Overview
Portucel has built biodiversity conservation into its forest management framework, helping to protect a range of valuable habitats.

Background
Portugal’s forests cover around 3.4 million hectares, around 38 per cent of mainland territory. After maritime pine and cork oak, non-native eucalyptus is the third most common species, accounting for around a fifth of the total forest area. Portugal’s eucalyptus plantations date back to the government’s strategic afforestation projects in the early 20th century. More recently, eucalyptus has been widely cultivated by private landowners on non-cultivated, abandoned or degraded agricultural land; conversion of native forest is illegal.

Portucel is one of Portugal’s strongest players on the international pulp and paper market. It manages around 123,000 hectares of forest and plantations in scattered locations throughout the country, of which 72 per cent are eucalyptus plantations. The company’s afforestation or reforestation programmes rely on long-term knowledge of species for pulp production in Portuguese conditions. They are subject to strict legislation and internal procedures to assess natural values, minimize impacts and preserve ecosystem integrity and special biodiversity features at a landscape level.

The project
As Portucel manages woodlands on a large scale, dispersed over a wide area, it wanted a well-grounded forest management framework to address biodiversity conservation. The company’s estate contains many important natural assets, and many of its plantations are located in protected landscapes, including the European Union Natura 2000 network and Portugal’s national network of protected areas. The environmental, social and economic components of forest certification schemes were a further motivation.

Because the land is scattered all over the country, the biodiversity context and relevant stakeholders vary considerably. Portucel has identified special landscape units in regions where it manages large areas, or which are particularly important for ecosystem services and biodiversity.

The process starts by identifying each forest management unit’s natural values and the regulatory framework governing it, and assessing the potential impacts. Portucel surveys the habitats, flora and fauna on the ground using its own tailor-made biodiversity manuals, based on national and international legislation and conventions, which describe the potential natural values for each region and assessment techniques. Following this, it maps conservation zones for important habitats and sensitive species and defines specific management measures in conservation action plans.

Conservation plans continue to be used and monitored in the design and management of plantations. Practical measures include:

- identifying and preserving existing valuable habitats and natural/semi-natural vegetation within plantations
- leaving protective buffer zones around water courses
- preserving and enhancing wildlife corridors and other connectivity features
- promoting structural diversity through a mosaic of species, age classes and habitats
- planning operations by season to avoid disturbing the biological cycles of key species (for example, not harvesting while birds are nesting) or to avoid negative impacts on soil and water
- controlling pests and diseases.

Conservation action plans define the space and timeframe in which to apply these measures in the field, taking account of the surrounding landscape, neighbouring areas and the dimensions and interconnectivity of important areas for biodiversity.

As well as integrating biodiversity conservation into its forest management model, the company runs specific projects with various partners, including WWF and other conservation organizations and local stakeholders.
Portucel has conservation action plans for almost half the area it manages.

Benefits
This approach has provided extremely valuable information on the natural assets in the company’s estate. It has raised both internal and external awareness of biodiversity conservation and how plantations can contribute to preserving it.

By 2011, conservation action plans covered nearly half the area Portucel manages. Around 10 per cent of the estate was classified as zones of conservation interest. Management units included 43 habitats that are representative of the protected habitats in the National Network of Protected Areas and the Natura 2000 network for Portugal. These include eight priority habitats such as temporary Mediterranean ponds, endemic juniper forests and alluvial forests of ash and alder. Other habitats include dehesas (wooded pastures) with evergreen oak, Mediterranean sclerophyllous forests of cork oak and holm oak, and riparian forests with willow and poplar galleries.

The main aim of Portucel’s management activities is to maintain existing biodiversity values, but some initiatives go further by aiming to enhance biodiversity. These include projects to replant riparian galleries in degraded areas to restore ecosystem services such as soil stability and water quality.

These efforts have also helped to raise awareness, spread knowledge and share best practice in biodiversity conservation, both internally and externally. The company’s experiences have been featured in a number of industry and conservation publications. This has helped to enhance its reputation, bringing business benefits.

Next steps
This work will continue with assessment in new areas, monitoring programmes and restoration projects. Portucel believes this will have a positive impact on biodiversity levels at the landscape level in regions where the company has an influence. Further work is needed to develop a cost/benefit analysis, which should incorporate the value of biodiversity and ecosystem services.