The last cement frontier

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The Sub-Sahara has been described by market analysts as "the last cement frontier". However, there is little doubt that capacities are on the increase in the region with many producers looking to capitalise on the current industrial, political and economic development taking place. When it comes to cement production, Africa is starting to catch up.

Ohorongo Cement, Namibia

Cement consumption in Africa in 2010 was 175Mt, with the Sub-Sahara counting for 50 per cent of volumes. West Africa, defined from Senegal to Cameroon, recorded sales of 33Mt and represented 20 per cent of the entire African market.

Per capita consumption in West Africa averages about 95-100kg. Due to differences in the national economies and purchasing power, the consumption per capita vary significantly. Senegal is the highest (220kg) and Niger the lowest (23kg). West African cement consumption has been growing quite steadily over the last decade and this trend is likely to continue. The growth rate will probably be higher in the oil economies like Ghana and Nigeria than in the smaller and landlocked countries.

According to the IMF, GDP growth in Sub-Sahara has averaged 5.8 per cent over the last five years, while population has averaged 1.75 per cent over the same period. So in general, per capita incomes are increasing and the region is slowly becoming less poor, although not significantly richer.

Ciments de Sahel has a new 1Mta kiln line, Senegal

CIF Luanda Cement, Angola

Sino-Zimbabwe Cement under construction

East Africa is similarly beginning to undergo substantial growth in terms of cement demand. Proximity to the rapidly developing central areas of Rwanda, Burundi and newly-formed Southern Sudan could be a great advantage to cement producers located in East Africa.

Central Africa has traditionally received most of its cement imports from the west, but now East African producers are seizing opportunities in the region. However, the influx of imports are likely to come under pressure as more of the central African countries look to grow their own domestic cement production. The move of HeidelbergCement into Democratic Republic of Congo (DR Congo) and Cementos La Union's desire to enter the Republic of Congo will see state-of-the-art plants built in these countries.

Southern Africa is also experiencing noteworthy development. While the established players of Lafarge and Pretoria Portland Cement (PPC) are looking to invest in neighbouring countries, new entrants such as Germany's Schwenck, in Namibia are adding to the 'new look' landscape. Zambia and Zimbabwe are also attracting the attention of the Chinese who are willing to invest in new cement plants.

Development trends

The importance of how Sub-Sahran governments prioritise budget spending is crucial for future development in terms of capital investment for infrastructure and housing. Imara points out that this is most evident in Angola, Botswana, Nigeria, Rwanda, South Africa and Uganda where government sponsorship has been a catalyst for infrastructure development.

Geo-political forces are also at work in that China has a strategic focus on Africa's resources in exchange for financial aid. China is keen to build roads, bridges, dams and airports in Africa and Sinoma is already the biggest turnkey supplier for the cement industry in the region and will have installed some 15Mt by 2013. New Chinese mini plants have also started to establish themselves in various Sub-Saharan countries like Ethiopia and Eritrea, while, in Angola, China International Fund Luanda Cement operates a 5000tpd plant. Indian companies have also registered interest in the East African cement sector.

Key elements of West African cement markets

• Strong economical growth across the region with Nigeria as the dominant driver. A GDP growth average of six per cent is expected for 2011.

• New oil discovery along the coast combined with high prices on minerals are impacting the various economies positively, in particular Ghana and Nigeria.

• Various governments are putting much emphasis on infrastructure projects, improving sustainable supply to remote areas. Improved access and penetration combined with availability of cement will mean increased consumption.

• Despite limited deposits of limestone, additional local manufacturing capacities are developed (or under construction) in Senegal, Mali, Ghana and Nigeria.

• Present local production capacity is 21Mt versus 33Mt of demand.

• Senegal, Ivory Coast, Togo and Benin are the only countries with established export patterns.

• Average cement prices vary from US$140/t in Ghana to US$300/t in Nigeria. Due to scarcity of cement, the Nigeria market price increased US$70/t during 1Q11.

West African trade flows

With a market growth of around 5-7 per cent YoY, and despite execution of various capacity expansion projects, the West African region will remain a net importer of clinker. There will only be a surplus in Senegal while Togo's overcapacity will be absorbed by WACEM's own grinding plants in Burkina Faso and Ghana. The massive expansion in integrated capacity in Nigeria, will to a large extent, eliminate the need for cement imports.

Figure 1 shows the main material flows in West Africa. Clinker is transported from Togo to Burkina Faso, while cement is sent from Senegal, Ivory Coast and Togo to the land-locked countries.

Limited volumes are transported from Benin to Nigeria. In the future, when the new Kayes plant in Mali is commissioned, it is assumed that the volumes will decrease, particularly from Senegal, Togo and Ivory Coast.

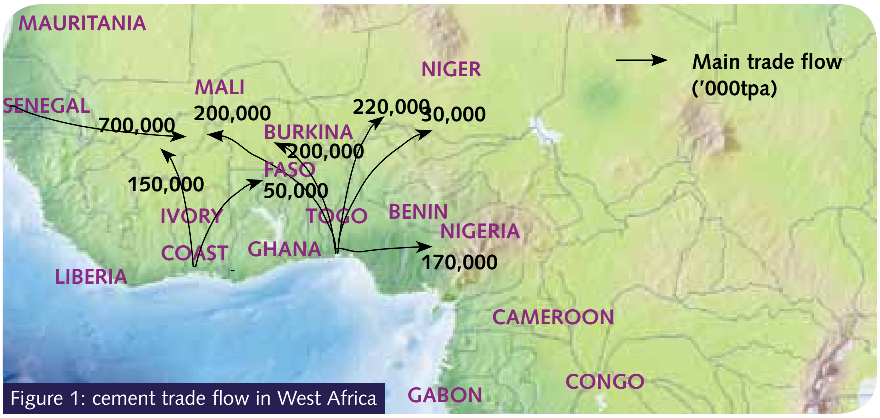


Figure 1: cement trade flow in West Africa

Developing markets

Benin

The demand for cement has increased steadily in Benin, averaging six per cent over the last seven years, which it has been met by a combination of local integrated capacity and clinker imports. In 2009 and 2010, supply had to be augmented by bagged cement imports. The market was stagnant during 2010 as a consequence of the financial crisis and pre-election disturbances. Benin has a shortage of cement and planned to import 18,000t a month last year from Togo after local production was curbed by power shortages. Domestic producers increased prices by as much as 30 per cent to CFA90,000/t (US$187/t).

The privatisation of the Onigbolo plant seems to be ongoing with SCB/Lafarge as the expected majority shareholder. Lafarge together with Amida were reportedly planning for a further capacity increase with a new 3000tpd line at the plant.

Cements du Sahel of Sengal is also planning to erect a 3000tpd (1.2Mta) integrated plant called the New Cement Works of Benin (NOCIBE), at the Masse limestone deposit, but no actual progress is reported.

Ciment de Golf has also announced plans to erect a grinding plant in the south. Meanwhile, Cimbenin SA (HeidelbergCement) continues to operate a 0.3Mta grinding station in Cotonou.

Ghana

The Ghana's economy has realised strong development in the recent years with double-digit growth expected from 2011, due to the recent commencement of oil production in the western region.

Annual cement growth over the last seven years has averaged seven per cent. Per capita demand has reached 140kg and is assumed to increase towards 200kg over the next 10 years. The market situation is characterised by competition between Diamond Cement (WACEM) and Ghacem (HeidelbergCement). In addition, the Greenview terminal in Tema, which is controlled by Dangote, commenced operation early in 2010. HeidelbergCement is preparing for 1Mta additional grinding capacity at its Tema.

Diamond Cement is expanding with a new 0.5Mta integrated plant at Buipe in the north and the company is the core investor in a new 1Mta grinding project in Takoradi.

Ivory Coast

The development of cocoa production for export and foreign investment made Ivory Coast one of the most prosperous of the West African states.

However, unrest over the last years has had a negative effect. Despite all the problems, cement consumption has increased. After the recent election, the besieging of the capital's presidential residence and the ousting of Laurent Gbagbo, it is somewhat difficult to predict the future.

There is no limestone in Ivory Coast, hence both Amida and Holcim import clinker from overseas. The surplus grinding capacity has traditionally been exported to Burkina Faso and in later years mainly to Mali, some 0.2Mt in 2010.

Nigeria

Nigeria is by far the largest market producing 16Mt. The average regional growth in cement consumption during 2010 was six per cent with the apparent positive development continuing into 2011. The demand for cement has increased by an average of 10 per cent in recent years.

However, per capita consumption is still below most other West African countries.

The domestic integrated capacity is rapidly expanding. The Dangote Group is proceeding with a massive expansion in Nigeria, 12Mta of integrated capacity over the next few years. It is erecting a new plant with 5Mta capacity in Ogun State (Ibeshe), while ongoing capacity expansion projects both at Obajana and Benue. Lafarge is similarly adding 2.2Mt by August 2011 to its Lakatabu plant in the southwest and is also expanding with the ongoing erection of a 5000tpd line at the Ewekoro plant north of Lagos.

Ashaka Cement in the northeast has a planned capacity expansion of 0.4Mta taking its total capacity to 1.25Mta in 2012. Sokoto Cement owned by Cement Company of Northern Nigeria (CCNN) is also expanding capacity from 0.5-1.25Mta with a second kiln line.

To facilitate local manufacturing of cement, the government is reducing allocation to cement importers and are trying to lower prices. Due to lack of capacity and volumes, prices on average increased to U$300/t during the 1Q11.

Table 1: Sub-Saharan expansion projects underway

	Current cement Capacity (Mta)	*2013 Capacity ((Mta)*	*2015 Capacity (Mta)*
Dangote Cement Industries (Nigeria)	8	20	21.8
Dangote Terminals	5	5	1
Lafarge	6	6	8.1
Lafarge Terminals (Nigeria)	1	1	1
WACEM/Diamond Cemment	3.1	3.1	6.2
Ashaka Cement (Nigeria)	0.9	1.3	1.3
CCNN (Nigeria)	0.5	1.25	1.25
HeidelbergCement (Africa)	3.84	3.84	5.29
SOCOCIM (Vicat)	3	3	3
Ciments de Sahel	1.3	1.3	1.8
Amida	1.47	1.47	1.47
Holcim	1.4	1.4	1.4
Athi River Mining (Kenya)	0.7	1.2	1.2
ARM (Tanzania)	0.65	1.2	1.2
Sub total	36.86	51.06	56.01

Source: Imara: Investing in Africa 2011 & Industry Sources

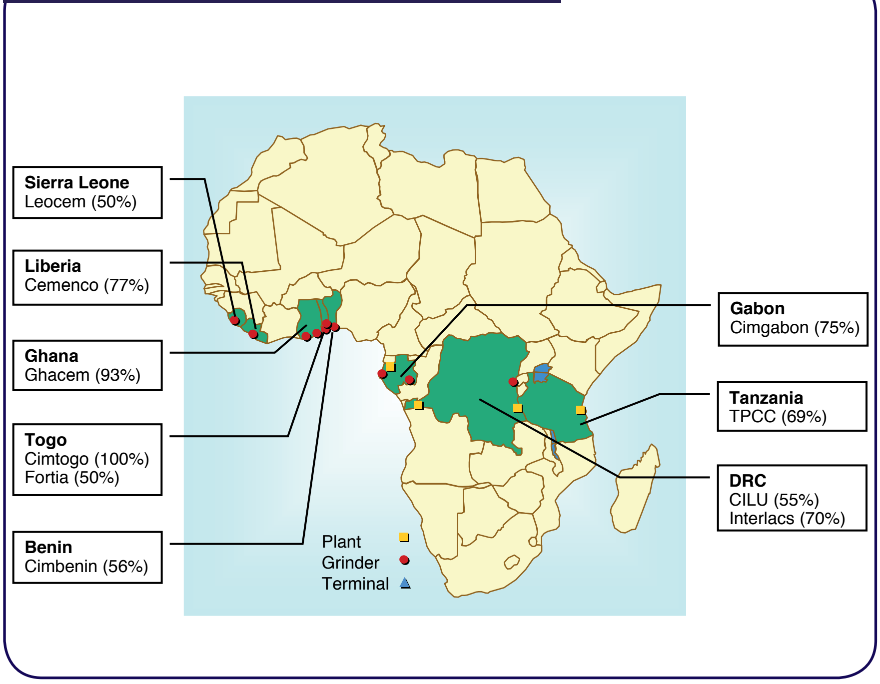
Senegal

Senegal is benefitting from reasonable political stability over many years. On a per capita basis, with the exception of the oil economies, Senegal has one of the highest GDPs in Africa at 193kg. Both domestic producers; Sococim and Ciment du Sahel have recently expanded the capacity each by around 1Mta. Ciments du Sahel's new line was commissioned in March 2011. Dangote is also in the process of erecting a plant with capacity 1.2Mta.

Senegal is already facing surplus capacity, and the additional volumes have traditionally been exported to the neighbouring countries, mainly Mali. In the future, any surplus will need to be exported by sea along the coast.

Despite the domestic surplus, the market price for cement is relatively high at US$160/t.

Figure 3: HeidelbergCement's ownership in Sub-Saharan Africa



Togo

In Togo, Diamond Cement commissioned a new grinding facility with 0.5Mta capacity in 2010. HeidelbergCement has also stated its intention to erect a 5000tpd facility in Togo. It already jointly owns the Fortia Cement grinding plant with Wacem as well as having full ownership of CimTogo which operates a 0.7Mta grinding station in Togo.

Other West African capacity additions

- WACEM and Partners will proceed with integrated capacity expansion of 0.5Mta at the Malbaza plant (SNC) in Niger.
- HeidelbergCement is commissioning a new 0.5Mta grinding mill in Liberia.
- WACEM's plant at Kayes in Mali will have a capacity of 1Mta and should be operational during 2011/2012.
- Dangote is also planning plants in Sierra Leone, Liberia and Ivory Coast.

Key strengths of East African cement markets

- Increasing government investment in infrastructure expansion and rehabilitation
- Higher economic integration under East African Community
- 300m population catchment and strong population growth
- Low cement consumption – mainly at under 60kg per capita
- Deepening financial sector with mortgage lending encouraged

• Emergence of the middle-class and aspiration for better housing
• Large infrastructure deficit.

East Africa ramps up production

Ethiopia

Ethiopia will more than double its cement-output capacity after a new factory and two enlarged plants begin production later this year. The country currently has a cement demand of 8Mta and imports 1Mta to help meet these requirements. However, by 2012-13 supply and demand should be balanced. Derba Midroc Cement is operational and will be in full production by September with its 2.5Mta plant, while expansion at Mugher Cement Enterprise and Messebo Building Materials will add a further 1Mta to production.

Kenya

The government is generating cement demand with many large infrastructure projects in Kenya. But unreliable power supply remains one of the biggest challenges faced by cement producers forcing them to operate below capacity hence losses from lower utilisation of installed capacity. Bamburi (Lafarge) operates 2.5Mta of cement capacity and is the largest domestic producer with a 41 per cent share in East African Portland Cement Co. It also owns Hima Cement in Uganda and the group has now established sales in Uganda and Rwanda.

Athi River Mining (ARM), the third largest producer in Kenya expanded its capacity last year to 1.2Mta. New greenfield capacity will also be added by the Indian Cemtech Sanghi company is to build a 1.2Mta plant at Pokot.

The Ugandan producer, Tororo Cement, is also present in Kenya as Mombasa Cement.

Tanzania

Holcim's alliance with Tanga Cement has given the Tanzanian company an advantage in its domestic market, but like its competitors it has to be more energy efficient to combat the threat of cheaper imports.

Meanwhile, Tanzanian Portland Cement (Twiga) has a 45 per cent share of the domestic market with a cement capacity of 1.4Mta. The company is refurbishing two kiln lines while still operating its newest line.

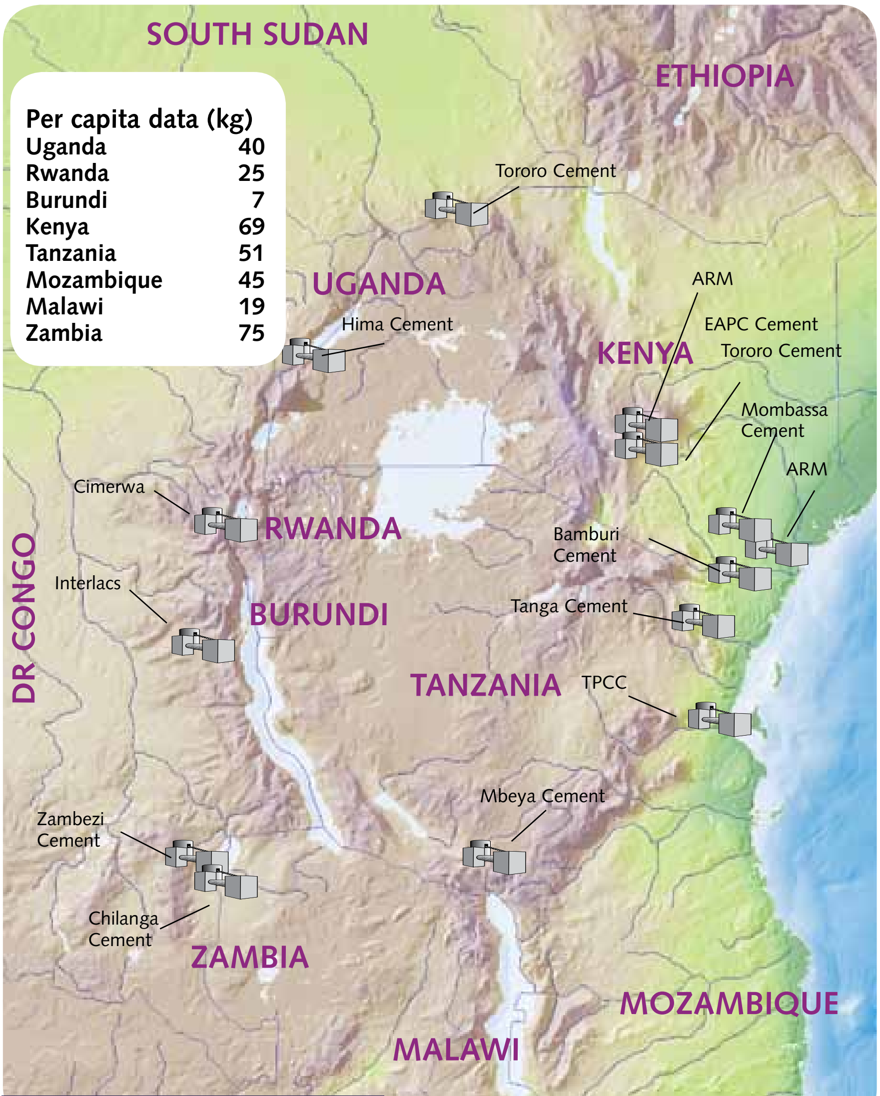


Figure 4: integrated plants in East Africa

Kenyan-based Athi River Mining is building a new 0.6Mta cement plant in Dar es Salaam, to position itself for the greater Comesa market, which will start up in 1Q12 and a 1.8Mta plant in Tanga. Currently the company has a cement capacity of 0.65Mta in Tanzania.

Meanwhile, Banco Products, another Indian company, bought a 51 per cent stake in Tanzania's Lake cement last summer and is turning it into a 0.5Mta plant.

Key features of Central Africa

• High transaction costs for project development.
• A lack of a favourable business environment and policy framework
• Limited access to finance by potential developers.
• Low state budgets and funding for development.
• No coastal access and poor infrastructure.

Central Africa on its starting blocks

Angola

Angloa is reported to have consumed around 3.8Mt of cement in 2010 and the supply deficit is less than 1Mt now that Nova Cimangola has raised its capacity to 1.8Mta.

By 2013, Nova Cimangola has plans to raise its capacity further to 3Mta as oil exploration and a developing middle class sustain the country's cement demand.

Secil Angola will raise its capacity by 2013 from 0.3 to 1Mta. Imara reports that Angola has seen the highest GDP growth in Sub-Sahara in the last decade at over 10 per cent per annum.

However, government debt has hindered most of the new infrastructure projects that are required.

Burundi
Burundi has a cement demand of 0.4Mt. In February, Burundi Cement Co (Buceco) began operations in the northern province of Chibitohe with a capacity of 0.1Mta. It is expected to produce 35,000t in 2011. The cement will be available in retail stores at US$16. Most imports come from Uganda, Kenya and Tanzania.

Republic of the Congo
The Congolese government has signed an agreement with Cementos La Union for a 0.5Mta cement factory in Pointe Noire in the south. Societe Nouvelle des Ciments di Congo (SONOCC) already operates a plant in the country.

DR Congo
At the end of 2010 HeidelbergCement acquired majority shares in three of the Forrest Group facilities with a combined output of 0.5Mta. Two of the Forrest plants will be expanded to increase their output to 1.4Mta.

Rwanda
Cimerwa plans to export cement to Burundi and East Congo. By the end of 2011 it will have a new 0.7Mta plant in the western part of the country, which will use peat for fuel. The country consumes 0.45Mt of cement of which 0.35Mt are imported. The retail price of cement is RWF12,000/sack (US$20.27/sack).

Tanga Cement also began operations in Rwanda in May last year, selling its Simba cement brand locally.

Key elements of South African cement markets
- Strong infrastructure spending in Botswana, especially on dams and in Mozambique and Zimbabwe
- Economic recovery in Zimbabwe on dollarisation. Cement sales now at 0.6Mt representing 40 per cent of installed capacity
- Low levels of cement consumption in Zambia (44kg) and Zimbabwe (50kg).

Rejuvenating older capacity and new opportunities
Malawi
Malawi is little developed in terms of cement production but changes are already on the way with local and foreign companies involved in limestone exploration in the country. The use of cement will help fight against deforestation in the region as people start to build more houses with concrete as opposed to red-burnt brick.

Lafarge Cement Malawi hope to set-up the Chemkumbi Cement Factory and along with Zagaf Cement it is targeting limestone deposits in the southern district of Balaka The Bwanje Cement manufacturing project, which is in the final phase of a feasibility study and an environmental-impact assessment, is expected to start operations in 2011.

South Africa
South Africa has seen cement consumption fall over for last three years in succession. PPC is the leading cement supplier with eight plants and three grinding units in South Africa, Botswana and Zimbabwe. PPC has seen subdued demand at home and has cancelled plans for the new ZAR4.5bn (US$668.5m), 1.2Mta Se Kika project, in favour of a three-phase brownfield expansion plan at its Riebeeck and De Hoek facilities and an overhaul of its Western Cape unit in South Africa. These changes will add 0.7Mta to PPC's capacity over the next six years.

PPC has also been looking at limestone reserves in Botswana and Mozambique with a view to building new plants.

Zambia
The capital, Lusaka, accounts for much of the high cement demand in Zambia. Lafarge Cement Zambia had a monopoly of cement production in the past and has strong exports to the DR Congo and Burundi, but it now has competition. Zambia's competition body has approved plans by a Chinese company to establish two plants in the east and northwest provinces. Zambezi Portland Cement has a capacity of 0.33Mta and as well as serving the domestic market exports to DR Congo and Burundi. It is aiming to produce 1500tpd in 2011 and is producing cement for hydroelectric projects in Zambia. Amaka Cement owned by Scirocco Enterprises Ltd is the remaining player in the country with a 300tpd plant, while Dangote plans a new plant in Kafue.

Zimbabwe
In 2011, Lafarge Cement Zimbabwe Ltd is expected to achieve 90 per cent utilisation of its 0.45Mt capacity. It exports 0.12Mta mainly to Malawi, Mozambique, Zambia and DR Congo. Over the next five years the company will raise its capacity to 1Mta, taking national capacity to 2.5Mta. Other producers in Zimbabwe include Chinese-controlled Sino-Zimbabwe and PPC. The Chinese enterprise is jointly and financially contributed to by CBMC and Zimbabwe Industrial Development Corporation. It operates a 700tpd kiln in the Nyanda mountain range.

Outlook
Imara has suggested that by 2013 Sub-Sahran Africa will see significant capex investments and a rise in cement capacity from 12.8Mt to 29.2Mt. The main cement producer behind this drive is Dangote Cement. If all its projects come to fruition it could increase its cement capacity from 8Mta to 20Mta by 2013. The positive consumption trend in most West African countries are continuing and all the major operators have embarked on capacity increases, representing an additional 20Mt by 2015. Despite this significant increase, the region is expected to remain a net importer of clinker and cement.

West African per capita cement consumption is still below most other regions in the world and has further growth potential in the years to come. In the short-term, Imara analysts argue that by end-2012, West African cement production will be greater than cement consumption levels attained in 2012 and that there could potentially be an oversupply of cement in Nigeria of 10-12Mta.

The main challenge for sustainable growth remains the lack of political stability in several West African countries. Important factors such as the urgent need for expansion of sea ports and improved power supply will also be decisive for further economical development.

East Africa also has room for growth in terms of cement consumption, which currently has a wide average between 20-75kg/capita this region (see Figure 4). There is increased competition in Ethiopia and Tanzania as these domestic markets grow and the potential for exports to Southern Sudan have become a reality.

Central Africa is likely to be the last region to see per capita consumption rise to higher levels, but development has already begun and producers are looking to boost cement output.