

Cutting edge

Gabon is proving to be a pioneer for sustainable forestry management in Central Africa. **Sarah Monaghan** goes to see the work of one its most successful companies

IT IS ONLY FROM THE AIR that you grasp the magnitude of Gabon's tropical forests. When my plane takes off from Libreville International Airport, I can see below the Presidential Palace, a building that dominates the capital's seafront. As we gain height, the grandiose structure becomes a tiny cube and the city's roads reduce to grey slithers as the landscape gives way to trees, trees, and yet more trees.

Gabon's ancient dense forests are so vast that they cover 85 per cent of its surface area. At first, it seems as if I am flying over fields of giant broccoli. Then, as the plane gains altitude, the thick tropical forest canopy becomes an ocean of smooth solid green, broken only by the sweeping curves of rivers.

I have flown to eastern Gabon to visit a logging company that has established itself as a model for sustainable forestry management. Compagnie Equatoriale des Bois (CEB), founded in 1947, was one of the earliest forestry companies in Gabon and it has forged a reputation as a national leader.

In 1995, it began a sustainable management programme well in advance of the requirements of the Gabonese Forestry Code imposed six years later. In 2004, it became the first forestry company in Gabon to earn the ISO 14001 qualification. This year, it intends to become one of the first in Gabon to win the rigorous Forestry Stewardship Council (FSC) certification – an international guarantee of responsible forestry management that is increasingly being demanded by wood buyers in Europe and the United States.

CEB is owned by Precious Woods, a Swiss group with forestry operations in Brazil and Central America and a trading arm in the Netherlands that is the largest distributor of FSC-certified timber products in Europe. It purchased CEB in 2007 as part of its first foray into Central Africa and now has plans to expand further into the Congo Basin.

CEB, says Precious Woods, was the kind of environmentally-aware and forward-thinking company that fitted its international portfolio. "CEB's management was concerned that selling the company could compromise its social and ecological commitment, so it was looking for a buyer with similar values," says a spokesman. "Precious Woods was an obvious partner."

CEB's 600,000-hectare concession is in two blocks bridging the Haut Ogooué and Ogooué-Lolo provinces. It has an annual production of 200,000m³ of logs, and 80 per cent of this is processed in Gabon. Logs, mostly Okoumé wood, are either cut at its on-site sawmill or transported from the nearby town of Lastourville via the Trans-Gabonese railway to its veneer and moulding factories in Libreville. Here they are processed into plywood, door and window frames and parquet flooring, and contribute to CEB's annual turnover of \$62 (€40) million.

Only 15 per cent of production is exported as roundwood (whole logs) to Europe and China. "With 80 per cent of our product processed, we are well ahead of the Gabonese government's target of having all forestry companies process 75 per cent of their logs by 2012," says Xavier Jaffret, managing director of CEB.

Harvesting the forest

CEB is one of just 10 companies in Gabon that has been granted a Concession Forestière sous Aménagement Durable (CFAD), known under Gabonese law as a Forestry Concession under Sustainable Development. This concession was granted only after acceptance by the Forestry Ministry of a sustainable forestry management plan that defines CEB's strategy for the entire duration of its 25-year permit. The plan ensures a sufficient rotation period for the resource to replenish.

"We are not cutting down the forest; we are harvesting it," explains Mr Jaffret. It is a subtle difference, but one that is vital for the forest's stewardship. No clear felling is carried out, only selective cutting, which works out on average at the removal of just one tree per hectare – the equivalent of around 2,000 trees a month. "Our production is even because it is carefully planned in advance," he says. "We will never take more than the forest can give."

Preparation of the management programme begins with a sophisticated inventory of the species composition of the forest and of the topography of the concession by survey teams who spend weeks in the forest recording information. The digital database then sets out the whole harvesting procedure, from the initial selection of trees to be cut to the practicalities of reaching →

A lumberjack team at work on the felling of an 150-year-old Okoumé. Precision cutting like this is a laborious and carefully-planned process which guarantees the direction of fall and minimises damage to the sensitive forest canopy. Buttresses are removed before felling to reduce the risk of the tree being damaged

SARAH MONAGHAN



“ LOGGING USED TO BE FAR MORE ANARCHIC. NOW OUR WHOLE CUTTING STRATEGY IS PREPARED IN ADVANCE ”

them in as low impact a way as possible. With the inventory, CEB's forest manager can project growth patterns and build a model of the forest's future composition. Only large trees with a given minimum diameter are felled, according to Forestry Ministry rules.

CEB's concession has been divided into units and the plan sets out an annual operating plan that defines the activities to be undertaken in each. To ensure minimum disturbance to wildlife, all the felling must be completed within three years. Then the section is closed and left to regenerate for the next 25 years.

"Logging in the past was far more anarchic," says Philippe Jeanmart, CEB's director of forestry operations. "Loggers would drive a road in and start felling. Now, we have computerised maps and our cutting strategy is prepared minutely in advance."

Precision cutting is the best way to protect the sensitive rainforest canopy. Logging causes 5 to 7 per cent canopy loss, but this can be far higher if other trees are damaged in the process of reaching and felling a tree. Most canopy destruction is the result of tree fall gaps and the digging of roads and trails. The smaller these gaps are, the quicker they can be recolonised by the forest.

I watch as a team of professional fellers prepares to cut down an immense 150-year-old Okoumé tree. It is so vast that it would take five men, arms outstretched, to encircle its huge trunk. Head lumberjack Samba takes time to plan the direction of fall, and then

instructs his team to clear it of any lianas. His chainsaw starts to buzz and the sawdust flies like tiny sparks as one by one Samba removes buttresses from the base to leave a smooth round trunk.

"We want it to make a clean fall – this is going to take some time," he tells me. On one side, he cuts out a triangular wedge to steer the direction of fall and then he sets his blade against the trunk and begins to slice across its immense girth.

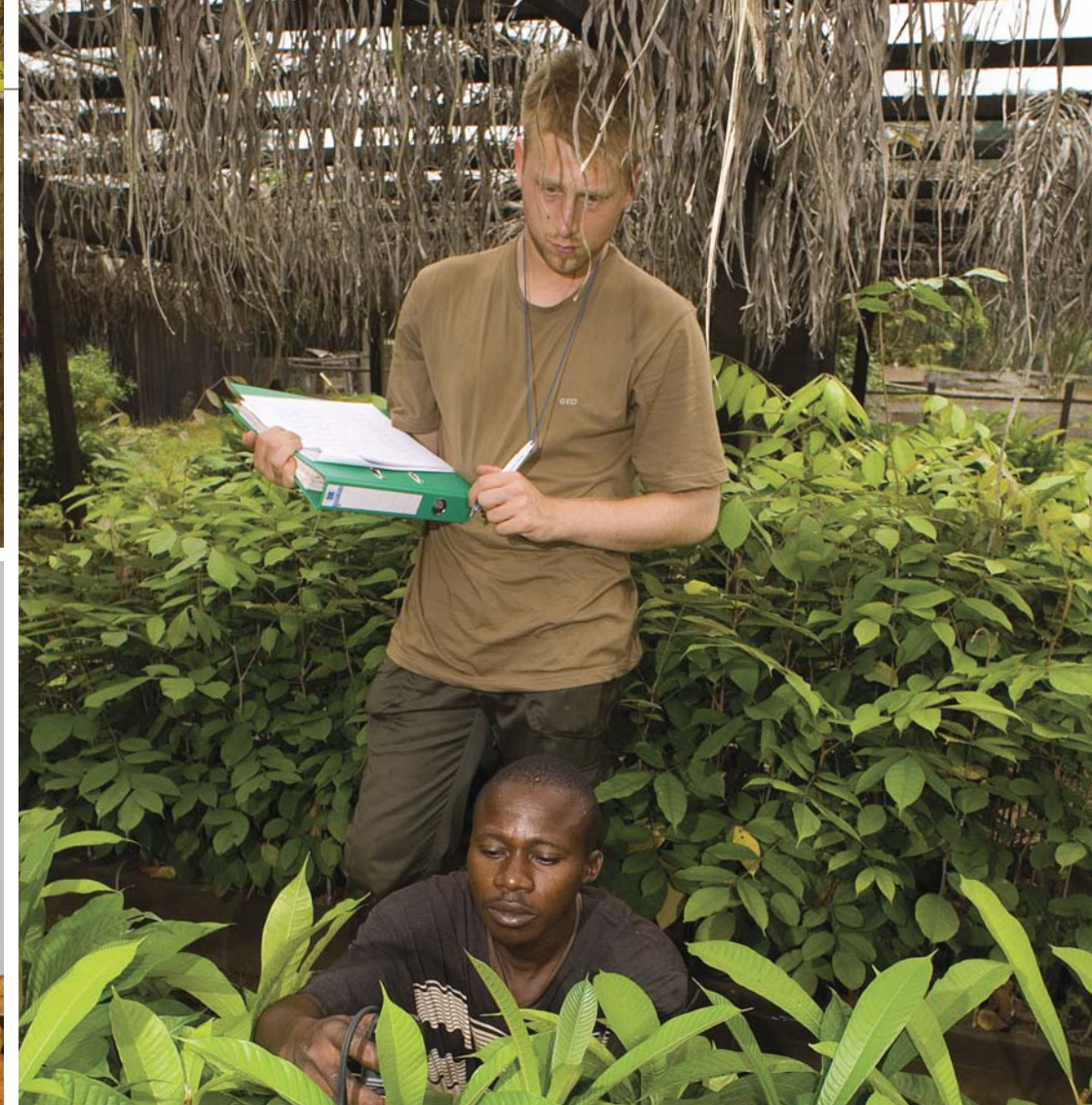
"Clear!" he calls, then runs back as the tree begins to creak and fall, crashing down exactly where he had planned it to land. A rich resinous smell fills the air.

The trunk is then winched to the nearest skid trail by steel cable. To avoid damage to the forest floor, lightweight machines haul it away to a collection point from where it is picked up by logging trucks. CEB has also introduced a tagging system that tracks each tree from the forest to the collection area so that the chain of supply is entirely controlled.

CEB is currently undergoing FSC international certification, an achievement that will put it at the vanguard of Gabon's forestry companies. The FSC has carried out its primary audit and inspectors will be returning in July to finalise their audit prior to presenting its Chain of Custody Certificate which guarantees the path taken by raw materials from the forest to the consumer.

The FSC demands the highest environmental standards – one of the reasons why CEB →

Left: Philippe Jeanmart, CEB's director of forestry operations, studies a map of the forest's topography. Right, clockwise: The diameter of a tree is a factor determining if it is suitable for felling; CEB works with forest scientists to determine optimum tree growth; on site at Bambilidie, the biggest residential camp of 250 workers, is a subsidised supermarket, bakery, leisure club, football ground, primary school and health centre. Here, CEB is currently midway through a rebuilding programme of 200 three and four-bedroom houses to replace ageing accommodation – all will have electricity and running water; a tractor transports newly-hewn logs to the sawmill



MAX HUREBOURICQ



GABON IS CENTRAL AFRICA'S LARGEST TIMBER PRODUCER AND THE WORLD'S LARGEST SUPPLIER OF OKOUMÉ WOOD



Left, clockwise: CEB's on-site nursery is used to produce thousands of seedling trees that are used for enrichment replanting in treefall gaps to assist regeneration; a surveyor prepares an inventory line in the forest; elephants frolic in a waterhole found within CEB's concessions where gorillas and chimpanzees can also be seen. Right: CEB's veneer factory in Libreville. Okoumé logs are placed on great rollers and literally 'peeled' to create sheets of veneer. One of CEB's biggest recent orders is veneer for the King Senzangakhona Stadium currently being built in Durban for the 2010 FIFA World Cup. Okoumé veneer is also used worldwide for making furniture, shoe soles and cigar boxes

SARAH MONAGHAN, MAX HUBBOURCQ

is now planning a new on-site power plant that will be fed by waste wood rather than diesel to produce the power required by its sawmill. "No other company in Gabon has won the FSC certification yet. We hope to be among the first," says Xavier Jaffret.

CEB employs 700 people and jobs are highly sought after. In its concession area, there are some 40-odd villages and two small towns, and for these CEB supports several schools and clinics, and maintains connecting roads. It places a strong emphasis on the need for good local relations and donates \$2 (€1.3) per cubic metre of exported wood to a fund for community projects. Local people are being helped to replace traditional mud houses with modern wooden ones, and schools, teachers' accommodation and health clinics have been built.

A fish-farming project is also being piloted to breed tilapia, a type of carp, and ponds across a two-hectare area have been dug. "We should be able to produce a tonne of fish per month which will be welcomed by our employees who otherwise rely on frozen meat and fish," says Mr Jeanmart.

Fresh fish will also, he hopes, discourage them from the temptation of illegal bushmeat hunting – an activity that is taken extremely seriously by CEB. "We are negotiating with the new National Parks Agency and the Wildlife Conservation Society to have ecoguards patrol the area," he says.

"There is a river here where we have spotted poachers' camps. The hunters travel by pirogue (dug-out canoe) and we know that bushmeat is being smuggled onto the Trans-Gabonese railway for sale in Libreville."

Nonetheless, the tracks of buffalo, chimpanzees and gorillas are often seen in CEB's concessions, and forest elephants can

regularly be spotted. Mr Jeanmart takes me to an area that was harvested in 2006 and is now closed to public access. "There are several watering holes here where elephants come for the mineral salts," he says. "We keep the locations secret, even from our staff, because we don't want to risk attracting hunters."

I follow him deep into the forest and soon we see elephant tracks, as well as those of red river hogs and duikers. The week before, Mr Jeanmart says he saw a leopard here. We slip and slide on the damp forest floor beneath the green canopy, stepping over brightly-coloured fruits and huge rotting leaves. Pungent smells of lemon, ginger and rhubarb fill my nose. Butterflies zip across the track.

Now the tracks have become the size of round dinner trays, followed by dinner plates – an adult elephant followed, perhaps, by its young? "This is looking hopeful," he whispers. "The elephant prints are fresh."

Moments later, we arrive at the waterhole and Mr Jeanmart stops dead. "They're here!" he says, flicking up the flame of a lighter to determine the direction of the wind. "It's okay – they can't smell us. Come on."

We inch forward through the trees and then I see them. In the river below is a family of elephants: a female, a male, and between them a baby, all carousing in the mud and tossing cooling water over their wrinkly grey skins. Another female is nearby, knee-deep in the river. We watch entranced.

It seems unthinkable that loggers were here just two years ago – but it is clear that nature has, and can, reclaim its own. Left in peace, this forest is regenerating and the animals have taken back their kingdom. ■

Sarah Monaghan

SEEING THE WOOD FOR THE TREES

Gabon's forests, unlike oil, are a renewable resource. The government's policy is to manage this valuable asset to provide long-term revenues rather than short-term gain

GABON IS CENTRAL AFRICA'S largest timber producer, followed by the Republic of Congo and Cameroon, and the world's largest supplier of Okoumé.

This versatile red Okoumé accounts for more than 70 per cent of its log exports. There are more than 30 tree types harvested in Gabon but Okoumé and, to a lesser extent, Ozigo represent the bulk of production accounting for up to 80 per cent.

Other popular species are Padouk, Moabi, Kevazingo, Douka and Belí, all with distinctive rich colours making them highly suited to veneers. These are slow-growing trees like many of Gabon's species, some of which are so ultra-hard that they are unharvestable because their high silica content seriously reduce the lives of saw blades in sawmills.

Until the mid-1990s, Europe, France especially, and the countries of the Mediterranean Basin were the primary importers of Gabon's timber. Today, however, Asia has become its primary destination and China has replaced France as the largest importer, taking close to 60 per cent of Gabon's total production of 1.9 million cubic metres of logs in 2007.

With a total land area of 26.8 million hectares, Gabon's tropical forests cover 22 million hectares and are home to an extremely rich forest ecosystem with many endemic species. Timber exports are Gabon's second most important earner after oil, accounting for

2.5 per cent of GDP, although wood products are believed to indirectly contribute more than 10 per cent, according to the French Development Agency. Forestry is the leading employer in the private sector, engaging 28 per cent of the population.

Both the government and international donors see Gabon's forests as central to its macro-economic development, and dwindling oil resources have made boosting the timber trade more urgent. "If managed properly, Gabon's forests could offer long-term revenues without compromising the ecosystems' natural functions," says Jonathan Lash, president of the World Resources Institute.

Aware of the need to pursue long-term benefits rather than short-term profits, the Gabonese government took the decision in the late 1990s to devise a management policy for its forests that would meet the need for sustainable economic development.

The result was a new Forestry Code, passed in 2001, that introduced strict new management regulations for all forestry operators. It also put in place a target of 4 million protected hectares for national parks and reserves and 10 million hectares to be managed as sustainable forest estate.

Gabon is also pursuing a major push for industrialisation to have more wood processed in its own sawmills and factories rather than being exported as logs. The aim is that by →

Right: Okoumé, Gabon's most exported and versatile tree species, produces an attractive veneer that has been used recently in the National Library of Paris and in the Eurostar train; a faux Padouk tree; logs are loaded at Owendo, Libreville's main port



SARAH MONAGHAN, MAX JURBEROURCQ, PHILIPPE JEANMART

GABONESE LOG EXPORTS IN 2007



TOTAL 1.9 million cubic metres

Forestry Code

Gabon's Forestry Code affects all forestry companies operating in the country and obliges them to carry out sustainable management of their concessions. It was drafted with the help of a World Bank grant and passed in 2001. Logging concessions are granted for 20 to 40 years on a public auction system linked to the financial and technical capacity of the company. The maximum size of a Forestry Concession under Sustainable Development (CFAD) is 600,000 hectares which is considered the maximum manageable size to meet sustainable management objectives.

2012, log exports from Gabon will be reduced to 25 per cent with the remainder exported as sawn lumber and processed products.

"Currently, Gabon is managing domestic processing of some 45 per cent of its wood," says Pierre Ngavoura, director general of the Ministry of Forestry. "It was only 7 per cent in 2002. We are aiming for 90 per cent in 2025."

There is a challenge, however. Asia is only too happy to accept Gabonese logs for processing more competitively in its own sawmills. "Gabon really needs to avoid this form of triangular commerce whereby China, for example, buys from Africa, processes the wood, then resells it to Europe," warns Xavier Jaffret, managing director of Compagnie Equatoriale des Bois (CEB), one of Gabon's biggest forestry companies.

Gabon has made good progress in ensuring that its forests are sustainably managed. So

far, 10 forestry companies – the largest being French operators Rougier, CEB, Compagnie des Bois du Gabon and Leroy-Gabon; Malaysian operator Bordamur and Chinese company Hua Jia – have been given CFAD concessions. Together, they occupy 3.2 million hectares of the 10 million hectares allocated nationally as concessions, but the Gabonese government is still waiting for 34 other companies to complete their management plans on the remaining 6.2 million hectares.

Gérard Moussu is the general secretary of UFIGA, the Union of Sustainably Managed Forestry Companies in Gabon, acting for eight of the 10 CFAD-status companies. "We represent about 40 per cent of Gabon's total forestry production," he says. "There are still a large number of companies, however, operating without sustainable management plans."

Controlling forces

In some countries in West Africa, such as the Ivory Coast, Guinea and Sierra Leone, logging is being less well-managed causing rapid deforestation and soil erosion. A recent report by the NGO Traffic International blames high Chinese demand for timber for a rapid increase in uncontrolled logging. In Sierra Leone, President Ernest Bai Koroma has recently imposed a ban on timber exports: "We are losing what is left of our environment and it is affecting our climate and other things. It was not the Chinese alone but we had a lot of logging activities which were uncontrolled," he said.

In recent years, several environmental NGOs such as Forest Monitor have also accused an influx of Asian private capital into the Central African forestry sector of bringing "more

aggressive and more openly short-term logging to the area, with a greater variety of species being exploited in a short space of time, primarily for log exports".

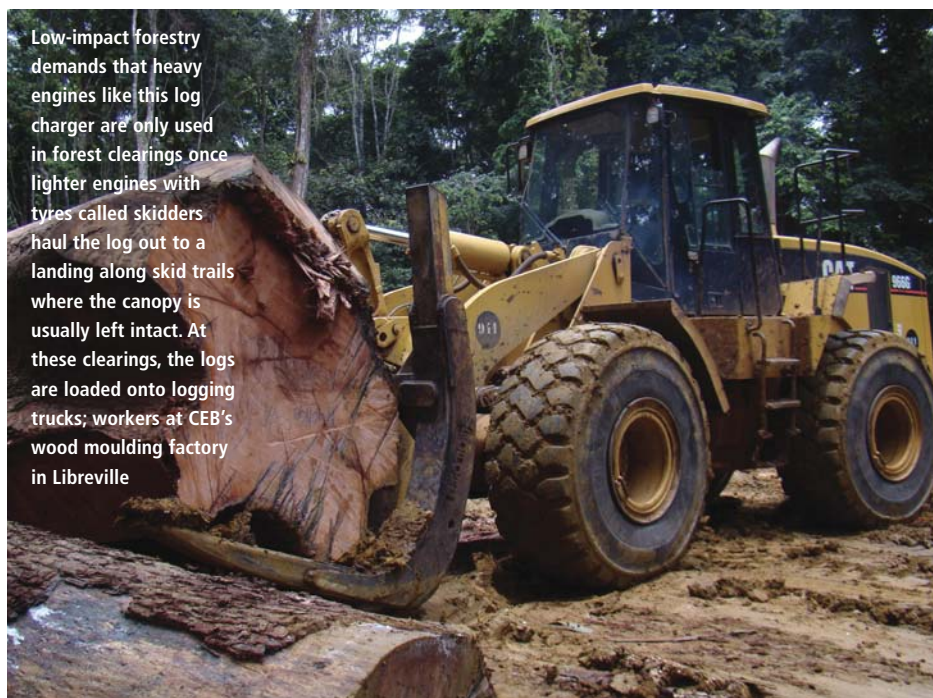
However, Mr Moussu says that in Gabon at least, the new forestry policy has reined in many of these problems. "For several years, Asian companies were accused of being lax about sustainable management," he says. "But these days their attitudes have changed. The government's determination to clamp down has made many rethink their working methods and engage with mainstream conservation practices."

Chris Wilks, a consultant to IRET (Institut de Recherche en Ecologie Tropicale) and the Wildlife Conservation Society, who has worked for many years in Gabon, says much of reduced impact logging "is just professional common-sense forestry". Professional foresters do not squander their money clearing forest unnecessarily, he says. "Reduced-impact logging, involving precision felling and planning a total road network of the shortest necessary length with narrow road margins, works for saving money as well as saving the forest canopy."

Gabon's forests, he points out, are its only major resource that is renewable. "Oil and minerals are not sustainable. Forests, in principle, are," he says. "They are a challenge for the planet as well as Gabon. Gabon could be a sustainable source of beautiful timbers for the world, a huge carbon reservoir and an eco-friendly tourist paradise."

Managing its forests, clearly, will be Gabon's major challenge for the 21st century. ■

Sarah Monaghan



Low-impact forestry demands that heavy engines like this log charger are only used in forest clearings once lighter engines with tyres called skidders haul the log out to a landing along skid trails where the canopy is usually left intact. At these clearings, the logs are loaded onto logging trucks; workers at CEB's wood moulding factory in Libreville



SARAH MONAGHAN

Pierre Ngavoura, director general of Gabon's Forestry Division at the Ministry of Forestry



How much land is allocated as forestry concessions and will this figure increase?

Of Gabon's 267,000 km² surface area, the forest accounts for 22 million hectares. We have planned for 14 million hectares [ha] of permanent forestry estate and 8 million ha of rural estate. Of the permanent estate, 4 million ha is for national parks and reserves and 10 million ha for sustainably-managed forest.

Okoumé is the principal timber that is exported. Are you trying to diversify by exporting other wood types too?

Okoumé is a native Gabonese species and we estimate that we have reserves of at least 104 million hectares. Its versatility is the reason for its high demand: it is a species whose logs float and is ideally suited for both veneer and the sawmill. We do need to make efforts to market other wood types too.

Outline the industrialisation push underway in the timber industry.

Currently about 45 per cent of logs are processed on home soil, but the government aims to have this figure reach 75 per cent by 2012 and we have several measures in place to make this happen. These include tax breaks on exports of processed wood and imports of industrial machinery, and the imposition of export quotas. We believe that this is justified because local processing will help create jobs and revenue.

Several companies in Gabon are seeking Forestry Stewardship Council (FSC) certification. What is your view of this?

FSC certification is a voluntary process but it is increasingly becoming indispensable for forestry companies wanting to sell wood onto international markets. Consumers on the

global stage are becoming more demanding. That is why we have made sustainable management the touchstone of our forestry policy.

Some say that China places less importance on the origin of wood that it imports than does Europe and that those forestry companies, many of which are Asian, which sell to China, have less incentive to pursue sustainable management.

Asian companies are recent arrivals on the forestry scene but they are beginning to work to our rhythm. That's certainly the case with Bordamur [a company owned by the Malaysian Rimbunan Hijau, the world's biggest forestry concern, with CFAD status and a 400,000 ha concession] which has proven itself to be an excellent example of co-operation with government. It is also working closely with NGOs to prevent bushmeat hunting. The Chinese company Hua Jia [CFAD status with a 100,000 ha concession] is also working closely with us on sustainable management. Infractions happen but our job is to make sure the forestry laws are respected.

Have studies been carried out to determine if the forests can regenerate at the current rate of felling?

Reliable studies have been carried out. The current rate of tree clearing is less than 1 per cent of national coverage and the average felling rate is one to three trees per hectare. Gabon's forests are not in danger but we fully intend to oversee their sustainable management.



Inset: The Ministry of Forest Economy, Water, Fishery, and National Parks in Libreville