



Fertilizing the Nigerian Economy

Indorama Corporation

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An IFC Manufacturing Case Study



IFC

**International
Finance Corporation**
WORLD BANK GROUP

Creating Markets, Creating Opportunities

MAJESTIC

“We act as a stimulant in the broader economy of the country; especially [Rivers] State has been hugely impacted.”

– Munish Jindal, CEO, Indorama Eleme Fertilizer & Chemicals, Ltd.



The Building Blocks

Nigeria, Africa's largest economy, has abundant natural resources, especially in oil and gas. These two resources, when processed, form petrochemicals that are the building blocks of many consumer and industrial products, such as polymers, fertilizers, chemicals, rubber and textiles, among others. But the country's domestic petrochemicals industry is small, making it hard for Nigeria to take advantage of its oil and gas resources to support economic diversification and job creation. Nigeria's few refineries operate below capacity and gas flaring from upstream oil and gas extraction and processing generates significant carbon emissions. Fluctuating crude prices and foreign exchange rates have added to the industry's challenges. Strengthening the petrochemicals industry is one part of building a vibrant, diversified economy to spur growth and add jobs. It can support fertilizer production, which in turn helps the country's agriculture sector, which employs more than half the country's workforce and provides a livelihood to about 90 percent of people living in rural areas. It provides the underlying chemicals for manufacturing products that are increasingly in demand by the country's growing middle class amid its rapid urbanization. But barriers to entry into petrochemicals are high, requiring large capital investments along with technical and management know-how, perseverance, and vision. IFC's long collaboration with Indorama Corporation has helped the company grow into a multinational, while building economic opportunities in Nigeria.

Indorama

Indorama Corporation is a multinational based in Singapore with diversified interests in petrochemicals and textiles in some 35 countries, producing products including polyethylene, polypropylene, nitrogen fertilizers, phosphate fertilizers, polyester, polyester feedstocks, textiles, and medical gloves. The company, founded by M.L. Lohia and his son, S. P. Lohia, in 1975 as Indo-Rama Synthetics in Indonesia, began as a yarn spinning company and manufacturer of cotton yarns. IFC's collaboration with Indorama started in the 1990s, when IFC offered financing that helped the company grow in Indonesia and then expand to Malaysia, Uzbekistan, Turkey, and other countries. In 2006, Indorama tapped IFC financing for the company's first investment in Sub-Saharan Africa, the acquisition of an underperforming petrochemical company in Nigeria under a government privatization program. Today, Indorama Eleme Petrochemicals Ltd., based in Port Harcourt, Rivers State, ranks as Africa's second-largest producer of polyolefins, a category of polymer resins used to make durable consumer and industrial plastic goods. Indorama expanded into fertilizers in 2016, with a urea fertilizer plant, Indorama Eleme Fertilizer & Chemicals, Ltd., along with dedicated port terminal for surplus urea exports.

Additional investment has been made for a second fertilizer plant that is under construction. These projects are part of Eleme's vision to build Africa's largest petrochemicals hub in Nigeria—which if achieved would give a major boost to Nigeria's economy.

Investment

The World Bank Group promotes diversified, non-oil growth and job creation in Nigeria. One way to achieve these goals is by expanding basic infrastructure and growing agribusiness and manufacturing, including boosting those economic sectors that add value to production. It's a strategy that IFC has pursued in its collaboration with Indorama. In 2006, IFC structured a financing package that enabled Indorama to acquire the controlling stake in Eleme Petrochemicals from the Nigerian National Petroleum Corporation, turning it around to achieve full operation and profitability. Eleme Petrochemicals taps Nigeria's abundant natural gas resources to produce polyethylene and polypropylene, which are used in the manufacturing of commercial and consumer plastic goods. Building on this success, Indorama established Sub-Saharan Africa's largest granular urea fertilizer plant, built by Indorama Eleme Fertilizer & Chemicals Ltd. with financing from IFC and other lenders. Tapping Nigeria's plentiful natural gas including flared down gas, Indorama Eleme adds value to an underutilized resource by using it to produce urea fertilizer. The fertilizer plant, which began production in 2016, has an annual production capacity of 1.4 million metric tons and sells to both domestic and international markets. Construction is underway on a second, IFC led-financed fertilizer plant, which will double the company's capacity in Nigeria and further develop the country's export market. IFC also stepped in to support Indorama's port terminal project when funding fell through. Besides financing, IFC has lent environmental, social, and emerging-market expertise to Indorama's Nigeria projects.

Impact

As one of Nigeria's biggest foreign investors, Indorama, with backing from IFC, has had a broad impact on the country's petrochemical sector and economy, helping boost production up the value chain. When Indorama first came to Nigeria, virtually all polymer resins, used to manufacture a variety of goods, were imported. Eleme Petrochemicals introduced additional products and guaranteed a constant supply, helping to fuel double-digit growth in the country's plastics industry in the initial years. Today, besides generating direct jobs, the plant feeds downstream industries including manufacturers of resin furniture and containers, and supports numerous ancillary businesses from contractors to caterers to trucking companies. Similarly, Eleme Fertilizer has created jobs and increased availability and usage of fertilizer in the country, supporting the government's initiative to substantially grow the agricultural sector. Together with the petrochemical plant, it has contributed to Nigeria's economic growth. The impact extends beyond the economy. Indorama has modeled good corporate-community relations through a dividend-sharing scheme for Eleme Petrochemicals. It has educated more than 1 million farmers on agriculture best practices. And it has promoted good management practices and worker training, imparting skills to the workforce that can help lift other companies and industries. Indorama also promotes sustainability: By using captured gas—that otherwise would be flared—for fertilizer production, Eleme Petrochemicals and Eleme Fertilizer projects support Nigeria's pledge to eliminate routine gas flaring by 2030 under the World Bank-led Global Gas Flaring Reduction Partnership, thereby reducing associated carbon dioxide emissions.

Next Steps

Nigeria remains important for both Indorama and IFC. Nigeria is Africa's largest economy and its most populous country, with more than 200 million people. As such, the country can serve as a springboard for corporate expansion and regional economic development. Indorama currently is working on its second fertilizer plant. When the plant is onstream, expected in late 2020, it will target export markets in western Africa, the Americas, and Western Europe. IFC, meanwhile, is supporting Nigeria's Dangote Group to establish its own greenfield urea plant. For IFC, this project would continue the push to diversify Nigeria's economy and boost value-added production, while also generating more competition and lower prices in the fertilizer market.

Unpacking the Success

INTERVIEW WITH
Kalim M. Shah, Chief Investment Officer, Sub-Saharan Africa Department
International Finance Corporation

IFC and Indorama go back a long way, to the 1990s. How did you start working together in Nigeria?

They have a global footprint. They come to us when they feel the risk is higher and they feel we can add value. Financing is one part, but also expertise, local knowledge, and the ability to mobilize. They need us, and we need them; they're a very strong client.

Eleme Petrochemical was not operational when Indorama took it over in 2006. How could you be certain you'd recoup your investment?

We were able to structure financing to balance the risks, but if things didn't work, there was breathing room to tweak things.

Actually, Indorama got the plant up and running in 12 months.

They have a very strong technical foundation with a pool of highly skilled people. They can pull technical staff from other facilities. They also have in house a good recruitment process for India and recruited technical people from there to help train the Nigerians. The plant was built by the Japanese and it's of a good quality, but it was badly managed and operated. Indorama had to do significant turnaround maintenance. That was part of the financing, to get the plant up to standard and running.

Did you learn any lessons with this project?

The lesson is to have a strong sponsor from the management and technical point of view, because there are a lot of moving parts. We'd like to have seen more privatization by the Nigerian government given the success of this one, but it never happened.

For IFC, it's good for investments to move countries up the value chain. How has Indorama been able to do that in Nigeria?

There's a lot of gas but if you're liquefying and exporting, it's not adding much value to the local economy with associated spin offs. With the Indorama projects, you're definitely adding value in-country. Their petrochemical plant uses natural gas liquid to produce polyethylene and polypropylene. These are used to make

“They are the model of the kind of client that we like to support. Their investments demonstrate private sector development works to increase the outcomes for all stakeholders in high-risk developing countries.”

plastic buckets, lawn chairs, heavy-duty plastic items. Natural gas is used for urea, which is produced by its fertilizer plant. Reducing flaring also helps add value by helping Nigeria meet its climate commitments. If there's an increase in demand for that gas, it gives suppliers an incentive to capture it.

IFC also wants investments to promote job creation and economic growth. What impact has Indorama had in these areas?

The impact in terms of direct employment will be low. You need 100 to 200 people to run [Indorama's plants], not a huge number. But there's a lot of spillover effect: catering, cleaning, maintenance people. There's a whole ecosystem. The polyethylene and polypropylene plant definitely created a lot of downstream. Once the availability is there, there's expanded usage and the volume just grew. It's the same with urea. The volume is growing because of availability and Indorama spending time with farmers on how to use it properly.

What's next for IFC in Nigeria?

In my view, we should be doing a lot more in the country to add value to gas, to monetize it, and to reduce flaring. The next step for us is to increase competition. The hope is to help sponsors who want to do gas-based industries to do so, to add value to natural resources in Nigeria, and to increase competition domestically to benefit end users. There are a couple of projects we chased with domestic sponsors, but none has really crystalized. Talk about the ability to execute—everyone has seen Indorama's success, but it's not that easy.

Tapping the Untapped

INTERVIEW WITH

Munish Jindal, CEO

Indorama Eleme Fertilizer & Chemicals, Ltd.

Eleme Petrochemical was basically shut down when you took it over. What made you decide to invest?

It was getting crowded and quite competitive in polyester and the margins were going down, so Indorama looked into diversifying. To do petrochemicals is quite expensive so there's less competition. This plant was not operating and it had its challenges, operating in a place like Nigeria. But we had experience in developing countries.

So why Nigeria?

The most interesting part was the huge availability of gas that's not properly utilized. There was a complete absence of a petrochemical industry when we acquired this plant.

You turned the plant around in 12 months. How did you do it?

More of the challenges were not technical but had to do with management and the philosophy with which the company was managed. For example, the contractor for the fertilizer plant required us to spend \$8 million on spare parts inventory but we invested \$30 million because if the plant is down, nothing is available in-country. You invest heavily in operation and maintenance manpower, because you can depend on yourself only.

Is financing the main reason you engaged IFC on Eleme Petrochemical?

IFC, besides technical, financing, and standards, has many more environment and social requirements. I personally like that it makes sure there's more focus on these, because if we ignore these in the beginning, they ultimately will become a social risk. Our team also gets the benefit of learning from the huge experience the IFC team has in terms of setting up standards and delivery on operations.

You now have several investments in Nigeria's petrochemical sector. Was that the plan all along?

We made it our motto to develop the largest petrochemical hub in Africa, based out of Nigeria, not only selling to the region but across the Atlantic. Once we stabilized the [petrochemical] operations,

“We want to produce [petrochemicals] in excess of five million tons. We will cross that with the next project in Nigeria.”

within three years, we were working on other opportunities aligned with the federal government's policies.

How have you added value to the petrochemical sector?

When we came in, all polymer resins were imported. We developed additional polymer products based on customer demand and ensured a constant supply. We don't monitor it anymore, but there was double-digit growth for the first five or six years for the whole segment of the plastics industry, from a very low base. Now we can't even supply the whole market.

Your fertilizer company has impacted the broader market, too.

Before we started producing urea it was all imported. Often, urea fertilizer was not available to farmers at the time of planting seasons because of commercial and logistical reasons. Prices also were very high. Now we make urea fertilizer available to farmers at competitive prices throughout the year. Farmers no longer need to buy it in advance—they can buy urea only at the time of planting seasons because they have confidence that it will be available when they need it.

Also, we deeply engage with farmers. We've covered about 1 million farmers in the last three-and-a-half years, teaching them the best farming practices for each crops, how to increase crop yields.

Your workers are learning skills they can take with them to other jobs in the industry and even other industries.

It's absolutely true. Our employees gain experience that helps them grow in the company and also find new opportunities elsewhere. Our philosophy is to motivate employees to excel, which helps our employees, our company, and Nigeria's economic growth and development

An aerial photograph of a port facility. In the foreground, a large red oil tanker is docked at a pier with a blue roof. To the left, a smaller green and white ship is docked. In the background, several large cargo ships are docked along the shore. The port is surrounded by green fields and a body of water. The text is overlaid on the water area.

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—Kalim M. Shah, Chief Investment Officer, Sub-Saharan Africa Department,
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DECEMBER 2019



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