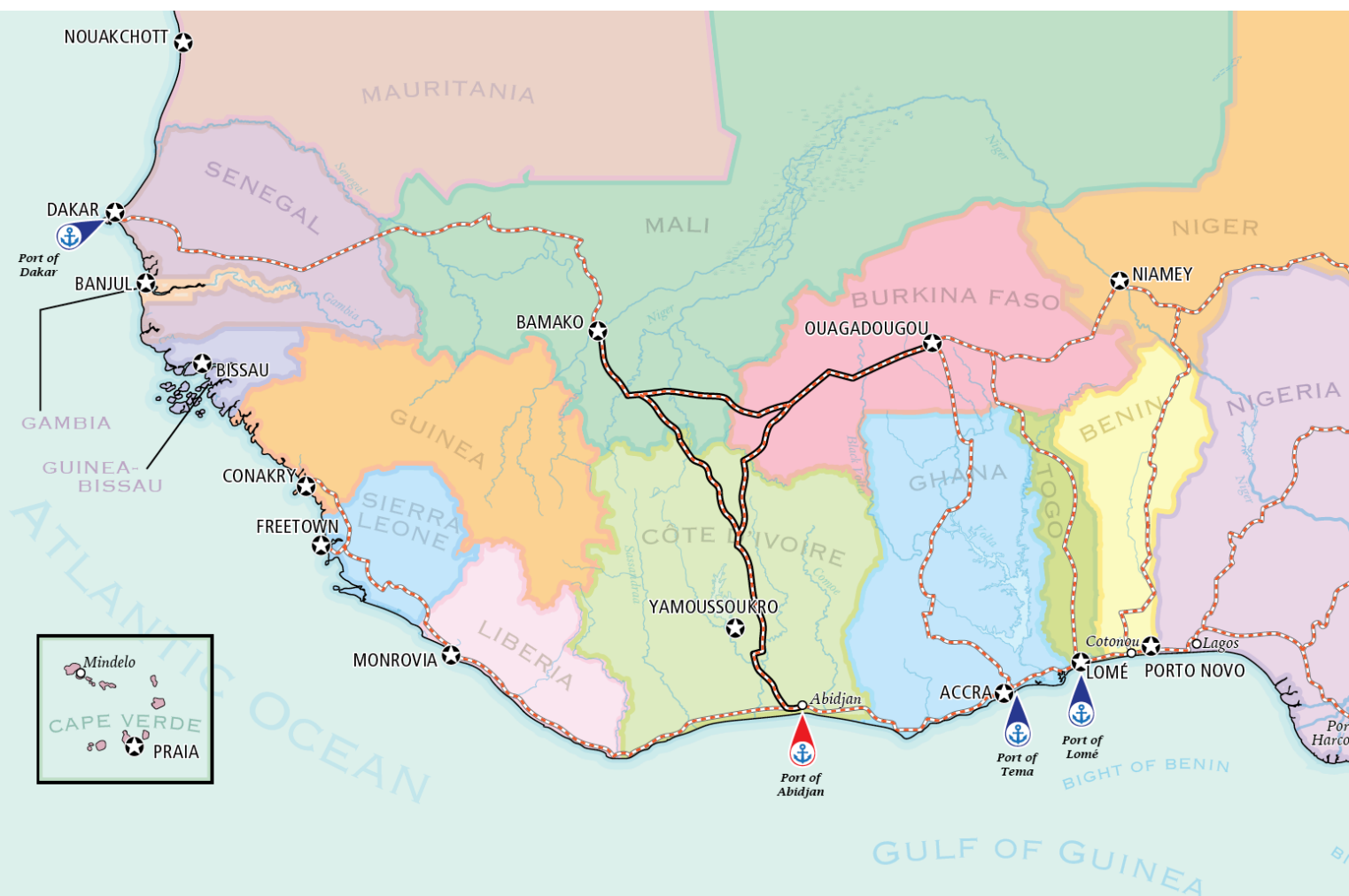




FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

ENHANCING GROWTH THROUGH REGIONAL AGRICULTURAL INPUT SYSTEMS (ENGRAIS) PROJECT FOR WEST AFRICA



FERTILIZER COST BUILD-UP AND PROCESS MAPS IN WEST AFRICA

PORT OF ABIDJAN

August 2019 | Dakar – [Abidjan](#) – Tema – Lomé



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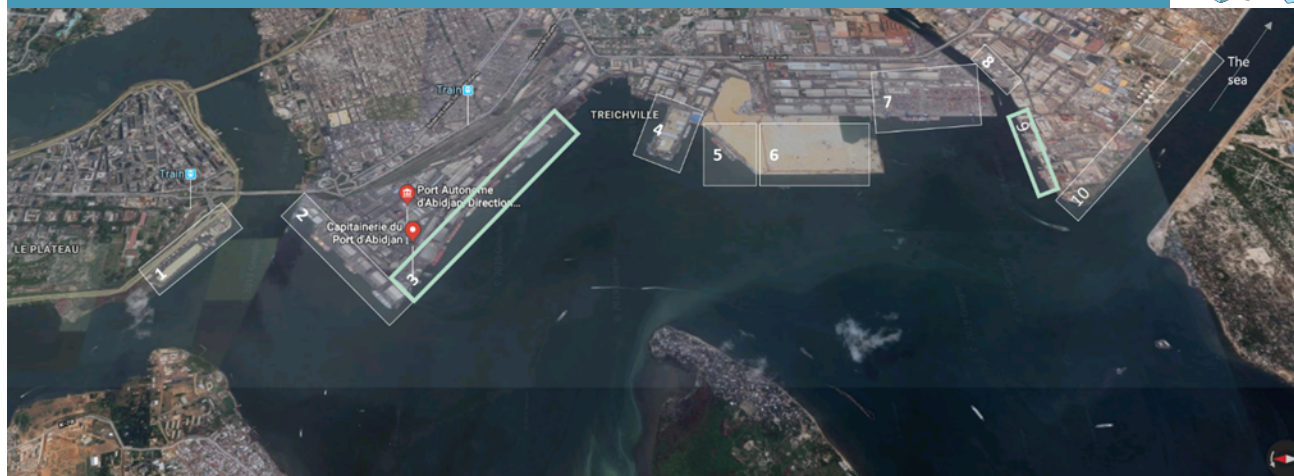
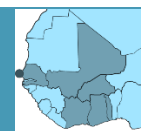
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Port Authority of Abidjan (PAA)

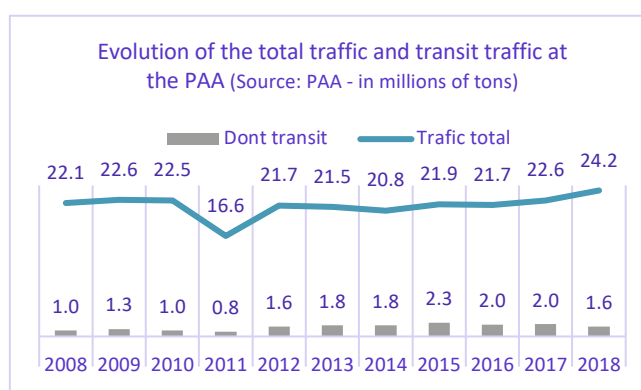


Map	1	2	3	4	5	6	7	8	9	10
Type of Dock	Bulk	Bulk	Bulk	Fishing	RORO	Bulk	Container	Tanker	Bulk	Tanker
Products	Fruits	Cereals/ General	Minerals/ General	Fish	Vehicles	Vegetable Oil/General		Gas	Fertilizer/ General	Oil
Length of Dock (m)	350	775	1,525			1,785			155	
Draft (m)	7	8.5 and 9.45	9.45			11	11.5		8.2	
Bulk (tons)	Mini Bulk 10,000	Handysize 30,000	Handysize 30,000			Handysize 30,000			Mini Bulk 10,000	
Key Data	Storage Area		Bonded Warehouse		Bulk Fertilizer Unloading Capacity		Bulk Waiting Time (days)		Time on Dock Bulk Carrier in Port (days) ¹	
	19 areas 250,000 m ²		18 warehouses 134,614 m ²		3,000 to 5,000 tons/day * 2 docks		Average: 3 Min: 0.6 – Max: 37		Average: 5.4 Min: 0.7 – Max: 9	

The Port Authority of Abidjan (PAA) is the first port in Côte d'Ivoire and the second in West Africa, after the port of Lagos (Nigeria), with a total volume of processed goods greater than 20 million tons since 2007 (except during the socio-political crisis in 2011).

The growth of maritime traffic in the PAA over the last 10 years is quite low (less than 1% per year), although a sharp increase was observed in 2018 (more than 24 million tons) for the first time in the history of the port. On the other hand, the transit traffic is relatively reduced (less than 7% of total traffic) over the last four years.

Fertilizer imports by the PAA have progressed during recent years between 350,000 and 550,000 tons per year, of which an average of two-thirds is cleared in Abidjan and one-third passes directly to the hinterland countries.



¹ The average transit period over the period May 2018 to May 2019 for dry bulk, according to www.marinetraffic.com.

Strengths of the Port Authority of Abidjan

One of the strengths of the PAA is the importance of exports in total traffic. Exports represent, on average, more than 30% of the volume that passes through the port, compared to between 6% and 21% for the other ports of the sub-region.

This relative importance of exports makes it possible to reduce freight costs slightly, especially for containers, for which shipping companies can offer cheaper fares since they will not have to return them empty. Large exports from hinterland countries also rationalize land transport costs based on truck return costs.

Another advantage of the port of Abidjan is its central geographic location within the sub-region, which makes it possible to reduce the cost of land transport both to Mali and Burkina Faso. Specifically, land transport is shorter and, therefore, less expensive from the port of Abidjan to Sikasso and Bobo-Dioulasso. These cities are large shopping centers located in the center of or near major agricultural production areas (cotton basins of Southern Mali and Western Burkina Faso), where important fertilizer distribution is conducted.

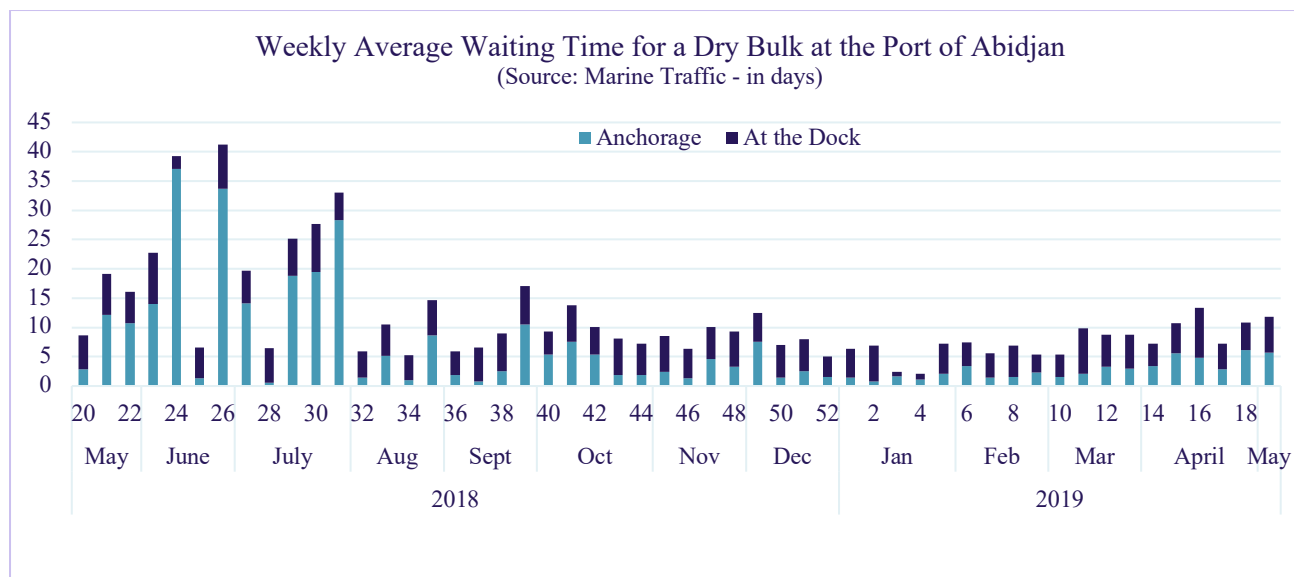
A final advantage of the PAA is the ability to use rail transport to convey fertilizer to Burkina Faso (unloading in Bobo-Dioulasso and Ouagadougou). It is the only port that benefits from an active railway line. Although fertilizer shipment by rail involves additional handling (from truck to train and train to truck) and generally causes more severe product losses, it can be competitive, especially during periods when the road transport supply is reduced (during cocoa and cashew milking periods) and the cost and time of trucking is higher. Also, goods in transit using the railway are not subject to the Road Guarantee Fund payment (0.5% of the Customs value).

Weaknesses of the Port Authority of Abidjan

The main weakness of the Port Authority of Abidjan is its congestion, which on average is greater than that of other ports in the sub-region. Over the last 12 months, the average waiting time for moored vessels was 3 days with 5.4 days at dock, i.e., more than 8.5 total days of waiting, compared with an average of slightly less than 7 days in other ports, where the average waiting time is 2.3 days with 4.7 days at dock.

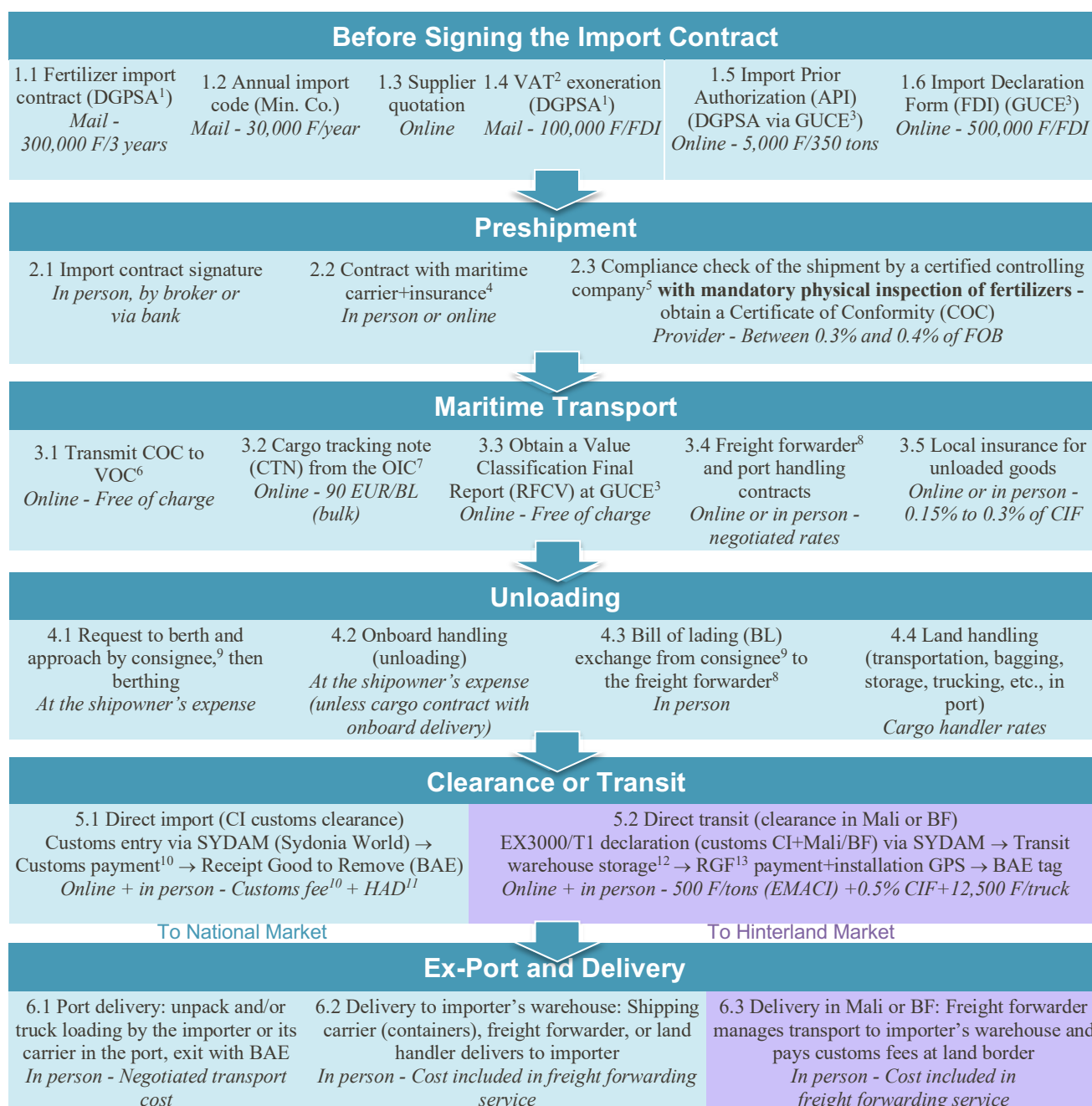
Fertilizer Imports via the Port Authority of Abidjan (in thousands of tons)			
	2016	2017	2018
Clearance in Abidjan	321.9	299.5	228.7
Hinterland transit	182.1	250.1	128.2
Total	504.0	549.6	356.9

Distance to Hinterland Cities (in km)			
Burkina Faso		Mali	
Bobo-Dioulasso	Ouagadougou	Sikasso	Bamako
799	1,117	804	1,177



Fertilizer Import Procedures via the PAA

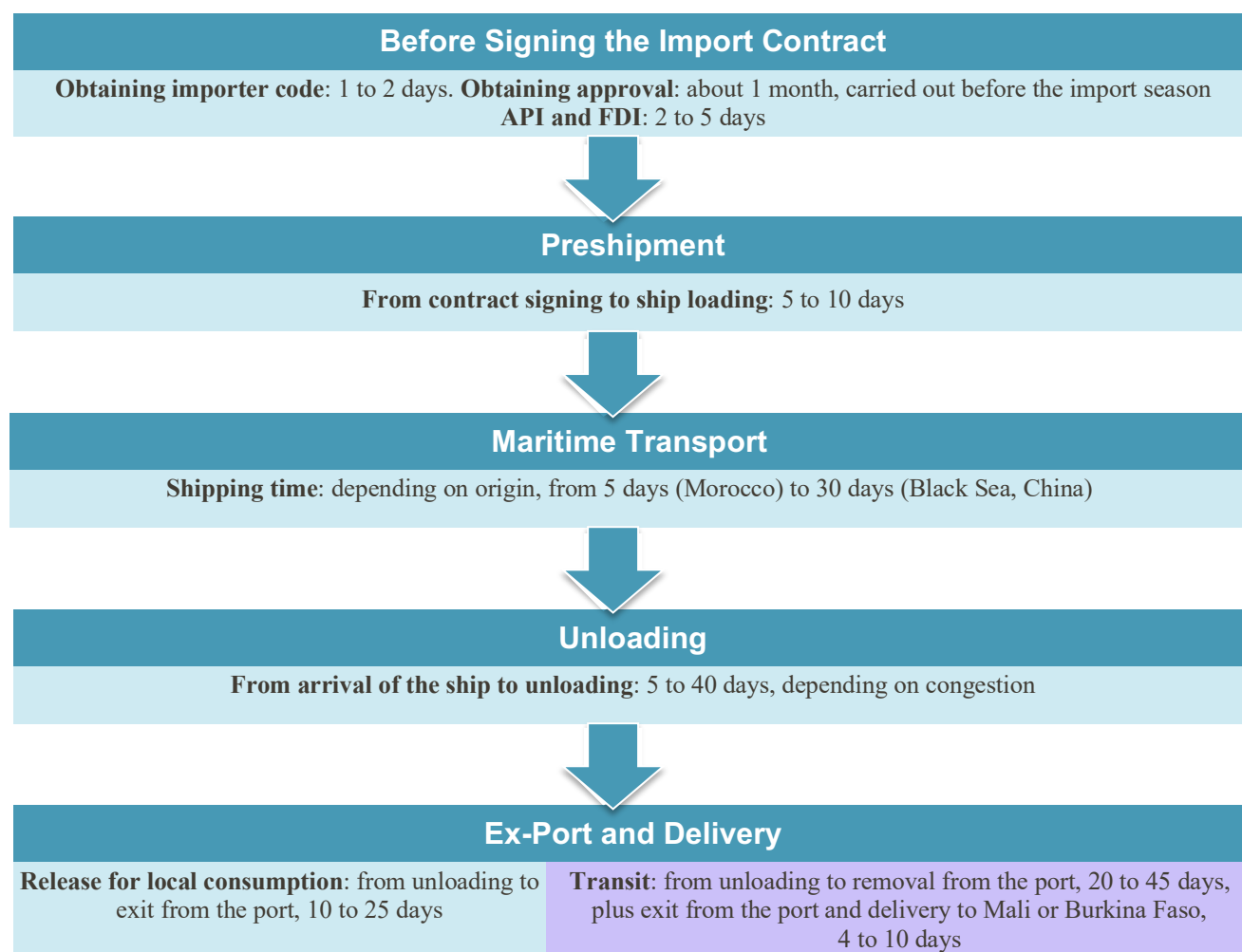
The following diagram summarizes the main steps in the import process. Depending on what the importer chooses, all or some of these steps can be delegated to the forwarder.



Notes on the Import Process

- ¹ **DGPSA**: Directorate of Productions and Food Security of the Ministry of Agriculture.
- ² **Exemption from VAT**: This is automatic when the product is classified in the fertilizer category (HS code 31) but is subject to an express request from the DGPSA for ingredients not specific to fertilizer production (borax, dolomite, etc.).
- ³ **GUCE**: [One-Stop Shop for Foreign Trade](#), the umbrella organization of the Ministry of Commerce in charge of the simplification, compilation, and control of the various import formalities under different ministries and departments.
- ⁴ If the import agreement is a CIF contract, transport and marine insurance are the responsibility of the exporter (supplier); if it is an FOB contract, the importer contracts transport and insurance.
- ⁵ The **inspection companies approved** by Côte d'Ivoire for the preshipment conformity assessment of "sensitive products," which includes fertilizers, are Bureau Veritas, COTECNA Inspection, Intertek International, and *Société Générale de Surveillance* (SGS).
- ⁶ **VOC**: Compliance verification service of the Ministry of Commerce in charge of preventing fraudulent product importation.
- ⁷ **OIC**: *Office Ivoirien des Chargeurs*, an industrial and commercial public institution responsible for regulating the supply and demand of freight at the Port Authority of Abidjan. The CTN can be accessed at <https://www.oic.ci/source/fr/defaulte.php?rubrique=bsc>.
- ⁸ **Freight forwarder**: The company responsible for the representation of the importer at the port for all or part of the procedures to be carried out at the port and at customs. Depending on the contracts signed with the importers, the freight forwarder can handle only the administrative formalities with the consignee, port authority, and customs or can handle part of the handling and transport to the importer's warehouse. This is particularly the case during transit to hinterland countries, in which the freight forwarder will manage the transport at least to the land border with Mali or Burkina Faso and customs clearance at the border.
- ⁹ **Consignee**: The company in charge of the representation of the charterer (shipowner) at the port for all the steps to be carried out at the port. The transfer of the product liability between the charterer (carrier) and the importer and the end of the contract of carriage is materialized during the exchange of bill of lading (also called BL exchange) between the consignee and the freight forwarder representing the importer.
- ¹⁰ **Customs fees**: Customs fees are virtually homogeneous at the ECOWAS (Common External Tariff) level and consist of a Community Levy (CL) of 0.5% of the CIF value, a Solidarity Levy (SL) of 0.5% of the CIF value, and a Statistical Royalty (SR) of 1% of the CIF value. Customs Duties (CD) of 5% of the CIF value are also levied on already formulated NPKs but not on other types of fertilizers and ingredients. In addition to these ad valorem charges, additional Labor Costs (TS) are paid to Customs amounting to 20,000 FCFA per customs declaration. In the specific case of importing a container, additional Inspection Fees are charged for scanning the container, which amount to 0.75% of the CIF value.
- ¹¹ **HAD**: Fees for Licensed Customs Agent. It is the fees of the forwarder "licensed Customs Agent" for transit formalities with the Consignee, International Trade organization, Port Authority, and customs. These fees vary by freight forwarder, depending on the tasks assigned and volume handled. HAD fees vary between 1 and 2 USD/ton, plus any handling and transportation costs paid by the freight forwarder.
- ¹² **Transit warehouse**: These are managed by the *Entrepôts Maliens de Côte d'Ivoire* (Malian Warehouses of Côte d'Ivoire [EMACI]) for transit to Mali and by *Entrepôts Burkinabè de Côte d'Ivoire* (Burkinabé warehouses of Côte d'Ivoire [EBCI]) for transit to Burkina Faso. These structures levy a fee of 500 FCFA/ton on the product in transit for the Coordination of Transport Activities (RCAT).
- ¹³ **RGF**: The Road Guarantee Fund is a guaranteed fund managed by the Chambers of Commerce and Industry of both the country where the port is located and the country of destination. It is used as a guarantee to customs in the event of a spill of the goods without payment of customs duties and taxes during transit between the port and the final destination. The levy that supplies this fund is 0.5% of the CIF value of the goods.

Process duration: the supplier's quotation to delivery of the goods, 1 to 4 months!



Import Fees via the PAA

The following table shows the most common case,² bulk import with in-port packaging. However, for blending near the port city, the product is transported in bulk to the factory, which significantly reduces the port fees. Sales prices in Côte d'Ivoire are estimated for the northern part of the country (cotton basin). Sales prices in Mali and Burkina are estimated for production areas for which the port of Abidjan is competitive (Sikasso and Bobo-Dioulasso).

² The data presented are only averages and do not cover all import processes. A comparison matrix produced during the study allows more complex comparisons per port, final market, and import modality. It also gives the minimum and maximum values per step according to the costs specific to each importer, the storage period, the loan interest rate, and the purchase price of the raw material. All values should be considered orders of magnitude that may vary according to the international market of inputs, exchange rates, supply and demand of transport on national markets, and supply chain congestion, including unloading at the port.

<i>Values in USD/ton</i>	Simple Product (import Urea, DAP, MAP, etc.)	Complex Product (import NPK formulated at source)	Abidjan Formulation (import 90% of ingredients)	Mali or Burkina Formulation (import 90% of ingredients via PAA)
FOB reference price	300	300	260	260
Sea freight (bulk carrier) + insurance	40	40	35	35
CIF reference price	340	340	295	295
Port charges	42	42	25	35
Road transit (Abidjan→Mali/BF)				65
Clearance	8	22	7	7
Storage and handling fees of the importer	10	10	35	25
Administrative and financial costs of the importer	25	25	32	30
Importer profit	30	30	30	30
Price ex-warehouse importer/blender	455	469	429	487
Transport to the distribution area	→CI: 25 →Mali/BF: 65	→CI: 25 →Mali/BF: 65	→CI: 25 →Mali/BF: 65	→Mali/BF: 10
Administrative and financial costs of the distributor	10	10	10	10
Distributor profit	15	15	15	15
Price from warehouse to distributor production area	CI: 505 Mali/BF: 545	CI: 519 Mali/BF: 559	CI: 479 Mali/BF: 519	Mali/BF: 522
Price ex-warehouse to distributor production area (in FCFA/50-kg bag)	CI: 14,650 Mali/BF: 15,800	CI: 15,050 Mali/BF: 16,200	CI: 13,900 Mali/BF: 15,050	Mali/BF: 15,150

Projects and Developments of the PAA

1) Enlargement and deepening of Vridi canal (port entrance):

The Vridi canal, through which vessels move between the open sea and the lagoon where the port is located, has been enlarged and deepened between 2015 and 2019. This enlargement allowed the width of the canal to be increased from 250 to 270 meters and its depth from 11.5 to 17.5 meters. Now vessels with a draft of 15 meters and a width of more than 250 meters can access the port. To complete this project, plans include deepening the generalist bulk wharf (#2 on the map) by 2021. This should accommodate Handymax type ships that can carry up to 60,000 tons.

2) Second container terminal (TC2):

A second container terminal (TC2) is being completed. The terminal will have an area of 37.5 ha and will be able to handle 1.5 million 20-foot containers (TEC) per year. This additional infrastructure could slightly reduce the cost of container imports, although the impact on fertilizer imports will be negligible since less than 10% of imported volumes arrive in containers.

3) Extension of the port:

In the longer term, port extension projects are planned on new sites at the western part of the current port, particularly in Yopougon district and Boulet Island. Dates for these projects have not been set at this time.

Recommendations for Importing Fertilizer via PAA

General Recommendations

1) Reduce the waiting time of fertilizer vessels:

The West African Fertilizer Association (WAFA), with support from the Ministry of Agriculture of Côte d'Ivoire and ECOWAS, should negotiate with the PAA a berthing priority for fertilizer vessels on the ore berth (allowing berthing of Handysize bulk carriers) over other mineral products (cement, sand, etc.), for which logistical issues are of less seasonality.

2) With the support of FEDERMAR, encourage the port to implement an action plan to reduce congestion:

WAFA and fertilizer importers should request the Maritime Federation of Côte d'Ivoire (*Fédération Maritime de Côte d'Ivoire* [FEDERMAR]) to support a global action plan to reduce congestion in the port of Abidjan.

3) Upgrade the Siveng Wharf:

This wharf, which is largely dedicated to fertilizer importation, should undergo much development to maximize its potential and improve access by both sea and land.

4) Reduce land transport costs:

WAFA should facilitate tripartite agreements between road carriers, export companies (cotton, cocoa, cashew, etc.), and actors in the fertilizer industry (importers and distributors) to optimize freight costs, particularly by reducing the number of empty trips.

Specific Recommendations

1) WAFA should design a monitoring system for port logistics:

WAFA should recruit an internal or external analyst to produce a monthly report on the logistics situation. By combining the analysis of sea freight cost data (Argus data, Freight Brokers, etc.) with data on vessel port passage time (www.marinetraffic.com), this report would help importers anticipate logistics costs and risks. It could also encourage importers to better organize joint negotiations in the event of a risk or a common problem.

2) Negotiate a fertilizer import priority season on the bulk carrier terminal:

WAFA should negotiate a priority season for fertilizer importation with Sea Invest (manager of the bulk carrier terminal) and the Port Authority of Abidjan to reduce the time and shipping fees at a specific time of the year (e.g., January). All importers (Ivorian and sub-regional) that made an advance commitment on a minimum volume could benefit from this. Handysize type bulk carriers (25,000-30,000 tons) could then be used to import fertilizer without incurring the risk of high demurrage fees.

3) Organize a joint negotiation for Sitarail (railway company) investment in dump wagons:

Interest in using trains to ship fertilizers to the north of Côte d'Ivoire and Burkina Faso is currently limited by the major breakage and product loss caused by this mode of transport (boat → bagging → truck → train → truck). The use of hermetically sealed dump wagons could reduce this, and bagging could be performed at dry ports. Investment in dump wagons could be supported by Bolloré, with backing from the governments of Côte d'Ivoire and Burkina Faso and their technical and financial partners, if the request is supported by a large number of operators. This solution would reduce transit costs as well as the uncertainties associated with land transport.

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