



By Thais Santi - Special for *O Papel*



AFRICA – CHAPTER 4

This month, we present Chapter 4 of our International Series: The Sector Around the World, which will end next month with the chapter on Oceania. We started this journey through the five continents in September having already visited North and Central America, Asia and Europe

This month we have landed in the African continent, which comprises 50 countries and territories, with a wide diversity of ecosystems. It concentrates 14% of the world population, that is, 1.166 billion people distributed throughout an area of 30,000,000 km². In spite of its proportions, the region is responsible for a Gross Domestic Product (GDP) of only US\$ 2.243 trillion.

In terms of forest area, the African continent comprises 624 million hectares, of which 16 million hectares are planted forests, according to data from the United Nations' Food and Agriculture Organization (FAO). Demand for forest products and services is growing rapidly in the region, incentivized by population growth and an expanding economy, as reported in *The Role of Forests in a Green Economy Transformation in Africa - United Nations Environment Program – (UNEP)*. It is estimated that by 2050, industrial domestic demand for roundwood may double, or even triple, from the current annual level of 96.2 million m³.

However, the formal wood industry contributes less than 1% to the continent's GDP. Standing out in this scenario is the charcoal and wood industries – informal in most cases –, responsible for 90% of wood consumption in Africa, contributing roughly 2% of GDP and 5% of workforce.

Forests also contribute to the GDP of other sectors, such as carbon sequestration, protection of hydrographic basins against erosion and maintenance of biodiversity. However, FAO pointed out that these services are threatened by land degradation, overharvesting and deforestation. FAO estimates that between 1990 and 2010 roughly 75 million hectares of African forests disappeared. **(See comparison of main products produced by the forest sector in the table below)**

Wood product output, 2006

Products	Global	Africa	Share (%)
Industrial roundwood (million m ³)	1,635	69.0	4
Sawnwood (million m ³)	424	8.3	2
Wood-based panels (million m ³)	262	2.5	1
Pulp for paper (million tons)	195	3.9	2
Paper and paperboard (million tons)	364	2.9	1
Woodfuel (million m ³)	1,871	589.0	46

Source: FAO, 2008a.



In relation to wood for pulp and paper production, Pöyry, consultancy company and contributor to The Sector Around the World series, points out that in 2014 the region was responsible for the production of 3.860 million tons of pulp, 1.362 million tons of virgin pulp and 3.966 million tons of paper. Of this total, 10% of pulp production was exported for paper production (virgin fiber, recycled fiber + non-wood fiber) and 17% of paper production was exported. It is important to point out that these figures represent only 0.9% of global pulp production for producing paper and 1.1% of global apparent consumption.

At the same time, 22% of pulp production was imported for paper production (virgin fiber, recycled fiber + non-wood fiber) and 122% of paper production.

Manoel Neves, Economic Studies manager at consultancy Pöyry, expects growth to exceed the global average and keep up with the income increase in the continent over the next years. However, political instability may slow this economic development. "Neighboring Europe, the African continent has favorable factors like soil-climate conditions and land availability, which makes it an attractive platform for future forest investments and for pulp production."

Neves also points out that South Africa has a forest platform and pulp & paper production already installed and that other countries like Ghana and Mozambique possess forest industry stimulus programs. The main producing regions in the continent are South Africa, Egypt, Tunisia and Zambia, and three main producers are Sappi, Mondi and Mpact Limited. **(See details about these companies in the "Top 3 - Africa" box, as well as capacity expansion projects in the region for all segments through 2020)**

SOUTH AFRICA

Forest resources in South Africa comprise more than 40 million hectares of the country's land surface. The forest sector employees roughly 165 thousand workers and provides more than 62.7 thousand direct jobs and 30 thousand indirect jobs. Silviculture provides support to the subsistence of 652 thousand people of the country's rural population, while the pulp and paper industry contributes roughly 13.2 thousand direct jobs and 11 thousand indirect jobs.

In terms of land-use, the area utilized amounts to 1.27 million hectares, or 1% of South Africa's total land area of 122.3 million hectares. The forest sector (silviculture and forest products) contributes roughly 1% to the country's GDP.

• Industry and exports

The forest industry is one of the main exporting industries in the country, having contributed 1.92% of total exports and 1.4% of total imports in 2012. That same year, pulp products were the most important exports accounting for 43% of the total, or \$5.890 billion South African rands, followed by paper with 34% (R 4.707 billion), solid wood products with 19% (R 2.680 billion) and other products 4% (R 555 million), totaling 13.8 billion South African rands, equivalent to US\$994.7 million. Exports of wood plates, particularly to Japan, represented 52% (R 1.407 billion) of total solid-wood product exports.

South African Forestry Company Limited (Safcol) is a government forestry

company that harvests and processes wood both in the domestic and international market. In 2013, possessed 18 plantations on more than 187 thousand hectares, with one sawmill and lease capacity in another two.

In turn, Sappi is the main private company operating in the region. Commercial intensive-management forest plantations in South Africa are recognized as some of the most productive in the world - not only due to soil and climate conditions, but also for their advanced management techniques. The industry can, in sustainable way, produce between 16 and 18 metric tons of wood per year.

Source: Department of Agriculture, Forests and Fishing (DAFF) - South Africa Annual Report 2013/14.

EGYPT

Egypt's forest area is estimated at 2.5 thousand hectares, with most of its forests being planted with Casuarina, Eucalyptus, Cypresses, Pine and Khaya. The region suffers from desertification and a lack of wood production, but stands out in the continent for being a major importer of wood.

The current utilization of wood products is to protect the environment against pollution, exploration/utilization of treated sewage water, and production of certain non-wood products (beekeeping, silkworm, resin and others). It is also used in small industries for producing boxes and packaging, charcoal production, fuel and fodder.

Some trees and shrubs are used to secure sand dunes and as wind barriers. The wood industry comprises laminate, plywood and particleboard. Production units depend highly on imported raw material. Only particleboard is processed using local wood, whereby softwood pulp is imported.

Since the country does not possess a sawmill industry, most of the softwood demand is imported as sawn wood. Roughly 70% of wood is imported, particularly poplar from Belgium, France, Sweden, Cyprus, Bulgaria and Germany. The remainder is imported from Ghana and Gabon, Congo and Liberia. The private sector imports roughly 75% of its wood needs, and the only company in the public sector is Société Commerciale des Bois (FABAS).

Most importers are traders and located in the port city of Alexandria. Finland, Chile and Canada are the main suppliers of wood for the sector.

Source: FAO

NIGERIA

With more than 134 million inhabitants, Nigeria is the most populated country in Africa. Data from the Environment Ministry shows that in 2014 the country became the biggest economy in sub-Saharan Africa, but is nonetheless a developing nation with a low income and a GDP per capita of US\$ 2.95 thousand.

In 2011, the forest sector contributed US\$ 991.8 million to the economy, accounting for 0.4% of the country's GDP. Roughly 44 million people are employed by the sector according to 2011 FAO data. Nigeria currently concentrates 835 million metric tons of carbon inventory in the live forest biomass. However, the forests of Nigeria, which currently extend more than 9.6 million hectares, have diminished over the last decades. The current rate of deforestation is estimated at 3.7%, one of the highest in the world.

Source: Government of Nigeria, FAO and UNEP



TUNISIA

Forests and woody vegetation cover a total area of 1.3 million hectares, which represents 8% of the country’s surface (FAO, 2015). Through an environmental program, the forest area increased from 643 thousand hectares in 1990 to 1.041 million hectares in 2015, representing a 62% increase in the last 25 years, or an annual increase of 1.9%.

In spite of the increase in forest area, Tunisia continues highly dependent on wood & wood-product imports. This includes sawn wood and chemical pulp, inducing continuous dependence. The main changes in imports are the increase in MDF imports in detriment of sawn wood, and the increase in chemical pulp in detriment of paper and board.

In 2011, the forest sector contributed US\$ 336.6 million to the economy, or roughly 0.8% of GDP. The sector is responsible for employing 23 thousand people directly, according to 2011 FAO data.

Source: FAO - State of the World’s Forests 2016 (SOFO)

ZAMBIA

Zambia has an estimated population of 9.3 million people, with an annual growth rate of 3.5%, considered quite high, with a direct effect on its forest resources. According to Zambia’s Department of Forests, Environment and Natural Resources Ministry, the main objective of the country is to reduce poverty through economic growth, investing in the development of human resources and protecting the environment.

Mining dominates the region’s economy, followed by agriculture, whereby the contribution of forests to GDP amounts to less than 1%. However, the forest sector has significant growth potential. Forest resources in the country cover 60% of total area, with an estimated forest stock of 3.5 billion m³ as volume of marketable planted trees and 2.2 billion m³ considered wood of commercial value.

Sawmills are considered a well-developed industry in the country. Roughly 400 thousand m³ of sawn wood is the estimated annual demand for this industry. Additionally, wood and charcoal will continue being the main source of energy for most families. Statistics available indicate that 95% of rural populations depend on wood and 95% of urban families depend on charcoal.

According to data from the United Nations Environment Program (UNEP), Zambia’s forest ecosystems contribute US\$ 1.3 billion to the nation’s economy, roughly 6.3% of its GDP, without forgetting the role that forests can play in the global transition to a green economy.

Additionally, forests create 1.4 million jobs, supporting 60% of families in the country. According to 2009 statistics, Zambia has the second highest deforestation rate per capita in Africa and the fifth highest in the world. The main factors of this deforestation are charcoal production, agricultural and human expansion and the illegal exploitation of wood.

Source: Department of Forests, Environment and Natural Resources Ministry of Zambia. ■

TOP 3 – AFRICA

Paper and Board + Market Pulp Producers

	Sappi (Annual Report 2015)	Mondi (Annual Report 2015 & Company website)	Mpact Limited (Annual Report 2015)
Company description	Founded in 1936 in South Africa, Sappi today is a global company and one of the main global producers of paper, pulp and other forest products	Founded in 1967 in Marebank, South Africa, Mondi became a global company specialized in the production of different types of paper and packaging	Mpact was originally a division of Mondi and emerged as an independent company in 2011, becoming the African leader in the recovery and recycling of paper and plastics
Products	Coated paper, printing paper, specialty paper, newsprint, packaging paper, pulp for paper, specialty pulp, wood products	Packaging paper, corrugated board, cartonboard packaging and printing paper	Industrial papers, corrugated board, cartonboard, paper and plastic packagings, products converted from recycled paper and polymers
Production	5.6 million tons of paper, 2.5 million tons of pulp for paper, 1.3 million tons of specialty pulp	2.14 million tons of corrugated board, 1.16 million tons of kraft paper and 2.1 million tons of softwood pulp	430 thousand tons in total, comprising all types of paper and board
Forest base / raw material	Possesses 492 thousand hectares of planted forests in South Africa, which supplies 78% of the raw material used in mills. The remaining production is performed with pulp purchased in the market	Possesses 154 thousand hectares of planted forests on land owned in South Africa and manages another 2.25 million hectares around the world, responsible for satisfying the entire raw material demand of mills	Does not possess a forest base. Roughly 35% of raw material comes from pulp purchased in the market and the remainder consists of recycling, recovery and conversion of pre-and post-consumption of wastepaper
Global presence (plants)	7 countries	38 countries	5 countries
Production units	14	107	33
Employees	12,800	25,000	4,467

Source: Pöyry (April/2016)



Overview

AFRICA (58 COUNTRIES AND TERRITORIES)

Population: 1.166 billion

Area: 30 million km²

GDP: US\$ 2.243 trillion

Forest area: 624 million hectares

Planted forests: 16 million hectares

(FAO, 2015)



Total paper production: 3,966 thousand tons/y

Total pulp production: 3,860 thousand tons/y

Virgin fiber pulp production: 1,362 thousand tons/y

(Pöyry, 2014)

Production Capacity in Africa - Paper and Paperboard - 2016

Rank	Country	Capacity 1000 t/y	%
1	South Africa	2732	45
2	Egypt	1693	28
3	Tunisia	415	7
4	Algeria	392	6
5	Morocco	383	6
6	Nigeria	263	4
7	Tanzania	58	1
8	Zimbabwe	51	1
9	Kenya	36	1
10	Ethiopia	26	0
	Subtotal:	6049	99
	Others:	72	1
	Total:	6121	100

Source: Pöyry

Production Capacity in Africa – Market Pulp - 2016

Rank	Country	Capacity 1000 t/y	%
1	South Africa	1430	97
2	Zambia	20	1
3	Tunisia	15	1
4	Egypt	5	0
	Subtotal:	1470	100
	Others:	0	0
	Total:	1470	100

Source: Pöyry

Production Capacity in Africa – Total Pulp - 2016

Rank	Country	Capacity 1000 t/y	%
1	South Africa	2745	80
2	Egypt	341	10
3	Nigeria	86	2
4	Tunisia	78	2
5	Tanzania	50	1
6	Zimbabwe	35	1
7	Zambia	35	1
8	Madagascar	28	1
9	Algeria	25	1
10	Morocco	15	0
	Subtotal:	3438	100
	Others	6	0
	Total:	3444	100

Source: Pöyry

Capacity expansion projects in Africa (through 2020)

Company	Country	Segment
Mpact Limited	South Africa	Containerboard
Webuye Paper Mills	Kenya	Containerboard/ Boxboard Obs.: Resumed production after 4 years stopped
Hygienic Tissue Mills	South Africa	Tissue
Sam's Tissue Co	South Africa	Tissue
SAPPI	South Africa	P&W
Carta Misr	Egypt	P&W
Paper Mill Investment Co.	Algeria	Tissue
TwinSaver (Ethos Private Equity)	South Africa	Tissue

Source: RISI

Note: RISI, the top provider of information about the pulp and paper market, and contributor to O Papel magazine's The Sector around the World series, offers reports, databases and studies with detailed information about these projects, which can be accessed at <http://www.risi.com/>

RISI