOW?

- In 2014, 27 articulated lorries transported 30% of timber that arrived at the pulp mill in Fray Bentos. This model allows for a more efficient use of the routes and reduces the amount of journeys undertaken, as well as carbon emissions.
- The Alessi boat carried out a total of 50 trips in 2014. This represented a saving of 2820 truck journeys from Rocha to Fray Bentos.

IN URUGUAY

Thanks to the deployment of a mobile simulator acquired by the UPM Foundation and school trucks donated by the CAU, around 1000 freight drivers will be able to receive training over the next five years, reaching the very heart of Uruguay. The Ministry of Transport and Public Works launched the training course, which will seek to professionalise the industry through training. Designed to stimulate the creation of new jobs and to improve the working conditions of the workers, the plan has the backing of UPM Forestal Oriental, CETP - UTU, the **Professional Freight** Transport Guild (ITPC), the Sole Union of Carriers (SUCTRA), the Congress of Administration Offices and the Ministry of Labour and Social Security. The course will be aimed at both current drivers and new drivers and will be available throughout the country. The plan is part of a general guideline from UPM Forestal Oriental and the authorities to improve professionalism in

highway transportation.

The Forestry Chain

2. MICROPROPAGATION LABORATORY

By selecting superior genotypes, controlled crossings and vegetative propagation, we were able to obtain the most productive materials, which are better adapted and which have the technological characteristics required by the pulp and paper industry. Having confirmed the best genotypes, we begin propagating the genotypes in the micropropagation laboratory.

1. GENETIC IMPROVEMENT

In the field, we select genetic materials that improve the performance and quality of fibre in our forest plantations. The genotypes are rigorously tested to verify their productivity in terms of volume, quality, rooting and health.

7. HARVESTING

After 8 years, the trees are in a position to be harvested. Harvest planning takes into account, in addition to demand at the plant, aspects such as species, distance from the factory, age structure of the forest plantations, growth curves and environmental conditions.

For reasons of safety, ergonomics, accuracy and flexibility, wherever possible we chose to carry out mechanised harvesting, minimising the risks of accidents and harvest times. On land where this is not possible, we carry out a semi-mechanised harvesting. Harvest activities take into account: the characteristics of the area to be harvested; presence of species of flora and/or fauna with special conservation status; proximity to riverbanks or areas close to water courses. The most appropriate systems and techniques are always applied and the best time of the year is chosen, among other aspects.

Harvesting techniques

Forest harvesters/forest forwarders. The harvester carries out the cutting, trimming, debarking and chopping of the tree, leaving the logs stacked on site. System performance is approximately 55 trees/hour, corresponding to 11m/hour depending on the average volume per tree of each trunk in particular. Secondly, the forwarder enters the area, loads the logs and transports them to the edge of the roads. The performance achieved is approximately 14 m/hour.

8. OUR CUSTOMERS

After harvesting, the timber is transported to our customers by companies specialising in forest freight and transport . In Uruguay, our main client is the pulp mill in Fray Bentos, to which we supply 3.5 million m3 of timber every year. We also carry out export activities according to demand.

3. NURSERY

The nurseries aim to produce Eucalyptus seedlings, either by seed or through vegetative propagation (rooted cuttings). We also develop new production techniques, reducing costs and improving quality without having a negative effect on the environment. We have an infrastructure capable of producing 35 million seedlings per year, between the San Francisco Nursery, on the outskirts of Paysandú, and the Santana Nursery in Guichón.

4. PLANNING

The Planning Department evaluates the land for tree planting, develops and coordinates the company's timber supply plans and plans the land use to optimise the use of natural resources, minimising negative impacts and maximising the positive impacts caused by our operations.

6. MONITORING GROWTH

Growth and dynamics are monitored in forests through permanent plots (PP) that are measured annually from their first year of age. Forest plantations are also evaluated twice throughout the shift: after 5 years and prior to harvesting. The basic indicators obtained are: site index (dominant height of the trunk after 8 years), trees/ha, average diameter, average height, dominant height, basal area, volume/ha, average annual increase, current annual increase and average tree volume. The results obtained are used both to keep the timber stocks updated on the forest plantations, and to evaluate the potential of different species and genotypes, analyse management measures, etc.

5. PLANTING

In order to achieve the proposed objectives, we need to have a stable forest ground to ensure the correct site-species relationship. To achieve this, we rely on the species Eucalyptus grandis and its hybrids, which are planted in warmer and topographically higher locations. In the low-lying areas we plant species or hybrids that are more resistant to the cold. New working techniques allow us to use soil with forestry aptitude previously regarded as marginal due to its rock content and which in turn has not been characterised as being of high environmental value.

Fomento Programme

The Fomento Programme was created with the aim of promoting the integration of agricultural production, seeking to share almost 25 years of genetic research that the company has developed and is continually developing with the Uruguayan rural producer. The medium-term goal of UPM Forestal Oriental is to provide the pulp mill in Fray Bentos with 30% of timber from these producers that are associated with the company independently. Today the programme includes more than 350 rural producers, both individuals, investment funds or institutions such as the University Professionals Retirement and Pension Fund, the Housing Fund and the Rural Association of Soriano, among others.

Our Fomento Programme gives them a good opportunity to participate in a growing activity and a company that allows them to diversify and increase their profitability. It ensures the producer a sustainable business base, the purchase of all timber produced at predetermined prices, the supply of genetic material of high productive potential and quality and technical advice. By going into partnership with the Fomento Programme, the producer has the chance to graze their livestock on the company's unplanted areas in unique conditions, generally low-lying land with very good livestock aptitude which allows them to maintain or even increase the load per hectare of this business.

They are also provided with assistance in certifying their timber under the standards of the FSC® (Forest Stewardship CouncilTM), ensuring sustainable economic, social and environmental management of their forests.

For each new agreement, UPM Forestal Oriental carries out a detailed study of the conditions of the establishment and develops a proposal adapted to the local conditions and the needs of the producer. Through the Fomento Programme, the producer integrates into a sector and a stable market, making efficient use of the soil and maximising the total performance of their agricultural business.

MORE BENEFITS WITH YOUR FORESTRY CARD

As a result of the constant drive to meet the needs of the Associated Producer, in 2012 the Forestry Card was created to jointly share the benefits and opportunities of commercial alliances with leading companies in different sectors. On the one hand, the partners receive the Forestry Card, which gives them access to benefits and discounts on the products and services offered through a real productive alliance between leading companies. On the other hand, by using the Forestry Card, producers generate and accumulate "Brotes" (vouchers), the equivalent of which is paid by UPM Forestal Oriental to the communities through the implementation of social projects. We therefore put into practice our desire to work together to improve the communities to which they belong.

In its second year, the Forestry Card offers benefits in over **90 shops that have signed up** to the project



Agreements by area

- 43% less than 50 ha.
- 26% between 50 and 100 ha.
- 31% larger than 100 ha.

2014 "BROTES" PROJECT

In 2014, UPM Forestal Oriental invited the Associated Producers involved in the Fomento Programme, the shops that have signed up to the Forestry Card and company employees to take part in restoring Rural School No. 19 Rosendo Bucheli, situated in Chacras de Sarandí del Yí in the Durazno department. Throughout the day, the volunteers who attended painted the facilities, renovated furniture and installed new electronic equipment. As part of the programme objectives, the creation of a greenhouse, the construction of educational games and the landscaping of the land have already been completed during the year.

"This activity is undertaken jointly with UPM Forestal Oriental and enabled the school to strengthen its ties with the families because they understood that mutual help and collaboration from everyone could improve the school. As a result, several parents have expressed an interest in taking part in the Brotes Project. From a social point of view, the school has taken on another role, as a venue for meetings with other schools.

The changes have had a positive impact on the development of values such as caring for things, and has enabled the children to improve the quality of education and the facilities".

Graciela González, Head of Rural School No. 19 Roseno Bucheli

INSTITUTIONAL ALLIANCES

In the search for strategic alliances for the sake of more efficient agricultural production, UPM Forestal Oriental has signed a series of agreements with various organisations and professional associations. These cooperation and development complementarity agreements allow for dialogue and mutual assistance directed at the producer and their development. They include:

FUCREA - Uruguayan Federation of CREA Groups

Through this agreement, both institutions are committed to working together on forestry issues within CREA groups, as a way of diversifying agricultural production

- livestock of the establishments and, on the other hand, UPM Forestal Oriental to provide advice within the forestry sector to all producers who request this. This agreement ensures CREA producers access to the technology, experience and genetic material provided by the company.



Productores de Leche SA

This unpublished agreement brings together the forestry and dairy sectors in the search for conditions to promote rural productivity. Through this agreement, the Associated Producers linked to the Fomento Programme can purchase supplies and services for their establishments from PROLESA outlets, and dairy producers can receive relevant forestry advice.

Banco República Oriental del Uruguay

Both institutions agree to undertake joint and additional actions to support the development of forest production and the logistical services connected with this.

For its part, the bank offers and grants long-term loans to finance forestry enterprises and provides financial assistance for the development of the forestry and logistics services associated with UPM Forestal Oriental.

RESEARCH & DEVELOPMENT DOUBLE PRODUCTIVITY FOR ASSOCIATE PRODUCERS

Almost 25 years of research for development, as well as the investment made in the UPM Forestal Oriental Genetic Improvement Programme, which exceeds USD 50 million from 1990 to date, have ensured that cellulose yield per hectare has practically doubled. In other words, this means that producing a certain quantity of cellulose using the new genetic materials provided by UPM Forestal Oriental requires almost half of the land required by the first forest plantations. Forest plantations being created today will have a much higher productivity compared with the first forest plantations established two decades ago. This achievement is truly significant and is supported by the work of specialists and state-of-the-art technology aimed at continuous improvement.

The primary venue for research into genetic improvement activities is the field; tests are set up in the same places as the operational forest plantations are installed.

The key to the Genetic Improvement Programme is to evaluate large quantities of materials in all areas where they are planted, which requires multiple field tests.

These improvements, the result of uninterrupted research over almost 25 years, provide the Associated Producers with superior genetic material, produced in the company's two state-of-the-art nurseries in Uruguay.

MUCH MORE THAN AFFORESTATION

- 58,187 ha
- 481 farmers
- 67,000 head of cattle
- 140 beekeepers
- 8 kg average per hive



Commitment to work together, on the one hand in the promotion of the UPM Forestal Oriental Fomento Programme among its partners, as a way of diversifying

agricultural production - livestock of its establishments and, on the other hand, to provide advice within the forestry sector to all producers who request this.

Furthermore, this type of agreement ensures the producers access to grazing under favourable conditions, the technology, experience and genetic material of UPM Forestal Oriental, which is committed to providing ongoing technical assistance and training for technicians from both institutions, cooperating in the development of local contractors linked commercially to both institutions for the implementation of forestry services, and providing space for grazing within its fields to those producers who are involved in forest production.

GRAZING

The grazing of third party cattle was incorporated by the company as a way of integrating

the traditional production activities of the region into UPM Forestal Oriental plots and of providing opportunities for productive use of the company's pastures to producers from the region. It also means a reduction in combustible material available for the company, thus reducing the risk of fire. Area grazed by third parties:

58,187 ha

Number of Producers: 323 contracts, 481 farmers.

Number of hectares contracted with Associated Producers linked to the Fomento Programme: 25,833 ha Number of Associated Producers



linked to the Fomento Programme with grazing: 83 Average area per producer: 121 ha Breakdown by type of livestock Cows 67,619 Sheep 3611 Horses 1849

BEEKEEPING

With the aim of making comprehensive use of the forest plantations and in response to the growing demand from neighbouring communities to take advantage of the eucalyptus flowering period and promote beekeeping in certified environments, the company promotes beehive management in its fields, which also involves institutions and beekeepers.

In 2012 UPM Forestal Oriental created an innovative agreement with the Directorate General of Farming (DIGE-GRA) at the Ministry of Livestock,

Agriculture and Fisheries; the Honorary Commission of Beekeeping Development (CHDA); and the Uruguayan Bee Society

(SAU), for the management of beekeepers in the company's forests in the departments of Paysandú, Río Negro, Soriano, Cerro Largo, Durazno, Florida and Tacuarembó.

This project is being carried through an Administrative and Regulatory Com-

mission (CAR), composed of representatives of UPM Forestal Oriental, DIGE-GRA, CHDA and SAU, and a Bee Keeping Forest Fund (FFA) was set up, funded by contributions from beekeepers and UPM Forestal Oriental in order to train, strengthen institutions and promote the sector.



NICOLÁS MOSCA Commercial Manager

Today, we share the technological advances and experience acquired over nearly 25 years in Uruguay with more than 350 Associated Producers linked to the Fomento Programme. Access to the quality of our genetic material represents a very significant advantage in the production and quality of timber, which translates into better results for the producer. In this way, all bee keepers follow the same protocols, aligned with best beekeeping practices and maximising the use of the potential productive area, thereby ensuring greater productivity.

The plots monitored by the company aim to generate a sustainable bee production for a productive purpose, seeking to develop communities and strengthen local institutions.

Within the framework of the agreement we instigated and signed an agreement with eleven regional institutions interested in managing resources (forestry beekeeping and beekeepers) with three-year contracts, depending on trends. Every year, depending on the area with flowering capacity, beekeepers interested in placing bee drawers are contacted and the results of the second year are as follows:

Amount of hectares available (suitable for flowering)	TOTAL 23.103 ha R1: ha (Soriano/Río Negro) 6.529 R2: ha (Paysandú) 5.151 R3: ha (Paysandú) 4.805 R4: ha (Tacuarembó) 4.982 R5: ha (Durazno/Cerro Largo) 1.636
Number of hives	17.716
Number of producers	160
Regional Institutions involved	Rural Development Society of Nuevo Berlín (SFRNB) CALAY (Young) Grupo Apicultores Algorta SRL [Algorta Beekeepers Group] (Algorta) CALAGUI (Guichón) CALAPIS (Paysandú) Association for the Promotion of Beekeeping in Tacuarembó Apiartigas Agrarian Society of Yi (Durazno) COAPIKOL (Florida) Sociedad Agraria del Yí (Durazno) Agricultural Society of Cerro Largo (SACL)
Average estimated honey production in the year through forestry beekeeping	8 kg per hive


In 2014, as in 2013, within the framework of the Silvoapicola Project (forestry beekeeping) we ran workshops with the participation of the 11 institutions. At one of these workshops we drafted the "Integrated Management Guide for Forestry Beekeeping in UPM Forestal Oriental fields", which will be mandatory from the 2015 harvest.

The guide was the result of the work carried out mainly by the representatives of the 11 regional institutions with the support of Agricultural Engineer Rosana Díaz, a DIGEGRA [Farming Directorate General] technician who is also an active member of the Regional Advisory Council (CAR).

Another notable activity was the three-day workshop on Nosema Apis under the supervision of Dr Gabriel Sarlo, an Argentine technician, recognised within the industry as an expert on this subject. The workshop was held in Tacuarembó for 152 producers with hives in UPM Forestal Oriental fields and was financed via the FFA (Forest Bee Fund) through the CAR in order to meet the demand from the producers in view of the health alert raised.

Nosema Apis is a disease (fungus) that attacks hives and that has benefited from the climatic conditions in recent times.

The main consequence is the loss of production (in spring), not so much the death of bees or the loss of hives that occurs in the winter when the eucalyptus comes out.

Following the training provided by Dr Gabriel Sarlo on the etiology, diagnosis and treatment and prevention of the disease, it was decided that he will lead the Monitoring of Nosema Apis in hives in UPM Forestal Oriental fields in order to diagnose, measure and assess the situation, with a view to establishing a proper diagnosis and plan of action against this widespread health risk with its strong impact on honey production.

The first round of monitoring was carried out with the respective conclusions and work is continuing in this respect



We certify our operations

In October 2010 we achieved our second recertification for a new 5-year period, confirming once again the responsible management of the natural resources involved in forest production

In January 2001 the company was certified according to the principles and criteria of the FSC^{*} (Forest Stewardship Council [™]) and obtained international recognition by the Forest Management and Chain of Custody for its products, being the first Uruguayan company to achieve this certification (SGS-FM/COC-0006061).

UPM Forestal Oriental manages a group certification scheme (UPM Forestal Oriental Certification Group, SGS-FM/COC-002240) that includes small- and medium-sized producers found in the departments of Paysandú, Maldonado, Rocha, Lavalleja, Río Negro, Durazno and Treinta y Tres. Achieving and maintaining certification involves the application of a series of policies, standards and working procedures which allow for the protection, monitoring and care of all of the company's resources and the operations carried out throughout the entire production chain.

In 2011 UPM Forestal Oriental implemented the Uruguayan Standard of Sustainable Forest Management UNIT

1152, obtaining certification in June. This certification allows for the use of the internationally recognised PEFC[™] stamp (Programme for the Endorsement of Forest Certification).

This is extremely important as it enables UPM Forestal Oriental to confirm high standards of forest management in all its operations, as well as its positive influence on the communities where it operates and good environmental performance. The entire certified area is currently covered by both schemes, FSC^* and $PEFC^*$.

On the other hand, in October 2009 UPM Forestal Oriental endorsed its management through the integrated certification of all of its processes: quality (ISO 9001), environmental (ISO 14001) and occupational health and safety (OHSAS 18001).

Total Area with FSC[®] certification (SGS-FM/COC-000606): 249,562 ha Total Area with PEFC[™] certification (UY11/20080091: 249,562 ha Total Area with FSC[®] certification belonging to the UPM Forestal Oriental Certification Group (SGS-FM/COC-002240): 17,886 ha



1 The public reports can be accessed via the website http://info.fsc.org



The Forest Stewardship Council[™] is an international body that aims to promote responsible, socially beneficial and economically viable environmental

management of the world's forests by establishing a global set of principles and recognised and respected criteria. Through its working methods in accordance with FSC® Principles and Criteria, UPM Forestal Oriental favours the maintenance of ecosystem and biodiversity functions, contributes to the country's scientific expertise and provides education on environmental conservation.



The Programme for the Endorsement of Forest Certification (PEFC™) is an international non-governmental organisation dedicated to the promotion of sustainable forest

management through independent certification of the implementation of stringent environmental, social and ethical standards.

The PEFC[™] is a certification scheme that instead of having a single standard for sustainable forest management applicable to all countries or regions, recognises and validates the standards developed by each country. To do this, it has a number of requirements on how the standard should be developed, the central aspects that must be taken into account and the environmental, social and legal compliance parameters that must be considered.

Environment

CARING FOR OUR NATURAL RESOURCES

Through the Integrated Management System (IMS) and the operating processes, activities are identified that may have a significant impact on the environment and the risk of these activities is assessed. Based on these evaluations, a series of measures are carried out aimed at safeguarding the key attributes of the environment and ensuring maximum productivity and efficiency of operations.

The environmental requirements derived from legal regulations are also incorporated.

If necessary, mitigation and compensation measures are applied when accidents occur.

These environmental safeguards are reflected in the company's Working Standards as well as in the Operational Best Practices Recommendations and Booklets, which are updated on an ongoing basis. There are booklets for working the soil, the application of agrochemicals and weed control and road construction, among other things.

The activities with the greatest risk of environmental impact are carried out following micro-planning that considers the various factors involved in the operation (harvest micro-planning, for example).

DID YOU KNOW?

Around 25% of the area is still not directly affected by forest or agricultural activities

SUMMARY OF THE MAIN ENVIRONMENTAL PROTECTION MEASURES

Soil	To prevent erosion, tilling is only carried out in the plantation belt, on level curves or in straight lines by cutting the slope, or a combination of both. The burning of forest waste as a management tool is restricted to very special situations only.
Plant Design	It is essential to minimise impact on biodiversity, soil, water and the visual aspects. The situations to be corrected in general involve changes to tilling management, a correction of the buffering distances and an increase in the unplanted area.
Drainage networks	These are not tilled or afforested and spacers should be kept to prevent erosion, as well as to favour water run-off toward low-lying areas.
Low run-off areas	The conservation of these areas is deemed to be the priority from the point of view of the water resource. They are not afforested in order to fulfil their function as a filter and buffer of impacts to water resources. In the case of existing forest plantations, these are withdrawn during the following shifts.
Buffer Areas	These are used to minimise the impact of the various activities in areas with special characteristics (areas sensitive to any type of alteration such as water courses, associated riparian areas, mating, breeding and feeding grounds for animals or areas where rare or sensitive species have been spotted, landscapes of interest or other geological or physiographic characteristics). The roles of these areas are as follows: • A turning point for machinery, a fire barrier or roads; • To reduce or eliminate the influence of forest crops on special characteristics; • To conserve or allow for the active or natural development of transition areas between different habitats. Buffer distances vary according to the activity and the feature to be protected.
	When designing the plantations, we consider aspects of the landscape unit so as to minimise the visual impact mainly on national routes and departmental roads.
Quarries, dams, bridges, incineration sites and roads by sensitive areas	The negative impacts to the soil, vegetation, water courses, visual elements (elimination of rare species, visual impact, changes to the drainage system, etc.) are minimised when carrying out any of this work.
Transit	Traversing sensitive areas such as drainage networks, low-lying areas, ravines, flood-prone areas, the habitat of species, etc. is minimised at all times.
Native Tree Species	These are kept in every place where they appear and do not interfere with the plantation (firewalls, drainage networks, divisions of tables, low-lying land and mounds), promptly assessing the need to conserve isolated individuals in plantable areas (by size, age, species, presence of other specimens in the vicinity, function as a hook tree).
	Checks for exotic species are performed and subsequent monitoring to avoid loss of biodiversity according to a comprehensive strategy. Regenerations outside the productive tables of planted species and the presence of other invasive species such as Gleditsia triacanthos, Ligustrum lucidum, Melia azedarach, etc. in conservation areas or other sensitive areas are prioritised.
Fuel Spills	We work to prevent spills. In the event of a spill, we manage the affected area and spills of over 10 litres of fuel or lubricants are reported as an "environmental accident".
Agrochemicals	We always seek to minimise the use of agrochemicals, which are only used in nurseries and during the planting phase (1 to 1.5 years every 10 years of rotation). The use of hazardous agrochemicals is restricted by Responsible Management standards such as that of the FSC®, and by internal standards. Measures are taken to prevent agrochemicals from affecting sensitive areas such as watercourses, native vegetation, surrounding properties, crops, as well as to protect the staff administering it.
Waste	Contaminated and non-biodegradable waste is managed. The cleaning of equipment, work clothes and other equipment is carried out in the established locations. The contaminated waste is managed through specialist companies and authorised by the relevant government offices.
Harvesting	Sensitive areas are identified and the impact of different activities is assessed, implementing remedial measures in the event of negative impacts such as soil compaction, damage to strains, visual impact, etc.



CONSERVATION OF NATIVE SPECIES

The Environment Management System includes a biodiversity management strategy that includes different stages and activities, including those that allow for the identification and conservation of rare, threatened or endangered species.

Due to the geographical distribution of the company's plots, we have sought to take a different approach to the plot-by-plot analysis approach, including macro-scale (bioregional) and micro-scale (plots) considerations.

The methodology followed by UPM Forestal Oriental to achieve these objectives can be summarised as follows:

Bio-regional scale:

Characterisation of the main types of environment based on an analysis of satellite imagery, terrain models, field surveys and identification of the types of environments threatened. This characterisation is incorporated into the Geographic Information

System. The same criteria as those used by the Responsible Production

Programme (PPR) of the Ministry of Livestock, Agriculture and Fisheries (MGAP) were developed and used.

Analysis of the regional distribution of the wealth¹ of species (flora and fauna) and its relationship with the bio-regions recognised in Uruguay.

Analysis of the distribution and presence of species classed as a priority for conservation by the Protected Areas System (SNAP) and/or included in the IUCN Red Lists.

Construction and analysis of biodiversity indicators, based on the presences of total species, rare species, threatened species, etc. recognised in official lists.

1 Potential presence refers both to species that have been recorded in the area (presence in collections, bibliographic citations), as well as those which, according to the specialists, may be present depending on environmental offers, biogeographical aspects, etc.



Selection of the areas of concentration of species in general and of priority species; in particular to establish special protection areas (in addition to the areas of native forests) and to implement specific management plans, including monitoring and follow-up. It is intended that all bio-regions where there is company activity are represented in these areas, as well as seeking to ensure complementarity with the official conservation areas.

Analysis of the distribution of threatened environments present in UPM Forestal Oriental plots:

using the classification of types of environment and their categorisation according to the degree of threat, we examine the contribution of the company's conservation areas to the conservation of biodiversity in the country and the need for new areas of conservation or protection.

for the conservation of biodiversity, which has two main aims:

- To consolidate and expand the programme for the conservation and monitoring of chestnut seedeaters (Sporophila cinnamomea), a grassland migratory bird classed asthreatened
- To determine the composition of the bird life in grassland communities in the Quebracho area (Paysandú)
- To determine the composition of the bird life in the palm grove restoration area of Butia yatay (near Termas de Guaviyú – Paysandú)
- To establish a Bird Watching Club.



Plot scale

Operational practices that include the responsible use of sensitive areas and native species

Management plans for areas of high conservation value

Dissemination and internal and external training activities, aimed at improving knowledge of species with conservation problems and generating awareness of these species.

Areas that are not listed as protected areas are managed through a precautionary approach, mainly taking into account the need to maintain the naturalness of the unplantable areas, their connectivity and role as buffer zones or biological corridors, as well as their protection during forestry operations. The suitability of the land for other productive activities, such as agriculture, is evaluated, taking into account the impact on the most relevant environmental components (soil, water, biodiversity)

The presence of threatened species and environments is taken into account to maximise caution in areas with some degree of vulnerability. The maintenance of the key attributes of the main types of environment allows for the conservation of the species present. In this sense, we maintain native forests, low-lying areas (wetlands or otherwise) and a significant percentage of stony and rocky areas, among other elements.

For all this work, including specific management plans for the most relevant areas, the company has received and continues to receive advice from independent experts and public and academic organisations.

Since 2011, we have worked together with the NGO Vida Silvestre Uruguay (Wildlife Uruguay), the University of the Republic (Agriculture and Life Sciences Faculties) and with other forestry companies to analyse the regional distribution of biodiversity and to identify the most relevant areas and management units from the point of view of species conservation. This facilitates decision-making with regard to the management of conservation areas and monitoring programmes, and allows for better additions to be made to the existing official conservation areas in the country.

Through agreements with Vida Silvestre Uruguay (an NGO specialising in biodiversity conservation) we updated the

2011-2021 Management Plan for the Mafalda Protected Area (Río Negro Department), and we are re-evaluating and reviewing the objectives and management guidelines for all internal Protected Areas in order to continue meeting the conservation targets for native species and environments. These objectives include capturing the largest possible percentage of environments and species requiring special conservation measures within the company's conservation areas, complementing other private or official conservation areas as far as possible. In 2013, a new agreement was signed for a period of three years with the basic objective of improving environmental management, emphasising the conservation of biodiversity.

Dept.	Name	Area (ha)	Comments	
	El Rosario	290	Wetlands, native forests and grasslands. High biodiversity value.	AAVC
	Mafalda Este	119	Alkaline soils, improvement in degraded environments.	
	Esteros y Argarrobales del Rio Uruguay [Estuaries and Carob Plantations of the Uruguay River] (formerly Mafalda)	1550	Part of the Esteros de Farrapos [Farrapos Estuaries] (native forest and wetlands). Recent sedimentary system of the Uruguay River. Richness in biodiversity.	1550
Negro	Las Tunas	178	New and rare species (herbaceous plants and cacti).	
Río	El Jabalí	641	Native forests, sandy areas, dunes, new species of flora and fauna. Conservation of fragile species and ecosystems. Rio Negro ecosystem. Richness in biodiversity.	641
	El Cimarrón	29	Native forest linked to a permanent water course.	
	La Trinidad		Legally protected species (Butia yatay), threatened grasslands and prairies, high scenic value.	
	El Ombú	227	Legally protected species (Butia yatay) (population with conservation problems); threatened grasslands and prairies, high scenic value.	
	Cueva del Tigre -El Refugio	12	Native forest linked to a permanent water course.	
	Santa Carolina	152	Site of paleontological value (currently being studied); high scenic value.	
andú	el Pucará – Carretón II	20	Sites of special management for the conservation of chestnut seedeaters.	
Pays	Chasicó	289	Regeneration area of Butia yatay palm groves.	
	San Pedro-Don Martín	256	Conservation area of Butia yatay palm groves, natural fields and native forests.	
	El Retiro (Queguay)	1113	Native forests, natural areas, rocky ledges	1113
òđ	Arroyo Malo	544	Native forest, uliginosa and sandy fields, rare species	
cuarem	La Rinconada	605	Vegetation of sandy areas, swamp forests, natural areas, rare species.	605
Þ	Cerro Agudo	498	Wetlands, rare species.	
Treinta y tres	Quiebrayugo	20	Straight-billed reedhaunter (Limnoctites rectirostris), threatened bird and its habitat.	20
Florida	CJPP-Arteaga	5	Site of historical interest	5
Cerro Largo	La Palma	252	Threatened grassland and pasture, native forest	
Total		6800		3934

PROTECTED AREAS

More than six thousand hectares have been defined by the company as protected areas, located in different management units both on the coast and in Tacuarembó.

Since the start of operations, protected areas have been identified and delineated for conservation purposes. In 2013, a Network of Protected Areas was set up in conjunction with Vida Silvestre, covering a total of 6251 hectares spread across 16 areas in the departments of Río Negro, Paysandú and Tacuarembó. Alongside this, we are carrying out an analysis of all of the plots to determine whether other areas should be incorporated, particularly in the other regions of the country that are not currently represented.



PROTECTED AREAS



QUEBRACHO

GUICHÓN



PROTECTED AREAS





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TACUAREMBÓ



AREAS PROTEGIDAS Cerro Apudo Forestal Oriental-UPM

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PROTECTED AREAS



FLORIDA

AREAS PROTEGIDAS REGION 5 CENTRO SUR

Referencias AREAS PROTEGIDAS CJPP - Arteaga Forestal Oriental-UPM

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ARÉVALO



PROTECTED AREAS



TRES BOCAS



DID YOU KNOW?

The areas protected by UPM Forestal Oriental contain 17% of all species of fauna and 10% of all species of flora declared as having a high conservation priority in Uruguay.

CONTRIBUTION OF THE UPM FORESTAL ORIENTAL RESERVES TO BIODIVERSITY CONSERVATION

Level of Biodiversity		Elements
Landscapes:		A representative sample of the units of landscape Coast south-west, Fluvial plains, North-west grasslands ¹
Threatened ecosystems ² : VU: Vulnerable IN: In danger of disappearing		A representative sample (over 55 ha) of the following environments: Wetlands BaDPPNPNN (EN), Riparian forests RiPPPUNN (VU), Yatay palm groves with wooded grassland (park forest) PaPMMMNNN-c (VU), Rolling meadows PrOMMMHNM (VU), PrOPMMHNN (IN), PrOMMMHNM (VU) Flat prairies PrPPLENNN-s (IN), PrPMLMNNM (VU), PrPPLMHNN (VU), PrPPLRHHN (VU), PrPPLMNNN (VU)
Species of Flora present in the protected areas and included on the List of Priority Species for Conservation ²	Not represented in any of the current SNAP areas	Adesmia punctata, Anmmoselinum rosengurttii, Aristida echinulata, Aristida hackelii, Chloris berroi , Croton chamaepitys, Cuphea lysimachioides, Eleocharis nudipes, Eleocharis obtusetrigona, Eleocharis subarticulata, Eryngium dorae, Frailea castanea, Galium equisetoides, Grindelia linearifolia, Gymnopogon legrandii, Holocheilus illustris, Macroptilium erythroloma, Matelea australis, Mimosa amphigena, Opuntia retrorsa, Opuntia sulphurea, Pappophorum philippianum, Paspalum falcatum, Pycreus unioloides, Schinus fasciculata, Schizachyrium gracilipes, Scleria leptostachya, Senecio cisplatinus, Senecio tacuaremboensis, Sommerfeltia spinulosa, Trichloris crinita, Utricularia laxa
TOTAL 67/688 (10%)	Represented in some of the current SNAP areas TOTAL: 34	Acalypha senilis, Acicarpha procumbens, Arachis burkartii, Aristida uruguayensis, Atriplex montevidensis, Banara umbraticola, Bernardia sellowii, Capanemia micromera, Chloraea bella, Cypella coelestis, Festuca fimbriata, Frailea schilinzkyana, Gymnocalycium schroederianum, Harrisia pomanensis, Holmbergia tweedii, Hyptis brevipes, Justicia tweediana, Linum burkartii, Lycium ciliatum, Maytenus vitis-idaea, Mimosa cruenta, Nierembergia calycina, Paspalum durifolium, Phragmites australis, Polygala aphylla, Prosopis affinis, Prosopis nigra, Schlechtendalia luzulaefolia, Senecio icoglossoides, Senna oblongifolia, Solanum platense, Sommerfeltia spinulosa, Vernonia pseudolinearifolia, Vigna hookeri
6 · · (5 · · · · ·	Not represented in any of the current SNAP areas	Clelia rustica (brown snake) Anhinga anhinga (snakebird), Bartramia longicauda (upland sandpiper), Cairina moschata (Muscovy duck), Cinclodes fuscus (Buff-winged cinclodesa), Cranioleuca sulphuriphera (sulphur-bearded spinetail), Cyanocompsa brissonii (ultramarine grosbeak), Mimus triurus (white-banded mockingbird), Pachyramphus viridis (green-backed becard), Sterna hirundinacea (South American tern), Sturnella defilippii (pampas meadowlark), Wilfredomys oenax (Greater Wilfred's mouseo) Ctenomys rionegrensis (Rio Negro tuco- tuco)
Species of rauna present in the protected areas and included on the List of Priority Species for Conservation ³ TOTAL 43/253 (17%)	Represented in some of the current SNAP areas TOTAL 30	Acanthochelys spixii (black spine-neck swamp turtle) Amblyrhamphus holosericeus (scarlet-headed blackbird), Bartramia longicauda (upland sandpiper), Buteogallus urubitinga (great black hawk), Cacicus solitarius (solitary cacique), Cistothorus platensis (sedge wren), Coragyps atratus (black vulture), Coryhpistera alaudina (Brushrunner), Cygnus melancoryphus (black-necked swan), Geranoaetus melanoleucus (black-chested buzzard-eagle), Gubernatrix cristata (yellow cardinal), Limnoctites rectirostris (straight-billed reedhaunter), Limnornis curvirostris (curve-billed reedhaunter), Megazogs sanctaecatarinae (long-tufted screech owl), Picumnus nebulosus (mottled piculet), Procacicus solitarius (solitary cacique), Rhea americana (greater rhea), Rhynchotus rufescens (red-winged tinamou), Saltator coerulescens (greyish saltator), Sporophila cinnamomea (chestnut seedeater), Sporophila palustris (marsh seedeater), Veniliornis mixtus (checkered woodpecker), Xolmis coronatus (black-crowned monjite), Xolmis dominicana (black-and-white monjita) Dasypus hybridus (Southern long-nosed armadillo), Dasypus novemcinctus (Tati), Leopardus braccatus (Pantanal cat), Leopardus geoffroyi (Geoffroy's cat), Puma concolor (cougar), Chrysocyon brachyurus (maned wolf)

According to Evia, G. & Gudynas, E. 2000. Ecología del paisaje del Uruguay. Aportes para la conservación de la diversidad biológica [Ecology of the Uruguayan landscape. Contributions toward the conservation of biological diversity]. MVOTMA, AECI. 173 pp. According to the classification of types of environment of the Responsible Production Programme. PPR/MGAP Clavijo, C.; Martínez-Lanfranco, Juan.; Soutullo, A. 2013. Especies Prioritarias para la Conservación en Uruguay. Vertebrados, moluscos continentales y plantas vasculares [Priority Species for Conservation in Uruguay. Vertebrates, continental molluscs and vascular plants]. MVOTMA/SNAP/MEC. 1

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The protected area of the Mafalda plot, called the Esteros de Argarrobales del Río Uruguay [Carob Estuaries of the Uruguay River], is currently in the process of being admitted to the National System of Protected Areas (SNAP). It will be the first protected area of the SNAP to be fully managed by a single private owner, meeting all of the system's requirements.

AREAS OF HIGH CONSERVATION VALUE

Forests or Areas of High Conservation Value (BAVC) are defined according to the guidelines and requirements of the Forest Stewardship CouncilTM.

In order to define these areas and their management, consultations are carried out with experts and other local stakeholders.

Those conservation areas of UPM Forestal Oriental that comply with these criteria are mapped as BAVC and monitored in accordance with the established management guidelines

Name	Specific Measures for their management
Mafalda	Monitoring of flora and fauna. Recovery of degraded environments. Implement a public use of the area (interpretation trail). Carry out educational and recreational activities. Control of invasive alien woody species. Establish rational grazing in different environments. Control of poaching.
El Jabalí	Monitoring of flora and fauna. Control of invasive alien woody species. Publication and internal communication of the results of monitoring. Control of the entry of poachers. Grazing management.
La Rinconada	Control of exotic species.
Queguay	Control of exotic species. Monitoring of flora in pastures and native forests.
CJPPU-Arteaga	Arteaga Infrastructure maintenance.
Quiebrayugos	Conservation of the straight-billed reedhaunter (<i>Limnoctites rectirostris</i>), a threatened species of bird, and of its specific habitat, the wet environments of <i>Eryngium pandanifolium</i>

Understand, Monitor, Safeguard

The assessment of the biodiversity values and their monitoring is carried out by analysing the best information available in the country in terms of the presence and distribution of species of flora and tetrapod vertebrates in relation to the areas where there are plots managed by UPM Forestal Oriental.

BIODIVERSITY

In addition to characterising the company's new areas, we continued to monitor existing Protected Areas in order to review the measures implemented.

We evaluated the distribution of biodiversity on a regional scale and calculated indicators at a regional and local level, estimating the representativeness of the total and threatened biodiversity at the company's sites and conservation areas.

Surveys of the fauna, flora and vegetation are carried out by selecting areas for studies with a higher level of detail, according to the results of the regional assessments. In the conservation areas, monitoring is carried out according to the specific management plans for each site.

The most significant results of the Biodiversity Monitoring Programme since the start of the programme to present are as follows:

- We identified areas and species that are important for conservation, which in turn helped create private protected areas in regions of the country that lacked such areas. Records of these species and areas are stored in the geographic information system.
- Plant communities such as scrubland, park forest, riparian forest, sandy meadows and rocky ledges (covering just under one third of the total land owned by the company) continue to have
- high levels of naturalness on the whole. It is in these environ-

ments that we have detected the majority of the species of flora and fauna of interest for conservation.

- Species of native fauna and flora classed as a priority for conservation have remained at the sites and in the natural environments since they have been identified in successive monitoring and surveys.For example, in the Protected Area of Mafalda, in surveys carried out in November/ December 2013 we detected 25 of the SNAP's 33 priority species that have been recorded in previous years.
- Environments of high conservation value that were degraded are recovering due to the management plans. E.g.: Alkaline soils and Chaco forest in Mafalda.
- It has been found that groups of orders of aquatic invertebrates that indicate good water quality and that require humid environments for survival have remained or increased in several forested catchments.
- The presence of species of flora and fauna that are new to the country or to science were detected or confirmed, such as: Puma concolor (cougar), Melanerpes cactorum (white-fronted woodpecker), Phyllomias fasciatus, Celtis pallida, Baccharis darwinii and Harrisia pomanensis, among others.
- Records were made of bird species classed as pests or potential pests in Eucalyptus forests aged

over 5 years, such as Columba maculosa (spot-winged pigeon), Columba picazuro (Picazuro pigeon), Zenaida auriculata (eared dove), Leptotila verreauxii (white-tipped dove) and Myopsitta monachus (monk parakeet). The populations decrease after harvesting due to loss of nesting sites.

- We studied a group of species classed as "pests" or "potential pests" that are currently or may become a problem for the productive sectors and the conservation of native flora and fauna. These are: the wild boar (Sus scrofa), hare (Lepus europaea) and the axis deer (Axis axis). There is no evidence that populations of these species have seen a significant increase that would endanger the biological attributes of the conservation areas in the plots surveyed. Regulated hunting activities are carried out at the company and records are kept of the specimens captured.
- Since they are classed as endemic species, populations of Río Negro tucu-tucu (Ctenomys rionegrensis) are preserved by not planting in the environments in which they live. Its population is monitored twice a year in the El Jabalí Protected Area.
- We studied the regeneration of the populations of Carob and Nandubay (Prosopis nigra and Prosopis affinis) in degraded spots within Protected Areas. The absence of or decrease in grazing is the most significant cause behind the increase and recovery of these populations in the sites studied.
- In the El Jabalí Protected Area, biannual monitoring is carried out of four species used as indicators of the environmental quality of the area: Ctenomys rionegrensis, Anhinga anhinga, Pseidoseisura lophotes and Lochmias nematura. In the 2013 survey, the four species were detected as occupying habitats characteristic to each of them.
- In the protected areas of Que-

bracho (Paysandú), special grassland management is provided to promote the improvement of the habitat for grassland birds, particularly chestnut seedeaters. These birds need tall pastures to nest and feed. In 2014, again several specimens were detected in the two managed sites.

- The areas destined for conservation of Yatay palm (Butia yatay) are working effectively. Monitoring was carried out of the population in the El Ombú area, confirming an increase in the population of juveniles specimens compared with 2005.
- In Treinta y Tres (Quiebrayugos Establishment) we monitored straight-billed reedhaunter (Limnoctites rectirostris) populations and their environments. This is an endemic species of this region, included on the SNAP list of priority species and which lives exclusively in the humid environments of Eryngium pandanifolium wetlands.
- We compared the diversity of arthropods (arachnids), reptiles and small mammals in between adjacent planted and unplanted areas. The diversity of arachnids was higher than that observed in other parts of the country and no significant differences were seen between the two situations. The diversity of scarce reptiles and the captured micromammals mainly belong to the Cricetidae (mice) family, belonging to seven of the fifteen species present in Uruguay, within which the field mouse (Akodon azarae) was the most abundant species. In some of the evaluated parameters we observed differences between the areas studied.
- We detected the presence of charismatic species such as the Yerba Mate (Ilex paraguariensis) in Tacuarembó (Cerro del Arbolito) and Cerro Largo (Arévalo).
- The known natural distribution of tree species Trichilia elegans (Paysandú) and Nectandra angustifolia (Tacuarembó) were extended.



SUMMARY OF ONGOING PROJECTS

Project	Objective	Localisation	Stage Project from the start	Period to the results
Study in paired basins	Examining the effect of eucalyptus forest plantations on the water balance at a local and regional level, as well as the quality of the surface water	"La Nueva Esperanza" (LNE) establishment in the vicinity of the town of Paso de los Mellizos (Río Negro) El Viraró (EV) establishment, close to the town of Los Cuadrados (Tacuarembó)	LNE: 2007-2010 Calibration 2011 Start of Monitoring EV: 2011-2014 Start of Calibration	Long-term (20 years)
Hydrogeological Monitoring Plots	Look for correlations between variations in the level of groundwater deposits, rainfall and <i>Eucalyptus</i> forest plantations	We selected the most relevant geological formations (as potential aquifers): Asencio, Guichón and Salto (Coast) and Tacuarembó.	2010 start of monitoring at the 3 plots along the coast. 2013 monitoring started on the Tacuarembó plot.	Medium-term (3-5 years)
Monitoring of the level of artesian wells	Evaluate the fluctuations in the water level of shallow aquifers with different proximity to <i>Eucalyptus</i> forest plantations through unused artesian wells.	No. of wells: 14 around the town of Grecco, 7 around Paso de los Mellizos, 5 in Pueblo Paso de la Cruz and 5 in Soriano	Started in 2008 with the wells of Soriano, with other locations added over time.	Long-term (10 years)
Quality monitoring of surface water.	Evaluate variations over time in the chemical/physical and biological properties in water basin courses in the area of influence of the <i>Eucalyptus</i> forest plantations	Order 3 Basins (A.E Strahler classification) A° Quebracho (Paysandú) A° Sarandí (Soriano) A° Coladeras (Río Negro) A° Pablo Páez (Cerro Largo) A° Potrero (Florida)	2012 start of proceedings in the first 3 basins. The other 2 basins were included in 2013	Long-term (10 years)
Monitoring of water quality and its suitability for different uses	Examine the quality of the water in facilities where there are wells for human supply and classify this according to fitness for use	All wells in sites under management by UPM-FO	2010 Systematic start-up.	Annual
Monitoring of water in the area of influence of the Santana Nursery	Establish a base level for water quality prior to the installation of the nursery and monitor the long-term evolution	6 underground water wells in the vicinity of the nursery (residents) and 2 sampling sites in Arroyo Santana 2 monitoring wells on the Nursery plot.	2011 Characterisation and definition of the base level: 2011 Start of monitoring at A° Santana. 2012 start of monitoring in phreatimeter wells.	Medium and long-term (5 to 10 years)

ENVIRONMENTAL IMPACT

The environmental impact derived from forestry operations in general are evaluated through operational monitoring carried out by the managers or supervisors of these activities, during or after their performance.

The following graph shows the frequency of deviations in internal monitoring in accordance with the non-compliance aspect (quality, legal/ administrative, environmental, etc.) Environmental accidents are reported by the supervisors and the corresponding mitigation measures must be taken.

Other potential measurable impacts in the medium or long-term continue to be assessed: for example, the impact of harvesting techniques on the conservation of the physical and chemical characteristics of the soil and water quality in the harvest areas.

RELATIVE FREQUENCY OF DEVIATIONS DETECTED



Distribution of deviations in the monitoring depending on the type of non-compliance aspect.

SOIL SAMPLING SITES BY GROUP AND YEAR

The monitoring programme for the physico-chemical properties of planted soil has been redesigned. This covers the most used soil groups according to CONEAT (soil productivity index) and, within these, the most representative soil types. The physico-chemical properties are assessed over a period of 5 years (approximately twice per shift) in the same place. Each year new monitoring sites are incorporated to provide a greater representation of the groups and types of soils used

WATER

The hydrological monitoring activities respond to UPM Forestal Oriental's commitment to the long-term sustainability of the operations. They are also a requirement of the standards under which the company is certified. The common denominator of the different studies initiated is to assess and quantify the influence of forest plantations on water dynamics, evaluating the different components of the hydrological cycle and the quality of the water, which helps adapt the forestry plantation to the best use of the resource.

°,			Grupo	G.Grupo de suelo	Año				
Regi	Establecimiento	Especie	Coneat				2012	2013	2014
3	La Guarida	E. grandis	07.1	Arenosol			х		
1	La Maleva	E. grandis		Brunosol	х				
1	Viraroes	E. grandis	09.3	Planosol	X				
1	El Rosario	E. grandis		Argisol				х	
2	Chicharrón	E. grandis	10.2	Argisol	x				
5	La Tribu	E. grandis		Brunosol			х		
5	Arteaga CJPP	E. grandis	2.11a	Argisol			х		
5	El Poncho	E. grandis cl.		Brunosol				х	
5	Arteaga CJPP	TUP		Argisol			х		
5	La Tribu	E. grandis cl.	2.12	Brunosol					х
5	La Vertiente	E. globulus		Brunosol			х		
4	Los Higuerones	E. grandis		Luvisol		х			
4	Los Baguales IV	E. dunnii	7.0	Luvisol		х			
4	La Zulma	E. grandis s.	7.2	Inceptisol					х
4	Cacique Sepe (Ur.)	E. grandis		Luvisol				х	
4	Higuerones	E. grandis		Acrisol	х				
4	Cerro Agudo	E. grandis	7.00	Acrisol			х		
4	Los Charabones	E. maidenii	7.32	Lluvisol					х
4	El Réfugio T	E. grandis cl.		Luvisol				х	
5	Peñarrosa II	E. maidenii		Luvisol			х		
5	El Ñandubay	E. grandis s.	8.1 -	Luvisol					х
4	La Rinconada	E. maidenii		Luvisol		х			
4	El Algarrobo T	E. grandis cl.	8.14	Brunosol					х
4	Valle Hermoso	E. maidenii		Luvisol				х	
3	La Palma	E. grandis	8.3	Luvisol		х			
5	Buena Vista	E. grandis		Luvisol		х			
5	Ñandubay CJPP	E. grandis	8.8	Luvisol			х		
2	La Perseverancia	E. benthamii		Brunosol	х				
2	Santa Elena	E. grandis s.	9.1	Brunosol					х
1	Santa Julia	E. grandis		Brunosol			х		
3	La Manea	E. grandis		Argisol		х			
3	El Palmar	E. dunnii s.	9.2	Argisol					х
1	El Bizcocho	E. grandis		Planosol	х				
2	Los Ideales	E. grandis		Brunosol		х			
1	San José	E. grandis cl.		Argisol					х
2	Las Marías	E. dunnii	9.3	Planosol	х				
2	La Toribia	E. dunnii		Argisol		х			
2	El Duraznal	E. dunnii		Brunosol			х		
1	Grito de Asencio I	E. grandis		Argisol				х	
1	El Molino	E. grandis	9.5	Brunosol		х			
3	El Carreton II	TUP		Brunosol					х
3	Ibirabitá	E. grandis		Argisol	х				
3	Tala	E. grandis		Argisol	х				
2	Las Mareas	E. grandis	9.6	Argisol		х			
2	El Icuré	E. grandis cl.	_	Brunosol				х	
2	La Negra	E. benthami		Brunosol					x
4	La Bandurria	E. arandis cl.	12.21	Vertisil				х	
3	El Tembetari	E. dunnii	10.4	Brunosol				x	
4	La Bandurria	E. grandis cl	1.10b	Litosol				x	

Human Resources

UPM Forestal Oriental seeks to make a positive impact on the society in which it operates and to contribute toward developing human resources in the area. In order to carry out all activities in a competitive manner, UPM Forestal Oriental has its own staff and contracted staff.

STAFF BY CATEGORY AND GENDER



STAFF BY AGE AND GENDER



In order to improve our efficiency levels, the quality of our activities and the development of skills in the communities affected, the company has focused on the long-term development of our service providers.

This is done by implementing systematic controls according to our quality standards, favouring self-governance in central issues such as medium and long-term planning and developing specific skills for the tasks carried out. All forestry activities are currently contracted out, as are some of the nursery, timber extraction and harvesting activities.

The company has practical guides and human resources tools to ensure the proper management of people and compliance with legal requirements in terms of employment standards, working conditions and safety. For this, the company has monitoring systems that are applied both to its own staff and its hired staff.

UPM Forestal Oriental understands that the development of people and their skills forms the basis for continuous improvement, for adding value to our processes and for being economically viable and socially beneficial in the long-term. This is why courses, workshops and lectures are held throughout the year in order to train staff in the various areas of competence.

As part of our development programme, the case study method was implemented at the Forest Academy from 2014 onwards. This new version seeks to ensure that we can generate new learning by analysing situations or real events that have taken place at the company. The purpose is to learn from the mistakes made and to identify opportunities for improvement that can be implemented in the different company processes.

DID YOU KNOW?

In 2014, 14,583 hours of training were provided to the company's internal staff, contractors and communities.

2552 PEOPLE WORKING FOR SERVICE PROVIDERS ALONG THE FORESTRY CHAIN ALL OVER THE COUNTRY

Nurseries	306
Forestry	879
Roads	149
Passenger Transport	7
Harvesting	205
Guards	15
Timber Transportation	571
Collection	5
Extraction and loading	48
Wire fencing	43
Shepherding	317
Other	7
Total	2,552

NUMBERS

Number of internal employees

at UTM: **387**

Number of employees of

service providers: 2552

21% of UPM FO staff

are women

PERSONNEL OF SERVICE PROVIDERS BY REGION/AREA

San Francisco Nursery	181
Santana Nursery	125
Collection	5
Transport	571
Southern Coastal Region	282
Central Coastal Region	288
Northern Coastal Region	251
Tacuarembó	428
Central-South	414
Other	7
Total	2,552

NUMBER OF COMPANIES HIRED BY PLACE

San Francisco Nursery	13
Santana Nursery	8
Collection	2
Transport	40
R1 - Southern Coastal Region	33
R2 - Central Coastal Region	20
R3 - Northern Coastal Region	19
R4 - Region Tacuarembó	28
R5 - Central-South	32
Other	3
Total	198

CONTRACTOR STAFF BY AREA/REGION





INTERNAL AUDIT

UPM Forestal Oriental has an internal audit department that constantly monitors the companies with which it works, including its main customer, the pulp mill in Fray Bentos. It verifies that they are all up-to-date in terms of employment, tax and social security law and that they have a valid accident insurance policy. In 2014, 378 audits were carried out in total, 256 audits in the field and 122 administrative audits.



SANDRA DE LEÓN Human Resources Manager

We have been committed from the start to the development of technical and behavioural skills as a way of developing people and the company in the longterm, adding value to our processes and improving the efficiency and quality of our operations

Safe Work

It is the company's firm resolve to minimise all operational risks present in the forest activity carried out.

In order to ensure the welfare of those working on the forest plantations and the inhabitants of the area affected, UPM Forestal Oriental classes safety as a fundamental value and implements a Risk Prevention System, especially designed by the company to understand the risks, control the conditions and avoid unsafe acts that may cause accidents or occupational diseases.

The ongoing programme of selecting and training its own employees and those of third parties and the application of new technologies for more specialist tasks allows us to obtain results that are proof of a safe and healthy working environment, as well as providing greater efficiency and quality in terms of the results obtained.

We are also constantly seeking to develop a series of tools that aim to continually update working procedures, describe the operational risks and the precautions to be taken into account, form security teams by working area and perform internal and external audits, among other things.

2014 Lost Time Accident Frequency (LTAF)*: At UPM Forestal Oriental: 3.4 At Service Providers:

6.4

*Lost time accident per million hours worked



DID YOU KNOW?

In 2014, the lost time accident frequency decreased for all UPM Forestal Oriental and contractor operations by 42%.

RESPONSIBLE FIRE MANAGEMENT

For the 2014-2015 season we implemented a national Forest Fire Protection Plan, developed within the framework of the Forestry Producers Society by technical representatives of the existing forestry companies in the three major forest regions of the country (South-east, North and Littoral of the Uruguay River), in which UPM Forestal Oriental played an active role.

Based on our experience in previous years, where the system was used exclusively

in the south-east of the country, we worked to cover an effective forested area of 720,000 ha. This represents approximately 90% of the total forest plantations in the country.

The main objective of the system has been to reduce the incidence and consequences of forest fires through the early detection of outbreaks and rapid, efficient and coordinated action to combat fires.

Three Operational Bases were therefore set up in the cities of Treinta y Tres, Guichón and Tacuarembó. Each of these bases has a helicopter capable of carrying a fully equipped combat team with 6 fire-fighters and a helibucket with a discharge capacity of 800 litres.

The Plan was developed jointly with a system of watchtowers strategically placed in areas where there is a greater concentration of forests and aircraft for the detection of fire outbreaks.

The aircraft fly over the forested areas, following the instructions received by an Operations Base that centralises all information and coordinates the various resources of the three regions. The flights carried out by the aircraft are determined by the IRIF (Forest Fire Risk Index), which is determined according to the information received and processed by the Operations Base.

The system is complemented by preventive actions such as maintenance tasks in the forests and fire buffer areas, monitoring and educational campaigns and radio broadcasting. With regard to radio broadcasting this year

we managed to run a single Fire Prevention Radio Campaign between all of the forestry companies in the country, always within the framework of the SPF and broadcast by radio stations across the country.

This project allowed the new UPM Forestal Oriental system to go from covering 50,000 hectares to almost 200,000 ha.





GERARDO GALIMBERTI Security Manager

At UPM, we work on the basis that all accidents are preventable. We are focused on the pursuit of continuous safety improvements. This has allowed significant reduction in accident rates.

Code of Conduct

UPM's objective is to carry out profitable, long-term activity in a responsible and ethical manner, taking economic, human, social and environmental aspects into account.

Efforts to achieve sustainable development and continuous improvement are part of UPM's usual way of working. Transparency, confidence and initiative are the UPM's basic values.

This Code of Conduct defines the way of working of all UPM employees, including managers and executives, without exception. Where necessary, it is complemented with rules and more detailed guidelines, approved by the executive team, divisions and departments. All the company's rules and guidelines must comply with the entire UPM Code of Conduct.

In terms of compliance with standards and delivery of information, UPM is legally required to comply in all its operations with the applicable laws and regulations in the places where it carries out its activity. This involves, among other things, laws and regulations relating to securities markets, corporate governance, safety and responsibility for products, occupational health and safety, staff, the environment, intellectual property protection, protection of individual privacy and equality in the workplace.

As a publicly traded company, UPM is committed to complying with all obligations stipulated by the listing rules of the HEX and NYSE markets, in addition to other applicable rules. It is also a UPM standard that all reports and documents delivered to public bodies and the relevant regulatory authorities, as well as communications sent to its investors and other people with an interest in the company, contain accurate and comprehensive information based on verified data in order to provide a materially correct overview of the company's operations. This information will be disclosed to the public in general on a fair and timely basis.

Regardless of the position filled, no one at UPM has the right to expect or allow illegal activities.

Conflicts of interest, gifts and bribes

UPM employees are expected to work to promote the interests of UPM and to act responsibly in doing so.

UPM prohibits any corruption or bribery in its operations.

Neither UPM nor its employees will pay or offer the payment of bribes or other illegal payments. Employees are prohibited from obtaining personal benefits from the opportunities that may arise through the use of their position at the company or of information pertaining to this. UPM employees must avoid any activity that gives rise to conflicts of interest. This includes the offer or acceptance of gifts or personal benefits that go beyond reasonable hospitality offered during normal activities.

There would be a conflict of interests if an employee or a family member received undue personal benefits as a result of the employee's role at UPM.

In addition to cash deliveries, articles of symbolic value are also excluded (maximum value of 100 Euros).

Furthermore, UPM employees must not compete with UPM. The company does not support any candidate, political party or political group. It is expected that all employees shall make proper use of UPM assets, use them effi-



ciently and not use them for unauthorised purposes. The delivery of confidential customer information or of other types of confidential information to any outside individual or entity, or the use of such information against the interests of UPM is prohibited without exception.

Respect for and promotion of human rights

UPM respects human rights in its operations, as defined in the Universal Declaration of Human Rights of the United Nations, and promotes its implementation within its sphere of influence. Among the rights that the company considers fundamental and universal are: freedom of thought, opinion, expression, worship and meeting, as well as protection against any discrimination on grounds of race, age, nationality, gender or sexual orientation

The company does not tolerate the use of slave or child labour.



HR practices

All employees with management responsibilities are required to actively and decidedly promote a leadership culture in line with the values of UPM and with the spirit of this Code of Conduct.

UPM strives to provide a safe working environment and to motivate all employees. All employees are required to carry out their work without jeopardising safety in the workplace.

The company encourages its employees to work for their own personal and professional development and growth.

UPM is committed to treating all employees fairly, impartially and equitably.

UPM maintains a commitment to equal opportunities in all of its practices, rules and regulations relating to its staff.

Environmental Practices

UPM's environmental management is based on internally defined objectives, the measurement of their degree of implementation and the development and application of good practices throughout the supply chain.

UPM continually measures and evaluates the direct and indirect environmental impacts and loads of its operations and strives to systematically manage these in accordance with the principle of continuous improvement. The impacts and environmental loads relating to the life cycle of the products come from the acquisition of raw materials, the production and distribution of products and their recovery and disposal. UPM evaluates its suppliers systematically and periodically, including from the point of view of social and environmental responsibility.

Integrated into a network of communities

UPM Forestal Oriental directly carries out its activities in 5 regions spread across the departments of Río Negro, Paysandú, Soriano (Coast), Tacuarembó (North Zone) and Durazno, Rocha and Cerro Largo (Central-South Zone).



DID YOU KNOW?

There are 97 communities within the area of influence 70% of these have fewer than 1000 inhabitants. There are various mechanisms for interacting with communities: meetings with representatives, talks to the community and visits. These actions, together with social monitoring, are vital for putting together social action plans.

With regard to the meetings with community representatives, for two years the company has held meetings with various opinion leaders to understand the concerns, suggestions and questions of both the company and the sector.

In 2014 meetings were held with approximately 100 opinion leaders belonging to communities within the area of influence of UPM Forestal Oriental. Among the main concerns detected are the increase in transit of trucks along village roads, causing a perception of insecurity.

Positive aspects that are repeatedly mentioned include: access within the area to better jobs, the marked improvement in general conditions of forest workers and their training.

The improvement in infrastructure in terms of providing access to many areas via roads that were previously precarious is also seen as a very positive aspect.

Questions arise on issues such as the use of water, soil and agrochemicals.

Work with social organisations via the UPM Foundation is highlighted, among other things. Both talks to the community and visits are aimed at providing information on how the forest operations works and what are the best practices of UPM Forestal Oriental. The joint work derived from these exchanges enriches the link between the company and the community.

In 2014 there were around 2000 visits to nurseries and more than 400 visits to the Biofore stations located within the company's plots.

The company uses external consultants to carry out monitoring of the communities where it operates. In addition to a description of the socioeconomic, cultural and spiritual characteristics of the communities, these also assess the perceptions of both the

UPM Forestal Oriental seeks to establish a balanced and longterm relationship with its employees, suppliers, service providers and customers, as well as with neighbouring communities and the environment. All of these are fundamental to the company's development policy.



community and the forest workers, both in-house and contracted.

In 2014 we started social monitoring focused on examining trends and migratory processes to urban centres as a general problem, as well as dispersed rural communities in the company's area of influence.

The specific aims of the study are:

• To identify the main recent demographic trends in the area of influence and the variables that tend to explain mobility in this type of rural community.

- To examine the aspects valued by the resident population in the area of influence in terms of the supply of services and current employment.
- To examine the degree of attachment to the town and the intentions to migrate to urban centres.
- To identify the motives that could strengthen permanence within the communities.
- To examine the training demands and expectations of young people in the area and their families.
- To determine the socio-demographic features of the target population and their families.
- This monitoring also includes the study of the characteristics, needs and satisfaction of the human resources employed by both the service providers and the company itself.

Joint work with communities helps strengthen links and understand their development needs more thoroughly

UPM opens its fields to the community

In 2014, the Paysandú Administration Office and UPM Forestal Oriental signed an agreement to promote the Biofore Station "Los Palmares de Cuico".

> More than **420 people** visited the **Biofore Stations** in 2014





ABOUT THE BIOFORE STATIONS

The Biofore Stations are part of a UPM Forestal Oriental initiative that aims to promote the enjoyment by residents and employees of those sites highlighted for their beautiful scenery or their biological and/or cultural attributes which form part of the company's assets. The different Stations, located in five regions, reflect the diversity of landscapes, environments, flora and fauna indigenous to Uruguay that are conserved on the company's plots as a result of the implementation of responsible forest management.

They offer the option of walking along paths with trees and other native or introduced plants, lagoons, animals in their natural habitat, all coexisting alongside the forestry production

UPM Forestal Oriental has areas with tourist potential called "Palmares de Cuico". These are located in the vicinity of Termas de Guaviyú, Termas de Almirón and in the Guichón area. By signing this agreement, we will seek to encourage the use and enjoyment of these spaces in addition to the existing tourist offers in the area.

The "Palmares de Cuico" path offers the option of walking around a recovery area of Butia Yatay palm trees (Palm Yatay), natural fields and Eucalyptus forest plantations, through a 1700 metre tour that crosses the "Cañada del Cuico" using hanging wooden bridges.



The Margarita Heber farm, today known as "Parada Arteaga," forms part of the Biofore Stations. These fields, which can now be visited, formed part of the significant cattle empire created in Florida by the John Jackson from Great Britain, the great-grandfather of the founder of the farm, which was acquired in the nineteenth century.

UPM Foundation

18 projects67 communities3015 beneficiaries

UPM Forestal Oriental seeks to establish a balanced and long-term relationship with its employees, suppliers, service providers and customers, as well as with neighbouring communities and the environment. All of these are fundamental to the company's development policy.

The UPM Uruguay Group (UPM and Forestal Oriental) understands its social responsibility to the communities with which it is linked as a set of activities that promote long-term development and growth and that are carried out jointly with other social stakeholders.

Most of its actions aimed at the development of the communities where it operates are channelled through the UPM Foundation. The Foundation's objective, since its creation, has been to support projects and programmes aimed at improving the quality of life of the inhabitants of the area of influence of the pulp mill in Fray Bentos and in the areas where UPM Forestal Oriental carries out its activities.

OBJECTIVE

The UPM Foundation supports projects with a specific duration and specific objectives, seeking to promote an improvement in the quality of life of the residents of the 96 communities that make up the area of operations. Social organisations and local stakeholders are the main allies in achieving compliance with the mission and in having an impact on the communities.



DID YOU KNOW?

Since its creation, the UPM Foundation has supported over 280 projects that stimulate the development of the heart of Uruguay.







MISSION

We promote the development of the communities where the company operates through education, training and entrepreneurship, fostering a culture of healthy living.

PHILOSOPHY

Our philosophy is based on action and teamwork. We interact with and work alongside key local stakeholders, seeking to promote the development and growth of the communities. Activities are carried out in conjunction with other social organisations, public institutions and departmental and/or national authorities that play a role in society. We accompany the development process that the community experiences without leading or imposing models. We act as a facilitator and coordinator rather than a bystander and we provide timely support. The actions carried out always focus on the long-term effect generated and the welfare of our reference communities. We focus our action on ongoing

dialogue with the communities through the design and implementation of projects with an emphasis on the development of capacities. Training is the main line of strategic action, which is reflected in projects that improve access to education for young people, strengthen rural schools or training for stakeholders.



BASIC VOCATIONAL TRAINING ADAPTED TO THE RURAL ENVIRONMENT

In December the first generation of students graduated from the Basic Vocational Training Proposal, adapted to the rural environment in Clara in the Tacuarembó department. This project is an educational solution for children and adolescents in the area who are unable to move to a larger town to continue their training in secondary education after completing primary education.

This programme arose from a diagnosis of the communities in the area, driven by the UPM Foundation, which identified the need for families to have greater opportunities in the field of education. In 2012, an agreement was signed between UTU, the UPM Foundation, farms in the area and the Cardijn Programme to provide a high-quality educational solution. This is also supported by the Pre-School and Primary Education Council, the Tacuarembó Administration Office and the Ministry of Social Development (MIDES).

This is the first generation of young people to complete secondary education—equivalent to the basic curriculum—in the rural area of Clara. This public-private educational offer is a milestone in the history of UTU and is being replicated in other rural communities.

PROJECTS SUPPORTED BY THE FOUNDATION

- Developed within the area of influence of the UPM pulp mill in Fray Bentos and in those places linked to the forestry activity of UPM Forestal Oriental.
- Through their implementation they tend to benefit all or a large part of the community with a long-term outlook.
- Demonstrate that their request is related to the Foundation's mission
- Meet the formal requirements established by the Foundation





MAGDALENA IBAÑEZ Community Relations and Development Manager

At UPM we believe that the growth and development of the industry must go hand in hand with the development of rural communities. In this respect, we support initiatives that come from the communities themselves and lead to their strengthening
HOW TO SUBMIT A PROJECT

Proposals must be submitted via the application form and should be sent to the UPM Foundation office in Fray Bentos, 25 de mayo 3339. Before preparing a proposal, you are advised to read the terms and conditions of the Request for Projects to see the scope of the support provided by the Foundation. Projects that include the following elements will be given special consideration: coordination with other institutions, a return for the implementing entity and projects that are sustainable once the support comes to an end. A Guide is also available for preparing projects that gives a step-by-step explanation of how to complete the form. To access these documents, go to: www.upm.com.uy

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For any additional queries relating to the content of this report you can contact us via the Communications Department.