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Report Highlights:

Ghana's overexploited marine stocks will continue to limit domestic seafood production, while population and economic growth push consumption upwards. To address critical levels of overfishing, policymakers seek to impose closed seasons in 2019, after unsuccessful attempts to do so the previous year. A small but rapidly expanding aquaculture sector shows promise in addressing supply challenges, but imports will also play a key role and account for an increasingly significant share of domestic consumption. Ghana imported an estimated \$311 million in seafood and fish products in 2018. As the local aquaculture industry gains steam, imports of soybean meal and competition for domestically produced feed grains will also increase. U.S. soy (beans and meal) and seafood exports to Ghana, valued at \$4.6 and \$7.3 million respectively in 2018, stand to benefit from these trends.

General Information:

Marine, inland (rivers, lakes and lagoons), and farm operations all play a role in Ghana's fisheries sector. Marine production stagnated in recent years, and available data suggests that inland capture production decreased marginally. The fishing industry accounts for an estimated 1.2 percent of total GDP, while agriculture accounted for 6.6 percent of the GDP (Ghana Statistical Service). While this is a decline from fishing's traditionally central role in Ghanaian economic life, the sector remains an important part of the country's economy and culture. Total domestic fish production from all sources in the past five years averaged just under 450,000 metric tons (MT). Although beginning from a low level, the aquaculture sector registered remarkable growth since 2010, growing from 10,000 MT to 57,000 MT of total production in 2017. Any future production increases will likely come from fish farming, as marine stocks approach critical levels due to overfishing. Tuna production and exports did expand recently, but the overall production trend for capture fisheries is static, if not declining.

Figure 1: Ghana's Waterways



Based on official production and trade data, Post estimates annual domestic consumption at approximately 775,000 MT in 2018, meaning there is considerable space for both U.S. exports and further development of domestic aquaculture. Ghana imported an estimated 370,000 MT in 2018. The common fish species imported into Ghana include mackerel, sardines, and whiting/hake. Ghana's seafood imports require a permit from the GOG. However in 2014, Ghana prohibited imports of tilapia in all forms as a means of protecting local producers, with more recent import bans also citing the threat of Tilapia Lake Virus (TiLV). Driven by the growing domestic aquaculture industry and a lack of steady supplies of quality domestic inputs, Ghana increasingly imports soybean meal, the major protein source in animal and fish feeds. Soybean meal imports jumped from 56,000 MT in 2017, to 117,000 MT in

2018. Ghana's whole soybean imports remain low, but increased from 1,000 MT to 22,000 MT in the same period. Currently, Argentina is the primary supplier of both beans and meal.

Table 1: Ghana's Fishery Production, 2000 & 2010-2017 (1,000 MT)

	2000	2010	2011	2012	2013	2014	2015	2016	2017
Total Production	457.1	412.9	441.6	400.5	434.1	413.0	451.1	465.3	476.6
Marine	377.6	319.6	327.1	283.0	314.9	289.1	320.2	328.5	342.4
Inland Capture	74.5	83.1	95.4	90.0	86.7	85.4	86.3	84.3	76.8
Aquaculture	5.0	10.2	19.1	27.5	32.5	38.5	44.6	52.5	57.4

Sources: Ministry of Fisheries and Aquaculture Development (MOFAD), Ministry of Food and Agriculture (MOFA), Ghana Statistical Service (GSS)

While increased tuna landings in recent years pushes production data upward, Ghana's marine catch has largely stagnated over the last several decades. Official sources also estimate that production from inland capture leveled off in recent years due to similar pressures of overexploitation. Although still early in its development, farmed production grew briskly over the last several decades to an estimated 57,400 MT in 2017. Yet this falls far short of official objectives to produce 100,000 MT annually from aquaculture. Given current growth trends and an abundance of suitable environs for fish farming, significant expansion of the industry is possible. Short-term concerns for the industry focus mainly on potential outbreaks of TiLV in the Lake Volta populations.

In response to a dwindling marine fish stock for small pelagics species, the GOG planned a closed marine fishing season in August 2018, with the Tuna fleet excepted. August, the maximum spawning period for the small pelagic fishes, is also the bumper season. However, GOG backed away from the 2018 closed season due to strong political pressure from the industry and fishing communities, which argued a lack of preparation and insufficient alternative livelihoods. For 2019, the Ministry of Fisheries and Aquaculture Development (MoFAD) and Fisheries Commission announced two closed seasons. The first closed season, from May 15 to June 15, will affect artisanal fishing only. A second closed season for industrial trawlers will run from August 1 to August 31, coinciding with the spawning season for small pelagics.

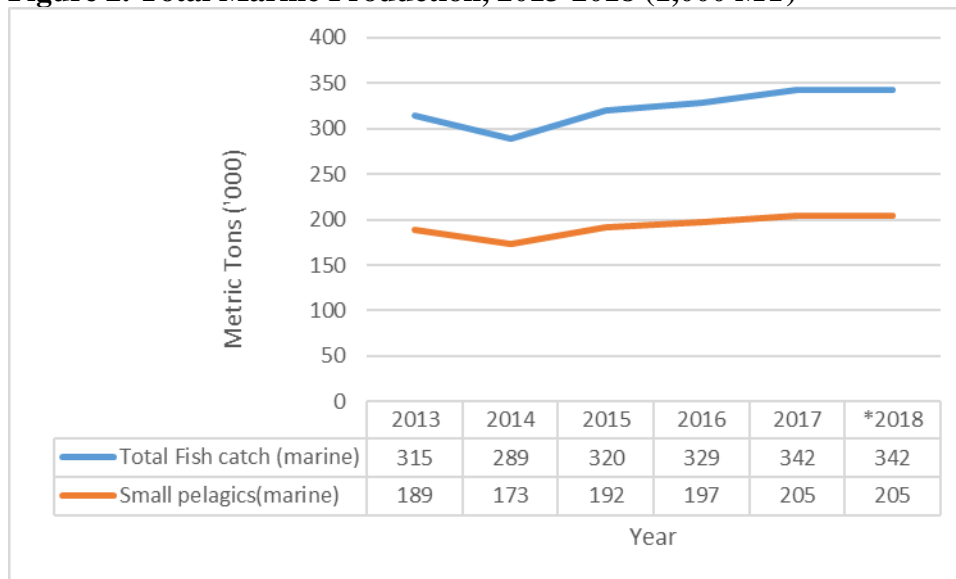
Although there is growth in aquaculture production in Ghana, it remains a small industry currently unable to keep pace with growing demand. Over the past five years, aquaculture production averaged annual growth of over 15 percent, reaching an estimated 57,000 MT in 2017. Tilapia, the preferred choice of an increasing number of Ghanaians, constitutes 80 percent of farmed production, with catfish accounting for the remainder. The increase in Tilapia consumption draws many entrepreneurs to invest in commercial farming. However, the high cost of available fish feed and the lack of viable fingerlings restricts the industry's growth. In June 2018, the GOG announced a ban on the importation of Tilapia (including eggs and fingerlings) into Ghana in response to fears over TiLV, which causes significant deaths in farmed tilapia species. This essentially perpetuates the 2014 ban, which sought to protect the local industry from imports.

Marine Production

Marine fishing operations in Ghana consist of three main subsectors, namely small scale, (artisanal or canoe), semi-industrial (or inshore) and industrial (deep-sea) sub-sectors. The artisanal sub-sector contributes 60-70 percent of total annual marine fish output, which are mainly small pelagic fish species such as round sardinella, flat sardinella, mackerel (horse mackerel, chub mackerel), and anchovies. Those species represent over 80 percent of the total small pelagic fish stocks in Ghana. The large pelagic type, mainly tuna, are caught by industrial fishing vessels. Currently, tuna is the only wild fisheries resource that can withstand further expansion in Ghana. According to GOG sources, the small pelagic fish species from marine sources fluctuate, and are generally on the decline or the verge of total collapse due to over fishing. Tuna stocks reportedly remain unaffected. Total fish landings from inland waters (rivers, lakes and lagoons) are also experiencing a decline in the last ten years due to inadequate fishing methods and overfishing.

Presently, the marine sub-sector in Ghana accounts for approximately 70 percent of total domestic production, compared to over 80 percent a decade ago. Due to rising imports and the emerging importance of aquaculture, marine production currently accounts for just over 40 percent of estimated consumption in Ghana. Both the pelagic (migratory fish that feed above ocean bottom) and the demersal (sea bottom-feeding fish) fishery resources are exploited in Ghana. The most common fish captured in Ghana are small pelagics such as round sardinella, flat sardinella, mackerel (horse mackerel, chub mackerel), and anchovies. These small pelagic species account for about 60 percent of total marine landings.

Figure 2. Total Marine Production, 2013-2018 (1,000 MT)



Source: GSS, *Post estimate

Ghana has a marine coastline of nearly 550 km and a total continental shelf area of about 24,000 square kilometers that support a marine fishing industry. The Exclusive Economic Zone (EEZ) in Ghana waters is 200 nautical miles. Marine fisheries in Ghana experiences two upwelling periods (Dec-Feb and Jul-

Sep) that occur in its coastal waters. During the upwelling periods, biological activity increases in the sea, resulting in increased marine harvests. This seasonal upwelling triggers the two breeding seasons in Ghana with the major one occurring in August. Fish species aggregate and move in large schools close to the shore or in estuaries to spawn. At spawning grounds, these fish become more accessible for exploitation. Both canoe and trawler fishers know where these areas are and they exploit/catch large quantities of spawning pregnant fish over a short period.

According to GOG sources, the biomass of the small pelagics fluctuates significantly. In the last ten years, the small pelagic resources, especially sardinella, are generally on the decline or the verge of collapse. This annual decline in fish landings is due primarily to overfishing and over capacity of the fishing fleet.

The primary large pelagic fish species in Ghanaian waters is tuna. There are three types of tuna species of commercial importance and value including the yellow fin, skipjack, and big eye tunas. These species undertake long-range migrations in the Atlantic Ocean and across national boundaries. Tuna is currently the only fisheries resource in Ghana that can withstand further expansion.

Ghana is a member of the International Commission for the Conservation of Atlantic Tuna (ICCAT). This body allows a quota system on its members to avoid over fishing in the Atlantic Ocean. According to GOG sources, the potential annual tuna fish resource and sustainable catch in Ghana's EEZ is between 60,000MT and 80,000 MT with an average yield of 70,000 MT. Most shrimp vessels have shifted to tuna fishing due to low levels of shrimp catch and the industry subsequently declined significantly over the past ten years.

GOG biomass survey estimates show that the potential yield of the total demersal biomass on Ghana's continental shelf is 50,000 MT-60,000 MT per year. The demersal species captured in Ghana include cassava fish, red snapper, sea breams, burrito, cuttlefish, red mullet, and croaker.

Marine Industry Composition

There are over 20,000 marine artisanal boats (canoes), many of which are wooden that operate in fishing villages along the coast of Ghana. Many large canoes are motorized with 40HP outboard engines. The main fishing gear used by canoe operators in harvesting the small pelagic fish species include purse seines, encircling gill nets and beach seines. Some canoe operators specialize in hook and line gears to catch demersal fish species and use ice to preserve the fish which are stored in insulated containers. A few artisanal operators use electronic fish finding devices such as echo-sounders.

The semi-industrial/inshore fleet consists of locally built wooden vessels 8-37 meters in length with in-board engines of about 400 Horse Power. There are over 500 semi-industrial fleet vessels operating from four landing sites along the coast of Ghana (MOFA sources). Most semi-industrial vessels are dual purpose in that they are able to use trawls or purse seines. The fleet exploits both the small pelagic and demersal fish species.

Industrial (deep sea) vessels are large, steel-hulled foreign-built fleets. They are mostly trawlers, tuna pole and line and purse seiners. As deep-sea vessels, the industrial trawlers by law are to operate in waters deeper than 30m (Fisheries Act 625, 2002; Amendment Act 880 2014). Most tuna vessels operate

on a joint-venture basis with Ghanaian counterparts having at least 50 percent shares as required in the Fisheries Act 625 of 2002. There are over 70 industrial vessels operating in Ghanaian waters according to industry sources. The industrial fleets have freezing facilities for preserving fish and can stay at sea for months. The industrial fleet underwent radical expansion in number since 1984, when GOG policy targeted industrial fishing as a mechanism for promoting non-traditional exports. The industrial fleets exploit both pelagic and demersal fishery resources.

The precarious position of Ghana’s fish stocks is the result of overfishing across all levels of the sector. However, the industrial fleet in particular is the subject of criticism as a primary culprit in illegal fishing and trading practices. The joint ventures upon which most industrial trawlers operate (in order to comply with domestic ownership laws) appear to be problematic, with reports of industrial vessels engaging in illegal fishing and trading practices. This in turn increases the likelihood that the actual marine catch in Ghanaian waters is higher than indicated in available statistics. Monitoring and enforcement of fishing regulations remains a challenge across the region.

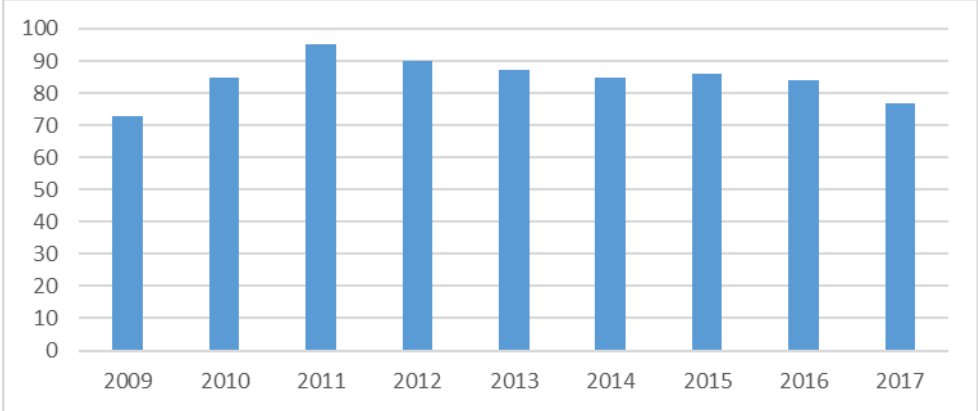
According to industry sources, deep-sea shrimp became unprofitable due to overexploitation and most vessels switched to tuna fishing. The industrial vessels operate from the deep-water ports of Tema and Takoradi, which have berthing facilities for industrial vessels. The introduction of demersal pair trawling of vessels in recent times has been of great concern to the GOG because they tend to obstruct and destroy the fishing activities of small-scale operators on the high seas.

Unauthorized fishing by foreign vessels has severely depleted fish stocks in Ghana's 200-nautical-mile (370 km) maritime EEZ, causing major government concern. The most affected stocks are the demersal sea bottom-feeding fish. The monitoring, control and surveillance of the EEZ and enforcement of the relevant fisheries laws are weak, making it difficult to assess the level of illegal fishing and thus the catch by foreign vessels.

Inland Production (Capture)

Ghana has a system of rivers, lagoons and lakes that form the basis of an inland fisheries industry. This includes Lake Volta, one of the largest artificial lakes in the world, covering an area of 8,842 square kilometers, and accounting for 70 percent of the total inland fishery production. The inland sub-sector remains predominantly artisanal.

Figure 3: Total Inland Production, 2009-2017 (1,000MT)



Source: MOFAD/MOFA

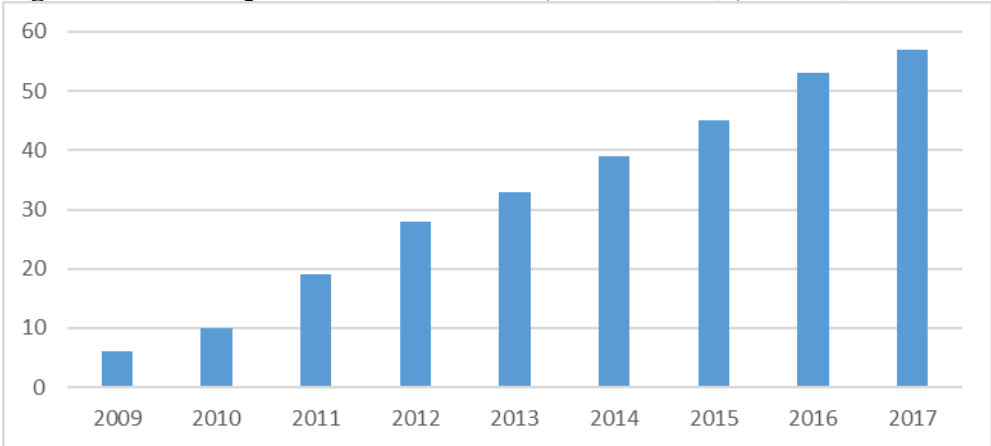
The estimated annual fish production from inland reservoirs (rivers, lakes, lagoons) was 77,000MT in 2017. Lake Volta is by far the predominant source of inland production. It is rich in several fish species. Fish landing in the river basins, lagoons and lakes are dominated by tilapia species, catfish, mud skipper, grey mullets, crabs, shrimps and oyster. Total fish landings from rivers, lakes and lagoons experienced a decline in the last three years due to pollution of the rivers from illegal mining activities and inadequate fishing methods.

Inland Production (Aquaculture)

Although there is growth in aquaculture production in Ghana, it remains a small industry currently unable to keep pace with growing demand. Over the past five years, aquaculture production averaged annual growth of over 15 percent, reaching an estimated 57,000 MT in 2017. Tilapia, the preferred choice of an increasing number of Ghanaians, constitutes 80 percent of farmed production, with catfish accounting for the remainder. The increase in Tilapia consumption draws many entrepreneurs to invest in commercial farming. However, the high cost of available fish feed and the lack of viable fingerlings restricts the industry’s growth. In June 2018, the GOG announced a ban on the importation of Tilapia (including eggs and fingerlings) into Ghana in response to fears over TilV, which causes significant deaths in farmed tilapia species. This essentially perpetuates the 2014 ban, which sought to protect the local industry from imports.

Aquaculture development in Ghana began to expand most notably in the 1980s with significant GOG support, but remained mostly at the subsistence level. Currently, fish farming is confined to freshwater sources, although there is interest in the development of fish and shrimp farming in marine waters. Fish farming shows great potential in Ghana as a sector capable of bridging the growing gap existing between fish demand and supply. Fish farming is mostly practiced in the Eastern, Ashanti, Volta, Central and Western regions of Ghana. Since 2010, aquaculture production increased nearly six-fold. Over the past five years, production grew an average of 15 percent annually. The proliferation of more commercialized cage farming operations on Lake Volta accounts for this surge in production.

Figure 4. Total Aquaculture Production, 2009-2018 (1,000MT)



Source: MOFAD/MOFA

Post expects the growth trend in farmed fish production to continue in 2018, due to both expansion of

existing fish farms and establishment of new farms. According to GOG and industry sources, factors limiting more rapid expansion include inefficient and inappropriate production practices, and availability of quality inputs. The sector faces challenges such as the lack of good quality and viable fingerlings and high cost of fish feed.

Aquaculture Industry Composition

Commercial fish farming in Ghana is a recent development that emerged in the last decade. Tilapia, the preferred choice of an increasing number of Ghanaians, constitutes 80 percent of production, with catfish accounting for 20 percent. Several systems of aquaculture are found in Ghana. They vary from large-scale commercial (intensive), medium scale (semi-intensive) and subsistence or small-scale (extensive), with the latter two the most common. Fish holding systems used in fish farming in Ghana include floating cages, earthen ponds and concrete tanks. Ghana has an estimated 5,000 fish farmers operating and about 19,000 fish cages/ponds. There are approximately ten largescale commercial aquaculture farms currently in operation. These operations account for less than 3 percent of total aquaculture farms by number, but they produce over 80 percent of farmed fish. Most large-scale commercial fish farmers operate the floating cage culture system on Lake Volta, while smaller outfits operate both the cage system and earthen ponds. As tilapia has become ubiquitous in local cuisine, the commercial tilapia farming sector is a major draw for investment from both Ghanaian and foreign entrepreneurs. Floating cages on Lake Volta are the primary means of tilapia production. Given the lake's extensive coastline protruding far into Ghana's interior, there is no shortage of appropriate sites for cage farming.

The GOG has few fish hatcheries that produce fingerlings for fish farmers. However, commercial cage farming triggered an increase in private fish hatcheries, with production soaring to over 150 million fingerlings in 2016. Many commercial operators hatch, breed and produce their own fingerlings from concrete tanks and earthen ponds. They also sell surplus fingerlings to smaller producers. The cages/pens/ponds are stocked with 10g-30g fingerlings which are ready for the market in 6-8 months at an average weight of 250g-350g. The commercial operators do not produce their own fish feed, but buy high quality pelletized feed from local distributors.

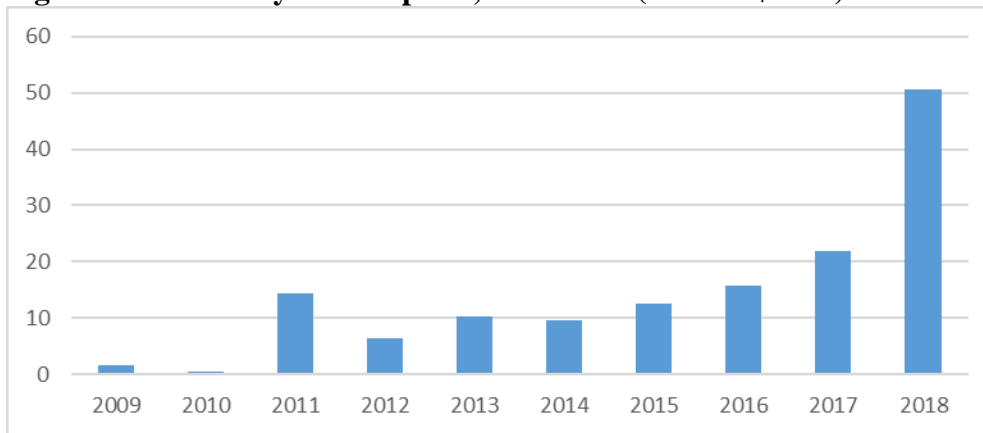
Medium/small-scale fish farms, mostly in the southern parts of Ghana, construct earthen ponds with varying dimensions ranging from 0.2 to 2 acres. Earthen ponds are located close to wetlands, rivers or in close proximity to some other water body. While local and imported feeds are both available on the market, most small pond farmers find them expensive, and attempt to use self-formulated feeds. Medium/small-scale fish farmers use poor quality feedstuffs in unbalanced proportions to feed tilapia in earthen ponds, negatively affecting growth and yield.

Aquaculture Feed Industry

The current annual feed requirement in the aquaculture sector is over 50,000 MT and growing. Primary local ingredients for fish feed include corn, fishmeal, animal byproducts and wheat bran. Soybean meal, premix vitamins, amino acids and minerals are imported. Corn, the main carbohydrate source for fish feed, is also the prime cereal consumed by humans in Ghana, and this high demand drives up the price. Corn typically forms about 50-60 percent of the total feed formulation. Due to the growing competition for domestic corn, local prices are on a steady increase since at least 2017. In addition to surging import demand for soymeal, increased corn imports are also possible if domestic production cannot keep pace.

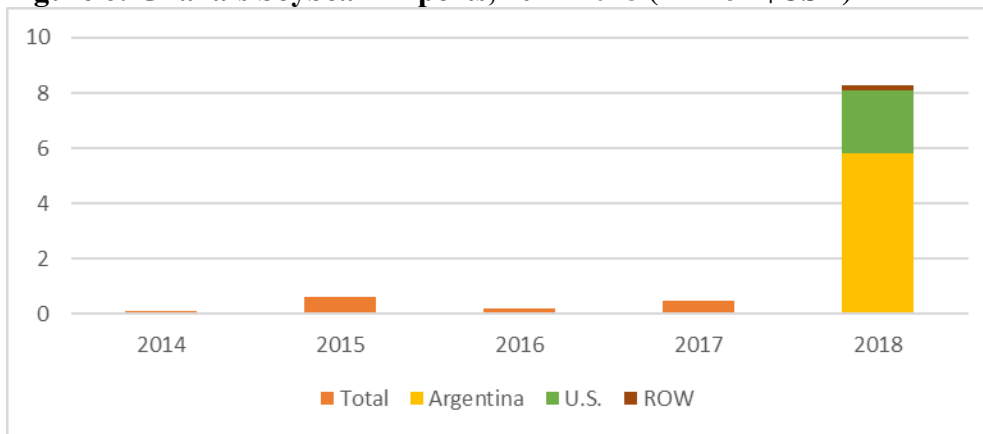
Soybean meal is the primary protein source for fish feed, currently imported almost entirely from Argentina. The continuing decline of the Ghanaian Cedi (GHC)¹ makes imported feedstuffs quite expensive and generally prohibitive for smaller local producers. Local soybean production remains mostly at the subsistence level with low yields, seasonal availability, and often of poor quality with unacceptable levels of foreign matter. Despite the added costs, quality concerns of local soybeans pushes the industry’s preference towards imported meal.

Figure 5: Ghana Soymeal Imports, 2009-2018 (Million \$USD)



Source: Global Trade Atlas (GTA)

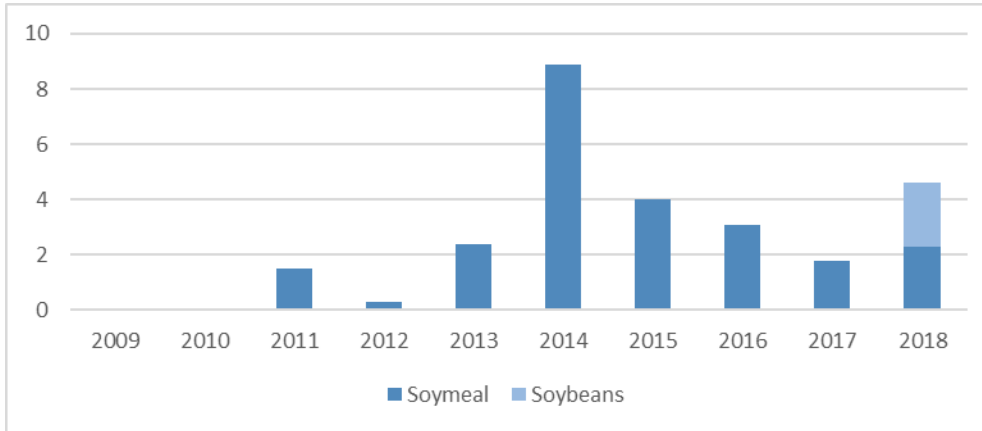
Figure 6: Ghana’s Soybean Imports, 2014-2018 (Million \$USD)



Source: GTA

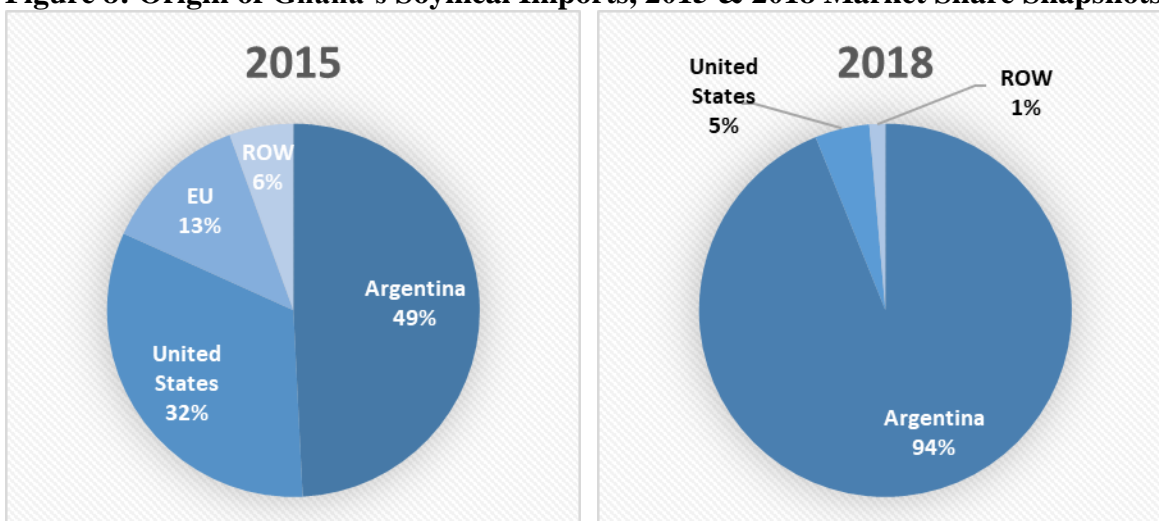
Figure 7: U.S. Soy Exports to Ghana, 2009-2018 (Million \$USD)

¹ 1 USD = 5.54 GHC, as of 3/8/2019



The ideal inclusion level of soybean meal ranges between 20 to 25 percent of the feed ration. However, this figure is lower across the Ghanaian industry due to its high cost. Feed mills will also employ a combination of alternative protein sources such as soybean cake and palm kernel cake produced locally. The average cost of fish feed is GHC65 per 20 kg bag. Imported fish feeds can be as much as 30 percent more expensive than locally produced (2016 FAO fish and aquaculture report). On average, feed accounts for an estimated 70 percent of total production cost.

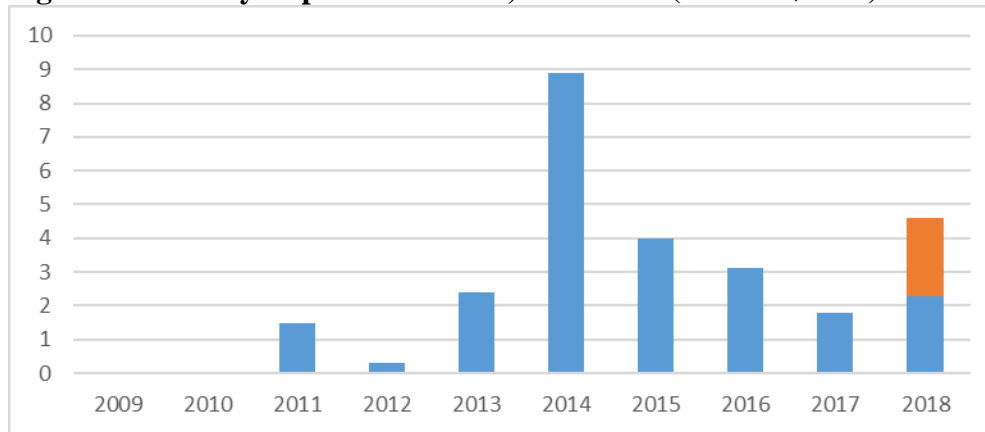
Figure 8: Origin of Ghana’s Soymeal Imports, 2015 & 2018 Market Share Snapshots



Source: GTA

Prior to 2011, all commercial fish feed was imported. That year an Israel-based company established a commercial feed mill in Accra that produces about 30,000 MT annually. This mill produces high quality extruded fish feed which is patronized by most of the commercial cage farmers. The mill sells 85 percent of its feed in Ghana and the remaining 15 percent in neighboring West African countries such as Benin, Togo and Burkina Faso. Other actors have since entered the market, including Chinese and Indian-based investors. Recently, a Dutch company announced the opening of an animal feed mill in Tema with a reported annual capacity of 90,000 MT. The proportion of this capacity dedicated to fish feed is not yet clear.

Figure 9: U.S. Soy Exports to Ghana, 2009-2018 (Million \$USD)



Source: GTA

GOG official sources indicate that several options in the feed industry need to be investigated to increase affordability. For example, in the medium term the GOG supports importing bulk feed to be re-bagged in Ghana. In the long term, greater local production is a priority; even though essential feed ingredients will likely still be imported. The long-term approach targets investment in the development and expansion of milling infrastructure while also seeking to increase finite local feed ingredients. Post anticipates continued steady increases in whole soybean imports, while the recent and significant jump in soybean meal imports merits further attention vis-à-vis domestic aquaculture and poultry sector development.

Consumption

Fish is the preferred source of animal protein in Ghana and a central part of Ghanaian cuisine. Officials estimate Ghana's average annual per capita consumption at just over 26 kg, though sources on this figure vary significantly. What is clear is that Ghana's per capita fish consumption far exceeds the ECOWAS-wide per capita estimate of about 14kg. With a population of approximately 29.5 million in 2018, Post estimates national fish consumption at approximately 775,000 MT. Population growth will continue to drive consumption upwards, and both domestic aquaculture and frozen imports will experience corresponding increases to meet this demand, as production from marine fisheries stagnates.

Fish provides approximately 60 percent of the animal protein consumed in the average Ghanaian diet, and accounts for 22 percent of household food expenditures. The premium fish species in Ghana are sea bream, red snapper, croaker and cassava fish. Hotels and restaurants are the primary consumer of these species, and thus they have become increasingly unaffordable for a majority of the population. Various mackerel species and sardines are more accessible to the average Ghanaian.

Although fish is increasingly expensive on the Ghanaian market, it remains the cheapest source of protein compared to meat and meat products. Locally caught small pelagics (sardines, mackerels etc) cost GHC30.00 (\$6) per kg. The demersal fishes, such as red snapper, sea bream, croaker, cassava fish cost between GHC40-80 (\$8-16) per kg. The price of the small pelagics drops during the local fishing season in Ghana.

In recent times, becoming more apparent is the importance of farmed fish, with tilapia a popular and

almost ubiquitous delicacy in Ghanaian cuisine. Grilled tilapia is a favorite of most Ghanaians, eaten with banku and hot pepper and featured on almost all menus. Fish is also a primary ingredient in countless traditional recipes including soups, stews, and sauces.

Trade

In 2018, Ghana imported \$311 million in seafood and fish products, an estimated 48 percent of its total demand, compared to an estimated 35 percent in 2010. In 2019, Post expects growth in import demand to continue as population grows and local production stagnates. For 2018, Ghana reported exports of just under 80,000 MT of seafood, almost entirely tuna. This represents a significant upswing from 55,000 MT of reported exports in 2017, but Post does not expect further growth in exports in the short term. Imports and exports of fish require a permit from the GOG.

U.S. seafood exports to Ghana totaled \$7.3 million in 2018, down from a record \$7.9 million the year prior. Frozen Whiting/Hake accounts for over 95 percent of exports. Small shipments of scallops, rock sole, and mackerel often account for the remainder. Ghana is not a major export destination for U.S. seafood, but shipments increased significantly in recent years. Growing demand for imported seafood, particularly within the hotel and restaurant sectors, could provide additional market opportunities for U.S. seafood.

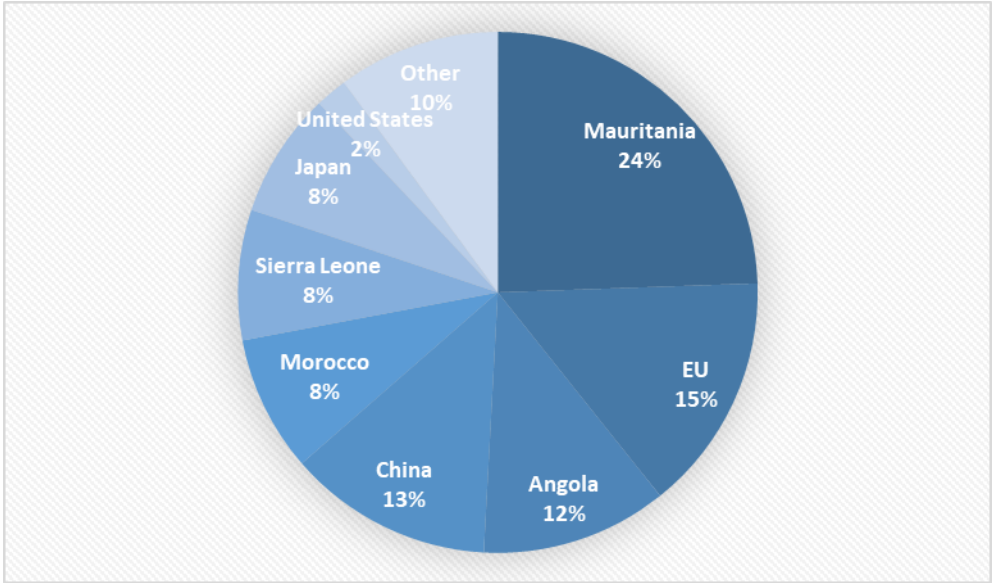
Table 2: Ghana Seafood Imports by Country, 2015-2018 (USD)

	2015	2016	2017	2018
WORLD	\$290,138,912	\$349,367,617	\$297,531,341	\$311,425,294
Mauritania	\$49,423,783	\$72,777,555	\$56,391,728	\$69,053,768
China	\$52,228,953	\$50,041,852	\$50,561,871	\$65,623,035
European Union	\$67,217,209	\$110,056,773	\$67,422,203	\$43,198,035
Morocco	\$49,635,956	\$32,775,857	\$39,488,783	\$28,143,086
Angola	\$25,400,905	\$10,516,069	\$17,785,582	\$27,954,748
Japan	\$4,752,243	\$11,976,952	\$20,203,499	\$26,588,168
Sierra Leone	\$2,237,048	\$4,198,057	\$6,846,239	\$13,691,961
United States	\$736,217	\$589,980	\$7,851,277	\$7,313,950
Guinea-Bissau	\$12,467,396	\$9,928,349	\$4,694,189	\$3,205,312
New Zealand	\$813,504	\$185,351	\$1,127,352	\$3,086,209
Indonesia	\$1,157,432	\$1,549,570	\$1,320,019	\$2,614,309
Senegal	\$3,691,145	\$4,549,701	\$2,580,237	\$2,468,076
Norway	\$5,038,350	\$10,580,009	\$5,330,231	\$2,145,994
Korea, South	\$586,030	\$2,946,345	\$1,424,475	\$1,665,306
Other	\$14,752,741	\$26,695,197	\$14,503,656	\$14,673,337

Source: Global Agricultural Trade System (GATS) and GTA

Imported frozen seafood is shipped in 10 kg, 20 kg, 25 kg or 30 kg packages depending on the buyers' request. The main fish species imported into Ghana are mackerel, horse mackerel, and sardines/sardinella. The import of frozen hake is trending upwards in recent years. Others include croaker, sea breams, and red snapper but on a minimal scale.

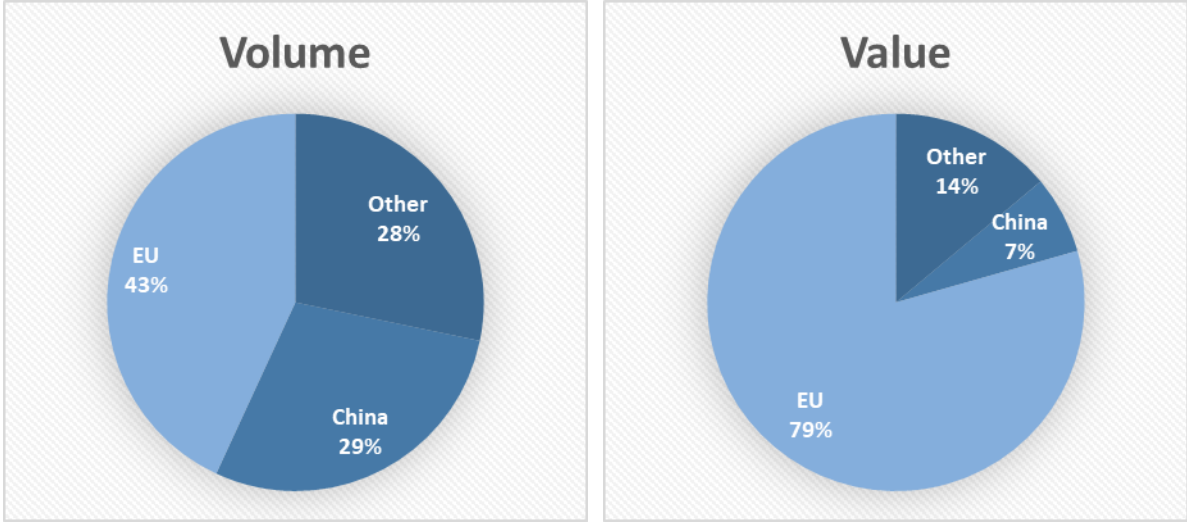
Figure 10: Major Seafood Exporters to Ghana, 2018 Market Share by Volume



Source: GTA

According to the trade, U.S. fish exports to Ghana would be more competitive if shipments were transported in bulk (average 1,500 – 2,000 MT). The major suppliers of fish to Ghana are Mauritania and the European Union, followed by other regional suppliers and China. At current volumes, The United States holds a minor market share. Although Ghanaians perceive U.S. fishery products to be of a high quality, freight rates adds to the cost of U.S. supplies.

Figure 11: Ghana’s Seafood Export Destinations, 2018 Volume/Value Comparison



Source: GTA

In terms of export destinations for Ghanaian seafood, the EU is the primary consumer, with China the second largest in terms of volume. Colombia, Iran, and Japan are other consistent destinations, but of much smaller volume. These exports are mostly tuna species of higher value, of which the EU is the primary customer. The EU accounting for nearly 80 percent of Ghana’s seafood export value reflects this pattern. While exports to China include tuna, they also include sizeable volumes of squid, cuttlefish,

and flat fish. Under invoicing of non-EU exports may also have an impact on statistics.

A large number of importers/distributors have cold storage facilities located at the main fishing port in Tema near Accra. A few cold stores are in the Takoradi fishing port in the Western part of Ghana. There are also rented cold storage facilities in these ports and cities that are available to wholesalers/distributors with smaller capacities. About 70 percent of imported frozen fish land at the Tema port and 30 percent at the Takoradi port from where it is distributed through internal trade channels. The trade channels include wholesalers and retailers who purchase the fish from the importers at cold storage facilities at the ports and sell in the traditional open market where most of them are located. Small quantities of dentex fish are imported for the poultry industry.

Tariffs on all fishery products (including fin fish and invertebrates) is 5 percent, Value Added Tax (VAT) 12.5 percent charged on CIF value; ECOWAS levy 0.5 percent; Export Development and Investment Fund Levy (EDIF) 0.5 percent; Inspection fee 0.1 percent; Ghana Customs Network (GCNET) charge 0.4 percent. The total tax is approximately 20.5 percent of the CIF value. The national Health Insurance Levy (NHIL) 2.5 percent has been effective since August 1, 2004. Importers pay a fish import levy of GH¢2.00 (US\$ 0.36) per MT which is paid into the Fisheries Development Fund and is used for the development of the fisheries sector, including aquaculture.

Storage and Processing

Large tuna fishing vessels have cold storage facilities for freezing tuna fish on the high seas. About 90 percent of tuna fish that reaches Ghanaian ports are processed industrially and exported. Industrial processing of fish catch in Ghana includes filleting, canning, cutting, packaging, grading, storing, chilling and freezing. Presently, Ghana has three tuna canneries operating in the port city of Tema. These facilities process about 40,000 MT of tuna, almost exclusively destined for the export market. These canneries meet internationally and EU approved standards using the Hazard Analysis Critical Control Point (HACCP) method. In value terms, Ghana exports about 80 percent of the total processed tuna to the EU (see Figure 11 above); primarily due to the partnership these facilities have with a European-based company.

Owners of cold stores in the main ports of Tema and Takoradi buy, freeze and store about 90 percent of the marine fish landed (apart from tuna) in their facilities. The cold storage method helps to reduce the high post-harvest losses that occur during the major fishing seasons from July to September each year. The remaining 10 percent sells as raw fresh fish on the open market. Traditionally, about 60 percent of fish in Ghana is smoked, 10 percent is sundried or salted and the rest is fried, grilled or steamed. Hotels and restaurants buy the majority of tilapia, fresh or chilled, from aquaculture farms and inland reservoirs.

Resource Management/Production Policy

The Fisheries Commission is the implementing agency of MoFAD, dedicated to promoting and expanding the Ghanaian fishery industry. Their functions include drafting legislation and regulations, aquaculture development, surveillance, evaluation, and compliance in fishery development, fish health, post-harvest activities, safety, and quality assurance.

The GOG supports the fishery sector through various means such as subsidy of fuel for outboard motors;

controlling the larger trawlers by the issuance of licenses; a legislation that requires Ghanaian majority ownership of fishing enterprises landing their catch in the country; and attempting to stimulate investment in fisheries related infrastructure. Most tuna vessels operate on a joint-venture basis with Ghanaians having at least 50 percent shares as required in the Fisheries Act 625 of 2002. However, as previously mentioned this arrangement is problematic and not easily enforced. This results in frequent tension between the fisheries sector and the GOG. The Fisheries Act mandates the minister responsible for the sector to declare open and close fishing season in order to conserve marine species. This has yet to happen, but announcements were made for two closed seasons in 2019.

In accordance with the Fisheries Act 625 of 2002, all fishing vessels operating along the marine coast of Ghana ought to be registered. The registration and Identification Number would become useful instruments to assist the Fisheries Commission to build a national Fishing Vessel Register and help to compile statistics and data on fish capture, information on number of fishing vessels including canoes, and fishing gear used. Since the exercise started in 2010, industrial and semi-industrial fleets have been compliant, but the artisanal canoe operators have not.

The law also provides for a regulatory body, the Fisheries Monitoring, Control, Surveillance, and Enforcement Unit as well as a fisheries advisory council. In November 2005, the GOG procured a vessel monitoring system to check illegal fishing in Ghana. Unfortunately, the monitoring, control and surveillance of the EEZ and enforcement of the relevant fisheries laws are weak, making it difficult to assess the level of illegal fishing.

The Fisheries Regulations, 2010 (LI 1968) Sections 11 (1), (2) and (3) prohibits for any person to use any fishing method that aggregate fish either by light attraction, use of bamboo for purposes of aggregating fish or use of explosives, or any obnoxious chemicals for fishing or pair trawling. It is also an offence for anyone to use un-prescribed mesh net sizes for fishing. In recent times over 10 vessels have been arrested by the Ghana Navy for using light for fishing.

Ghana's Membership in Regional Fishery Bodies:

Committee on Inland Fisheries and Aquaculture of Africa (CIFAA)

Fishery Committee for the Eastern Central Atlantic (CECAF)

Fishery Committee of the West Central Gulf of Guinea (FCWC)

International Commission for the Conservation of Atlantic Tunas (ICCAT)

International Whaling Commission (IWC)

Ministerial Conference on Fisheries Cooperation Among African States Bordering the Atlantic (COMHAFAT-ATLAFCO)