



# Getting iodized salt on the plate

**Dynamics, barriers, and opportunities around the regional trade of iodized salt in West and Central Africa**

*By Jorrit Oppewal and Mariëlle Karssenber*

*August 2022*



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### **Disclaimer:**

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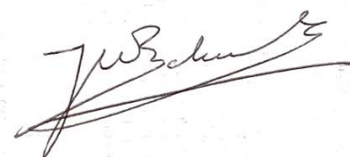
## Preface

The target year for reaching the Sustainable Development Goals (SDGs), 2030, is approaching fast. Yet a lot of work remains to be done. In fact, some of the goals, including SDG 2: Zero Hunger, risk getting out of sight, as recent trends have been negative. All over the world, we are witnessing the impacts of climate change, conflict and COVID-19 on food and nutrition security. We need to double down on our efforts.

Iodine is a key mineral for nutrition security. Insufficient intake, especially by children and pregnant women, can result in severe iodine deficiency disorders, with lasting negative impact on health and well-being. In West- and Central Africa, leadership from governments, private sector and a wide range of organizations has driven a lot of work over the past decades on promoting the universal iodisation of salt, the most important form of iodine intake. Through dedicated joint efforts on awareness-raising, capacity-building and provision of equipment, amongst other activities, the whole region made significant progress in combating iodine deficiency. During the last decade, however, progress has stalled and non-iodized salt has been making a comeback. It is high time to collectively define the actions that need to be taken to counter this trend.

The present report, resulting from a study carried out by The Broker and the Iodine Global Network (IGN), seeks to contribute to this effort and help reinvigorate new actions. The number of salt-producing areas in West- and Central Africa is low. Regional trade, the focus of this report, is therefore an essential factor in ensuring the availability of iodized salt throughout the region. Drawing on the available trade data and information gathered by in-country consultants, the study investigates the main trends, barriers, and opportunities in relation to the regional trade of iodized salt.

The report does not provide all the answers. It is meant to scratch the surface of this important topic, describing the key issues and highlighting knowledge gaps. By showing the importance of adopting a regional trade lens for combating iodine deficiency in the region, we hope to stimulate discussion among relevant stakeholders at the national level and stimulate a regional inter-country dialogue about what can be achieved together to facilitate the trade in iodized salt. Through cooperation we can rejoin the route towards eliminating iodine deficiency.



Jan Werner Schultink  
Executive Director , Iodine Global Network

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## Acronyms

<b>AfCFTA</b>	African Continental Free Trade Area
<b>CEMAC</b>	<i>Communauté Économique et Monétaire de l'Afrique Centrale</i>
<b>CET</b>	Common External Tariff
<b>CILSS</b>	<i>Comité Permanent Inter-État de Lutte contre la Sécheresse de Sahel</i>
<b>ECCAS</b>	Economic Community of Central African States
<b>ECOWAS</b>	Economic Community of West African States
<b>FTA</b>	Free Trade Area
<b>ID</b>	Iodine Deficiency
<b>IDDs</b>	Iodine Deficiency Disorders
<b>IGN</b>	Iodine Global Network
<b>NTB</b>	Non-Tariff Barrier
<b>RECs</b>	Regional Economic Communities
<b>UEMOA</b>	<i>Union Economique et Monétaire Ouest-Africaine</i>
<b>WCA</b>	West and Central Africa

# Salt trade facts & definitions

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## Definitions

**Salt** is sodium chloride (NaCl)

**Iodized salt** is salt that contains small amounts of iodine

## Iodine Deficiency Disorder (IDD)

Iodine deficiency has multiple adverse effects on growth and development in animals and humans. These are collectively termed the Iodine Deficiency Disorders (IDD), and are one of the most important and common human diseases. They result from inadequate thyroid hormone production due to lack of sufficient iodine.

Universal **Salt Iodization**, which intends that all salt for human and animal consumption be iodized thus ensuring adequate iodine nutrition, was identified as the global strategy for the elimination of iodine deficiency

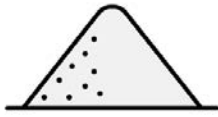
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## Key trade terminology

<b>Tariff barrier</b>	A duty (or tax) levied on the import or export of goods.
<b>Non-tariff barriers (NTB)</b>	Any measure, other than a tariff, that acts as a barrier to international trade. May include levies, product standards, bureaucratic requirements, among others.
<b>Free Trade Area (FTA)</b>	Trade agreement between a number of countries abolishing most import tariffs on goods produced within the area.
<b>Customs Union</b>	Deeper level of economic integration than a Free Trade Area, including the adoption of a joint trade policy vis-à-vis third countries, outside the FTA, through a Common External Tariff (CET).
<b>Currency Union</b>	Deeper level of economic integration than customs union, including the adoption of a common currency.

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## Stakeholders in the salt value chain



**Salt producers**



**Salt truckers**  
**Salt traders**



**Salt retailers**  
**Salt traders**



**Law enforcement officers**  
**Regional and national governmental bodies**  
**International and national trade organizations**



**Public health organizations**  
**National and international financial and technical partners**



**Consumers**

# Chapter 1: The case for investing in iodized salt trade

The landmark 1996 World Food Summit, organized by the FAO, resulted in the adoption of the [Rome Declaration](#), which defined food security as “when all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life”.<sup>1</sup>

One of the essential dietary needs of the human body is iodine. Insufficient intake can result in Iodine Deficiency Disorders (IDD), causing [adverse effects](#) on mental and physical health.<sup>2</sup> According to the [World Health Organisation \(WHO\)](#), iodine deficiency is the world’s most prevalent, yet easily preventable, cause of brain damage. Iodine deficiency has multiple adverse effects on growth and development, ranging from poor cognitive function, and goiter to severe cognitive disability, resulting in death, lower learning ability and loss of significant economic productivity.<sup>3</sup> In other words, the negative impact is felt in different aspects of life. , Therefore, ensuring sufficient iodine intake can make a crucial contribution in reaching several of the Sustainable Development Goals (SDGs), including SDG 2 (zero hunger), SDG 3 (good health and well-being), SDG 4 (quality education) and SDG 10 (reduced inequality).

Iodine is not naturally present in many food items. The most effective strategy to combat IDD is the universal fortification of salt with iodine. [UNICEF](#) estimates that 89% of the global population consumes salt with at least some iodine content.<sup>4</sup> The percentage is lower, at 83.3%, when only looking at West and Central Africa (WCA). It is important to note that this still includes those with access to salt that has some iodine content, but below the concentrations required for adequately iodized salt. The difference can be large. For Ghana, for instance, it was found that 62% had access to somewhat iodized salt in 2015, but only 29% had access to adequately iodized salt.<sup>5</sup>

Data on actual iodine content in urinary samples is scarce, but the existing data clearly show that iodine deficiency continues to be widespread. The median urinary iodine status of school-aged children is below or just above the advised minimum in various WCA countries, including

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<sup>1</sup> FAO (1996). Rome Declaration on World Food Security.

<sup>2</sup> Zimmermann, M. and M. Andersson (2021). Global perspectives in endocrinology: coverage of iodized salt programs and iodine status in 2020. *European Journal on Endocrinology*, 185(1): R13-R21

<sup>3</sup> Hetzel BS, Delange F, Dunn J, Ling J, Mannar V, Pandav (2005). Towards the Global Elimination of Brain Damage Due to Iodine Deficiency., *International Journal of Epidemiology*, Vol. 34(4): 762-764

Zimmerman, B. and K.Boelaert (2015). Iodine Deficiency and Thyroid Disorders. *The Lancet: Diabetes & Endocrinology*, Vol.3(4), 286-295.

Rohner, F., M.Zimmermann, P.Jooste, C.Pandav, K.Caldwell, R.Raghavan et al. (2014). Biomarkers for nutrition for development – iodine review. (2014). *Journal of Nutrition*, Vol. 144(88), 1322-1342.

Christian, P., L.Mullany, K.Hurley, J.Katz and R.Black (2015). Nutrition and maternal, neonatal and child health. *Semin Perinatol*. Vol.39(5); 361-372.

<sup>4</sup> UNICEF Data. Available at <https://data.unicef.org/topic/nutrition/iodine/>. Consulted on 26/08/2022

<sup>5</sup> IGN and UNICEF (2021). Landscape analysis of the Universal Salt Iodization Programme in Ghana. Iodine Global Network: October 2021, p.5.



Senegal, Mali, Burkina Faso and Niger. It implies that, in all likelihood, the iodine status of significant parts of the population is well below the advised minimum.<sup>6</sup>

Since the 1990 World Summit for Children, which set the goal of eliminating iodine deficiency, much progress has been made, also in WCA. During the 1990s, many countries adopted legislation on mandatory salt iodization, and national governments and salt industry stakeholders, with support from international organizations, invested in awareness-raising, scaling up of iodized salt supply, and capacity-building. Since 2010, however, further progress has stalled, and across WCA there are even signs of retrogression. In Togo, for instance, households with access to iodized salt (any iodine) fell from 92% in 2005 to 63% in 2017. Similarly, Ghana went from 91% in 2009 to 62% in 2015.<sup>7</sup>

The reasons for the downward trend will need to be investigated more thoroughly. It is clear, however, that renewed focus and attention to the problem of iodine deficiency is much needed. Earlier country-level experiences hold important lessons on what works well. To make structural progress in the WCA region, however, we must go beyond the level of national strategies, and also consider the regional trade dynamics of the issue. The number of salt producing areas in the region is limited, concentrated in Ghana and Senegal, meaning that most WCA citizens depend on smooth regional trade for their access to iodized salt.

This report seeks to describe the dynamics, barriers, and opportunities in relation to strengthening the flow of iodized salt in WCA. The methodology consists of three important elements: (i) review of existing studies and literature; (ii) analysis of available trade data (COMTRADE); and (iii) five dedicated country-level reports, for which country experts undertook fieldwork, visiting relevant sites and interviewed stakeholders. The selected countries include two net salt-exporting countries (Ghana and Senegal) and three net salt-importing countries (Burkina Faso, Togo<sup>8</sup>, and Côte d'Ivoire).

The report is meant to scratch the surface of the iodized salt trade in WCA, to identify knowledge gaps and promising avenues, from a regional trade perspective, for future programmes and policy interventions aimed at combating IDD.

Following this introduction, Chapter 2 will provide a description of the current salt trade landscape in the region. Chapter 3 analyses the main barriers and opportunities that were identified, before Chapter 4 offers a set of recommendations.

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<sup>6</sup> IGN and UNICEF (2021). Status of the Iodine Nutrition and Salt Iodization Program in West and Central Africa. Iodine Global Network, June 2021

<sup>7</sup> IGN and UNICEF (2021). Landscape analysis of the Universal Salt Iodization Programme in Ghana. Iodine Global Network: October 2021,

<sup>8</sup> It should be mentioned that Togo could also be seen as a salt transit country, considering the substantial amounts of salt, primarily from Ghana, that flow through Togo towards other countries. The amount of reliable data needed to quantify this dynamic is limited, however. For the purpose of this report, Togo is classified as a net salt-importing country, in the sense that it imports more salt than it exports.

## Chapter 2: The current salt trade landscape in West and Central Africa

The region of West- and Central Africa (WCA) comprises 24 countries, with a joint population of more than 560 million. Nigeria accounts for almost 40% of the total population, followed by the Democratic Republic of the Congo (18%). In economic terms, Nigeria dominates to an even larger extent, accounting for 51% of the region's GDP.

The region's trade dynamics have been dominated by raw commodity exports to and finished good imports from the rest of the world. Nigeria, for instance, depends for almost 90% of its export revenue on oil, which is mostly exported to Asia, Europe and North America. For Côte d'Ivoire, cocoa represents 50% of export earnings, mostly sent in unprocessed state to Europe and North America.

There have been long-standing efforts to promote regional trade among WCA-countries. Intra-regional trade often involves a higher share of processed goods, so that more intra-regional trade could help countries along the path of structural transformation<sup>9</sup>. Regional trade promotion in recent decades mostly occurred within the context of Regional Economic Communities (RECs).

### *Regional Economic Communities and the AfCFTA*

The Economic Community of West African States (**ECOWAS**) is a regional organization of fifteen countries, formed in 1975. It established the ECOWAS Trade Liberalization Scheme (ETLS) in 1979, which was turned into a full Free Trade Area in 1990, meaning that most import tariffs were abolished on internal trade for goods produced within the region. In 2015, it took another step on the ladder of integration, becoming a customs union through the adoption of a Common External Tariff (CET). This means that all member states charge the same import tariffs on goods coming in from outside the region.

ECOWAS contains within it two sub-regional blocks, the most important of which is **UEMOA** (*Union Economique et Monétaire Ouest-Africaine*). Although only formed officially in 1994, it builds on earlier organizations with roots going back to the 1950s. It concerns a group of French-speaking West African countries, all of which are also ECOWAS member states. It has its own Free Trade Area and Common External Tariff, which have now been harmonized with the equivalent ECOWAS agreements. Although this may seem an unnecessary duplication that could now be abolished, there are good reasons to believe that the two will continue to exist side-by-side. With Nigeria and Ghana accounting for 75% of ECOWAS GDP, the UEMOA

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<sup>9</sup> Structural transformation refers to the movement of a country's productive resources (natural resources, land, capital, labour) from low-productivity to high-productivity economic activities.

countries regard this sub-body as a useful parallel structure to exert influence.<sup>10</sup> Furthermore, the UEMOA-countries do not only share common import tariffs, but also the CFA currency, making it a currency union as well.

In Central Africa, a group of 11 countries are united in the Economic Community of Central African States (ECCAS), which is a Free Trade Area, but not a customs union. A sub-group of nine countries (all except for DRC and Angola) also form the CEMAC (*Communauté Économique et Monétaire de l'Afrique Centrale*), which is a customs union and a currency union, with all members using the Central African CFA franc, which is of equal value to the West African CFA franc.

**Figure 1. Regional economic integration in West- and Central Africa**



*Source: authors, using the mapchart.net tool*

Almost all African countries, 54 out of 55<sup>11</sup>, have signed the agreement establishing the African Continental Free Trade Area (AfCFTA), which was brokered by the African Union in March 2018. It officially came into force in 2019, after the 22<sup>nd</sup> country had ratified the agreement. By mid-2022, it stood at 44 ratifications. The AfCFTA seeks to promote intra-African trade by removing tariff and non-tariff barriers. The agreement builds on the existing Regional Economic Communities (RECs), like ECOWAS and ECCAS. The focus, therefore is on promoting trade between the existing blocks, rather than within the blocks, which remains the

<sup>10</sup> Byiers, B. and C.T.Dièye (2022). Regional integration in West Africa: Wasteful overlaps or necessary options? Discussion Paper, ECDPM and ENDA-CACID.

<sup>11</sup> Eritrea is the only country that has not signed the agreement establishing the AfCFTA

responsibilities of the RECs themselves. However, the momentum generated by the AfCFTA also provides another impulse for efforts to boost trade within the RECs.

### *Barriers to regional trade*

Despite the various trade agreements, policy frameworks and high-level statements on promoting regional trade, the reality on the ground often diverges significantly, which led Rwandan President Kagame to highlight a “crisis of implementation” in his 2017 report on African Union reforms.<sup>12</sup> A recent West African example concerns Nigeria’s decision in 2019 to temporarily close its borders to the import of many goods from its ECOWAS-neighbors, despite the ECOWAS ETLS.<sup>13</sup>

In this context we can also mention efforts at harmonizing regulations and standards. ECOWAS and UEMOA have been working on this through the ECOWAS Standards Harmonization Mechanism (ECOSHAM). This framework aims to reach common norms for a wide range of products, including salt, for which it has defined minimum and maximum levels of iodization at different points along the supply chain. Despite this initiative, different ECOWAS and UEMOA norms continue to be in place, and applied by member states. Whereas the ECOWAS norm states that iodine content at production must be at least 50 mg/kg, the UEMOA norm stipulates a range of 30 – 60 mg/kg. Furthermore, the UEMOA norm states that iodization must be done using potassium iodate, while the ECOWAS norm also accepts potassium iodide or sodium iodide.<sup>14</sup>

Another important barrier to trade concerns inefficiencies along primary trade corridors, which carry a significant proportion of regional trade. Important ones in West-Africa include the Dakar-Bamako-Ouagadougou-Niamey corridor and the Lomé-Ouagadougou corridor ([see AfDB 2019](#))<sup>15</sup>. Poor road conditions and excessive police checks along these corridors can be a major impediment to regional trade. [Bouët et al. \(2019\)](#) show that, throughout the region, truckers can expect to encounter at least three checkpoints every 100 kilometers, which can be as high as ten in some countries.<sup>16</sup> Passing each checkpoint takes time, and often requires illicit payments to be made. The same authors estimate the average cost of such checkpoints for traders, across the region, to amount to 1.41% of the value of all trade. For the Abidjan-Lagos coastal corridor, it could be as high as 22.5%.

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<sup>12</sup> Byiers, B., A. Cazals, A. Medinilla and J. de Melo (2021). African Regional Integration: A problem-driven approach to delivering regional public goods. FERDI, ECDPM and ACET: FERDI Working Paper No 290.

<sup>13</sup> Karkare, P., M. Odijie, K. Ukaoha and J. van Seters (2021). Inconsistent policies or political realities? Nigeria’s trade and industrial policy imperatives. ECDPM Discussion paper.

<sup>14</sup> IGN and UNICEF (2021). Status of the Iodine Nutrition and Salt Iodization Program in West and Central Africa. Iodine Global Network, June 2021.

<sup>15</sup> African Development Bank (2019). ‘Cross-Border Road Corridors: The Quest to Integrate Africa’. African Development Bank: June 2019

<sup>16</sup> Bouët, A., B. Cissé, A. Sy, and F. Traoré (2021). Red Tape and Corruption along ECOWAS Trade Corridors. IFPRI, IFAD and CILSS, June 2021.

Again, there is no lack of high-level efforts seeking to address such issues. On the Dakar-Bamako corridor, for instance, Senegal and Mali held a high-level dialogue in 2011, resulting in a long list of concrete mutual commitments. More than ten years later, however, it must be concluded that little has changed (Byiers and Karkare 2022).<sup>17</sup> This can be explained by political economy dynamics, whereby vested interests in the status quo, often at the local level, result in lack of progress. This suggests that top-down high-level approaches will need to be complemented by smart bottom-up and problem-driven approaches that identify different interests and find creative ways to form coalitions for small, but feasible and sustainable steps forward.

### *The Salt Trade in West Africa*

Salt has been traded in West and Central Africa (WCA) for centuries. In fact, in pre-colonial times salt was one of the driving forces of a booming trans-Saharan trade, whereby the kingdoms of West Africa would export gold and import salt. The Sahara itself contained significant rock salt deposits. Later on, salt resources closer to the West African coast started to be exploited, in Nigeria's Borno State, and in Ghana's Volta region.<sup>18 19</sup>

Today, Ghana and Senegal are the only two countries in the region with significant salt production and exports. Besides Mauritania, which is self-sufficient, all the other countries depend on salt imports to satisfy their consumption. Figure 2 shows the main annual trade flows of salt (the average of 2018 and 2019<sup>20</sup>) within the WCA region, as well as imports from outside the region. Two main features stand out. Firstly, looking at internal flows, the countries of the Sahel and those on the West-African seaboard until Benin get most of their salt imports from Ghana and Senegal. Secondly, and in contrast, the large importers of Nigeria, Cameroon and DRC (jointly accounting for 51% of all WCA imports), get most of their salt from outside the sub-region, notably from Brazil and Namibia. Ghana and Senegal have not managed to break into these important regional markets.

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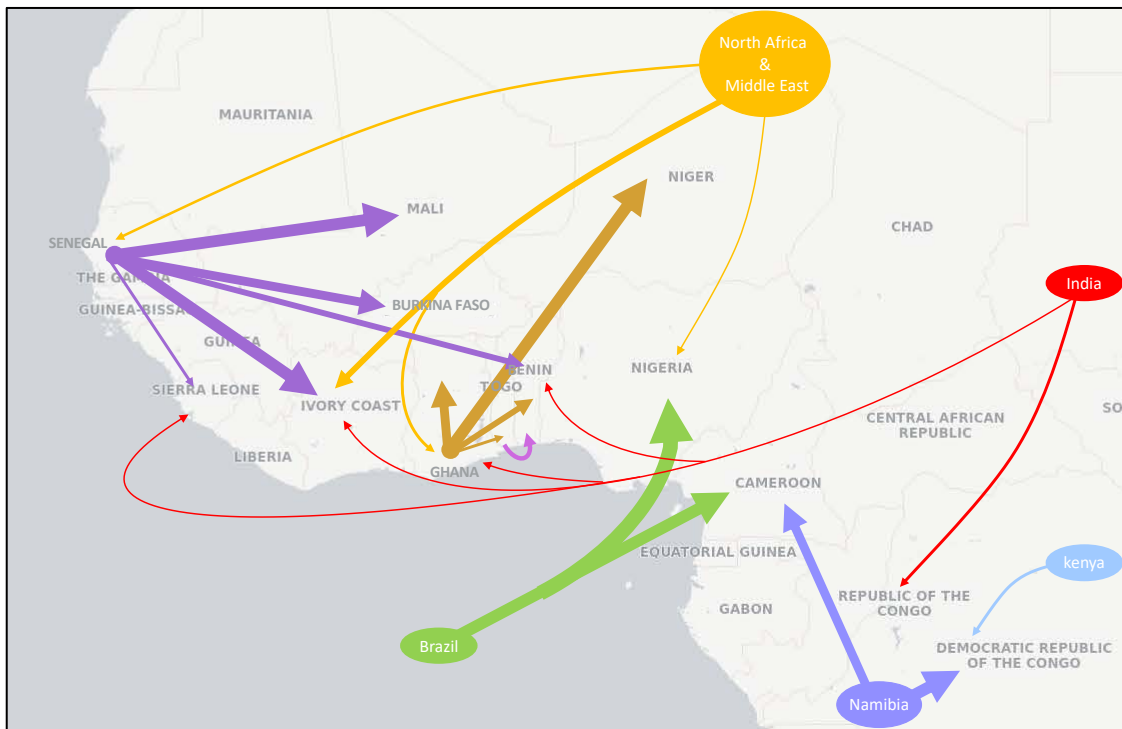
<sup>17</sup> Byiers, B. and P. Karkare (2022). 'Actors and interests along the Dakar-Bamako corridor'. ECPDM and Enda-Cacid, September 2022.

<sup>18</sup> Sutton, I. (1991). 'The Volta River Salt Trade: the Survival of an Indigenous Industry'. *Journal of African History*, 22, pp.43-61.

<sup>19</sup> Lovejoy, P. (1978). 'The Borno Salt Industry'. *The International Journal of African Historical Studies*, Vol.11 No.4, pp.629-668

<sup>20</sup> Data from UN COMTRADE, accessed through International Trade Centre's TradeMap.

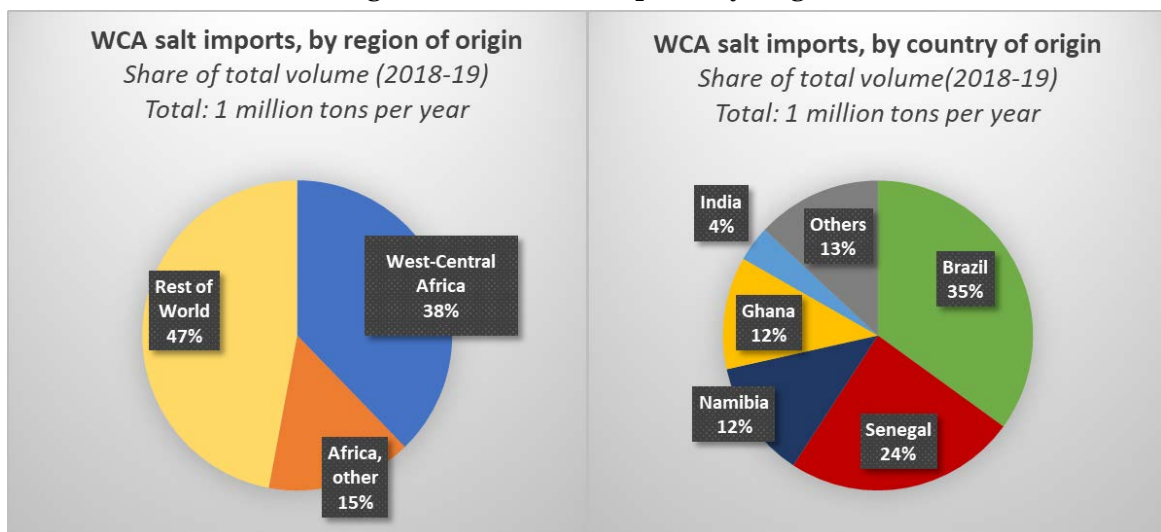
**Figure 2. Annual trade flows of salt (the average of 2018 and 2019)**



*Source: designed by IGN, based on UN COMTRADE data*

Figure 3 shows the origin of total WCA salt imports. The region’s annual import amounted to 1 million tons in the period 2018-19, of which 38% was sourced from within the region (mostly Ghana and Senegal), 15% from other African countries (mostly Namibia), and 47% from the rest of the world (mostly Brazil).

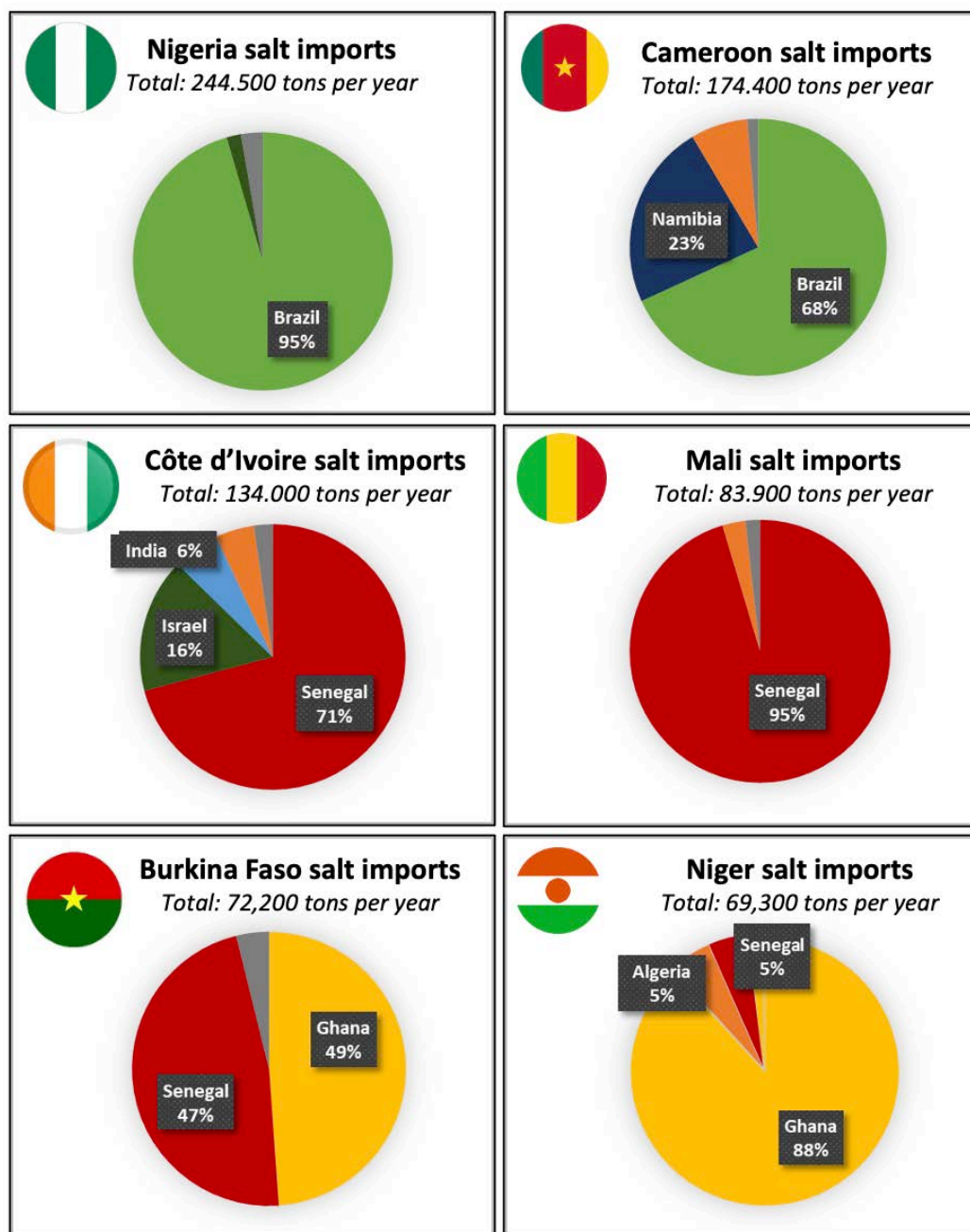
**Figure 3. WCA Salt imports by origin**



*Source: authors, based on UN COMTRADE data, via ITC Trade Map*

Figure 4 shows the origin of salt imports for 6 major salt-importing WCA countries. It confirms the different patterns, at country-level, that were highlighted in the map in Figure 2. Nigeria imports virtually all of its salt from Brazil. Cameroon imports 68% from Brazil, and 23% from Namibia. Mali imports almost all of its salt from Senegal, while Côte d'Ivoire sources most from Senegal, but also some amounts from other countries like India and Israel. Niger predominantly imports from Ghana. Burkina Faso, finally, imports half of its salt from Senegal, and the other half from Ghana.

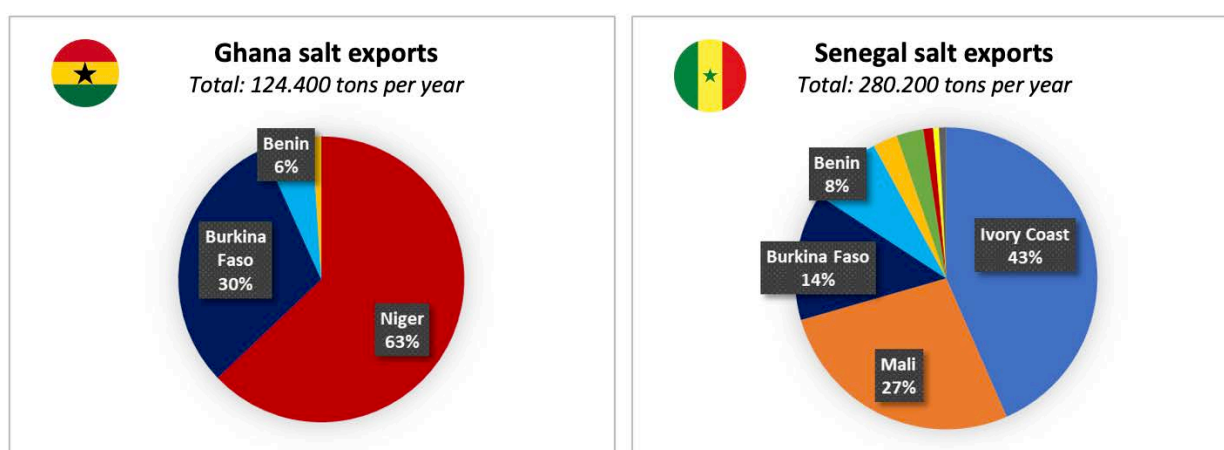
**Figure 4. Origin of salt imports, by country**



Source: authors, based on UN COMTRADE data, via ITC Trade Map

Zooming in on the salt-exporting countries, Ghana and Senegal<sup>21</sup>, Figure 5 shows that Senegal's exports are larger and more diversified than Ghana's. Two countries, Burkina Faso (30%) and Niger (63%) account for 93% of Ghanaian salt exports, with 6% destined for Benin. In the Senegalese case, the most important market is Côte d'Ivoire (43%), followed by Mali (27%), Burkina Faso (14%), Benin (8%), Sierra Leone (3%) and Guinea (3%). It should be pointed out that Ghana also imports salt, between 20 and 30 thousand tons per year, mostly from India and Egypt. This is mostly on account of large food manufacturers, who prefer the higher supply reliability and price stability of imports, compared to locally produced salt.<sup>22</sup>

**Figure 5. Salt export destinations, Ghana and Senegal**



*Source: authors, based on UN COMTRADE data, via ITC Trade Map<sup>23</sup>*

In interpreting these results of the analysis of official trade data, it is important to be aware of the data limitations, especially concerning informal cross-border trade (ICBT). Not all trade transactions are recorded, meaning that official trade data present an incomplete picture. There is no universally agreed upon definition of informal trade (UNCTAD 2021). Some definitions purely focus on whether or not the trade flow was registered, meaning that the terms informal and unrecorded trade would be interchangeable. Others focus on the economic status of the traders. Then, informal trade refers to trade that is not conducted by officially registered businesses, regardless of whether the trade flow itself is recorded at the border and ends up in official trade statistics.

<sup>21</sup> Note that total annual production for both Ghana and Senegal tends to be in the range of 300 to 400 thousand tons per year.

<sup>22</sup> Exchange with Alhassan Atta-Quayson, Ghana country consultant and author of underlying country report.

<sup>23</sup> With regards to Togo, it should be noted that there is a discrepancy between import and export data. Togo reports imports of approximately 7,500 tons of salt per year, mostly from Ghana. Neither Ghana nor any other country, however, reports much in terms of exports to Togo. Since the pie charts in Figure 5 are based on export data, Togo does not feature as a destination here.



Such differences in interpretations and lack of data mean that it is impossible to make precise assessments of the size of informal and unrecorded trade. All sources, agree, however, that it is substantial. ECPDM (2016) estimated that up to 75% of intra-regional trade in WCA is not accounted for in official statistics.<sup>24</sup> Other sources report that informal trade in staple foods alone represents around 30% of total regional trade in WCA ([Bouët et al. 2020](#)).<sup>25</sup>

Throughout the African continent, there are various initiatives to improve data collection on informal trade flows. In the WCA region, an important one is the [Agricultural Market and Trade Department](#) of the CILSS (Permanent Interstate Committee for Drought Control in the Sahel<sup>26</sup>), which has been collecting data at the level of multiple markets and border crossings throughout the region. Their data collection efforts over the past years have focused on agricultural commodities and did not include salt. Since 2021, however, the program has started to collect information on salt trade at some data collection points, most notably regarding Senegalese salt that is exported to neighboring Guinea-Bissau. An expansion of data collection points where salt flows are being tracked would be of great help to further our understanding of salt trading dynamics, and provide a more solid base for future policy interventions and support programs.

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<sup>24</sup> Torres, C. and J. Van Seters (2016). Overview of Trade and Barriers to Trade in West Africa: Insights in political economy dynamics, with particular focus on agricultural and food trade. ECDPM Discussion Paper, No. 195

<sup>25</sup> Bouët, A., B.Cissé and F.Traoré (2020). 'Informal Cross-Border Trade in Africa'. Chapter in *Africa Agriculture Trade Monitor 2020*. IFPRI

<sup>26</sup> In French: *Comité permanent Inter-état de Lutte contre la Sécheresse du Sahel*

## Chapter 3: Key barriers and facilitators

This chapter will analyze the main barriers and opportunities in relation to promoting the availability of iodized salt in West- and Central Africa from a regional trade perspective. The starting point is the observation that there continues to be a lot of regional trade in non-iodized salt meant for consumption, despite the fact that all countries have adopted legislation mandating that salt be iodized. We seek to advance our understanding of why this is the case, and to identify possible lines of action to promote the trade of iodized salt, and discourage trade in non-iodized salt.

The main source of information is the set of country reports written by country experts, for Ghana, Senegal, Burkina Faso, Côte d'Ivoire and Togo. These reports, in turn, are based on field visits and key stakeholder interviews. Where relevant, the information will be supplemented with findings from existing literature. Questions that need further research will also be highlighted. The chapter is divided into 5 thematic sub-sections.

### 3.1 Demand-side dimensions

Since the early 1990s, there have been significant investments in awareness-raising on the importance of consuming iodized salt. However, the country reports highlight that there are persistent pockets of demand for non-iodized salt, throughout the region, for various reasons.

The most frequently cited reason is the lower price compared to iodized salt. Salt iodization is not expensive, but it does involve some costs, meaning that traders and retailers selling non-iodized salt can undercut the market price for iodized salt. In a region where poverty continues to be widespread, every cent counts for many households. In countries that import salt from both Senegal and Ghana, it is generally observed that Senegalese salt is almost always iodized, while non-iodized, poor-quality salt on the market tends to come from Ghana, often being sold at a lower price than the Senegalese salt. In Togo, for instance, stakeholders observed that consumers used to prefer Senegalese salt before 2010, but then gradually shifted to salt from Ghana, because it is cheaper. Similarly, in Burkina Faso, lower-income households prefer Ghanaian salt, due to the lower price, often because it concerns non-iodized salt. Some observers point out that non-iodized salt is mostly traded by 'opportunistic' traders, meaning traders who are not normally dealing with salt. Often, they are unaware of quality-related iodization issues, and are simply after the lowest-priced salt and highest margins.

Consumers do not only care about price, though. Various stakeholders stress that some consumers actually want non-iodized salt, because they believe iodized salt to be bad for them. In Ghana, for instance, traders mention that some clients see iodized salt as the "whiteman's salt" that is not appropriate for them, and that some insist on "pure salt that is free of chemicals". Furthermore, some clients from Burkina Faso and Niger claim that their cattle died after feeding them iodized salt. As a result of the continued demand from some quarters for non-

iodized salt, many artisanal producers only iodize their salt on request of the customer, even when they have easy access to iodization equipment allowing them to universally iodize all the salt. Medium and large-scale producers tend to iodize by default, but some do supply non-iodized salt on request.

Interestingly, observers in Senegal note that there is little export of non-iodized salt. This is due, in part, to the presence of large companies that have the ability to iodize and export in bulk, but also to the general enforcement of the requirement that exported salt be iodized. Not all salt produced in Senegal is iodized, but the non-iodized salt is mostly found on local markets, not exported. This is an interesting contrast with Ghanaian non-iodized salt, which does end up being exported.

The difference between Ghana and Senegal in this regard seems to suggest that, with proper incentives and enforcement mechanisms in place, trade flows can be shifted to iodized salt, even in the presence of demand for non-iodized salt. However, demand-side factors deserve continued attention. If enforcement on the Ghanaian borders were to be strengthened, but underlying demand is left unchanged, then it is very well possible that smuggling of non-iodized salt, from both Ghana and Senegal, would increase.

### **3.2 Lack of Enforcement**

All of the case study countries have legal frameworks mandating that all salt produced, exported or imported must be iodized. Enforcement, however, is lacking in many places, both at domestic markets and at border crossings. Further, although enforcement was never total or perfect, various observers do note a general slackening in recent years. This is affecting the behavior of economic actors. In Togo, for instance, traders do not pay much attention to the legal norms any longer, since they know that enforcement is lacking. Various reasons are highlighted for weak enforcement of iodization norms.

The first one is a lack of resources and capacity on the part of enforcement agencies. In Burkina Faso, salt monitoring and control of imports by the *Direction de la Protection des Végétaux et du Conditonnement (DPVC)* has faced challenges due to a lack of equipment, reagents and trained personnel. Instead of robust testing, the DPVC officers now occasionally use rapid tests. These can only indicate whether or not traces are present; not determine the level. Similarly, on domestic markets, quality control agency ABNORM does not receive a sufficient budget allocation from the central government to allow it to organize quarterly spot checks, as planned. Furthermore, ABNORM officials sometimes face resistance from wholesalers not willing to cooperate with monitoring procedures. In such cases, ABNORM does not have the coercive power to demand collaboration.

Similar issues are at play in other countries. The National Laboratory of Côte d'Ivoire, LANEMA, lacks the necessary reagents and human resources to do effective testing. During a visit to a Ghanaian border post, meanwhile, it was found that there was no functional test kit. Ghanaian traders, meanwhile, stated that police on the roads no longer “worry” them on the issue of

iodization, and that the number of functional iodine test kits has reduced significantly. In Togo, photometers were acquired to enable iodine testing, but with no follow-up in terms of training or having procedures in place for effectively using the equipment.

Where controls are done, the procedures are often not watertight, and allow for ample space to feign compliance. In Burkina Faso, tests are not carried out on randomly taken samples. Rather, traders can supply the samples themselves. Observers note that some traders of non-iodized salt separately carry a bag of iodized salt with them, which they provide when asked for a sample. In Ghana, producers willingly comply with customer requests for non-iodized salt; they then make sure that the sacks on top of the truck are sprayed with iodine, so that they would smoothly pass any control points along the route.

Control procedures in Burkina Faso can also be circumvented because importers may choose to clear the salt at customs posts in Bobo-Dioulasso or Ouagadougou. Although this reduces the burden at the border, it also creates a risk of leakage of non-iodized salt into local markets. Another loophole is that, in some countries, the legal frameworks contain exemptions from obligatory salt iodization for salt that is not meant for human consumption, such as salt to be used in the textile industry. Some observers note that such exemptions get abused, and that non-iodized salt allegedly meant for industry, does end up being sold as salt for consumption.

Besides equipment and resources, the capacity of border officials is another important factor. In Burkina Faso, intensive training courses on salt iodization took place in the period 2012-14, for customs and public health officials. By now, however, most of these have either retired or been rotated to other positions. As a result, current customs officers are no longer aware of the legislation and the importance of salt iodization. This also increases the risk of corruption. Traders mention that, sometimes, customs officials may seek personal gain from non-compliance with iodization norms, by extorting bribes.

In most cases, however, we see a very different dynamic. Customs officials often feel compassion for small-scale traders who have undertaken a long journey with low-quality non-iodized salt. They often feel uncomfortable taking a harsh line on enforcement, such as refusing to let the traders enter into the country and/or confiscating the non-iodized salt. To many, the rules seem too far removed from current reality. The same is found for domestic wholesale markets in Ghana, where quality inspectors at informal markets feel that confiscating non-iodized salt is not a feasible option.

In considering gaps in enforcement, it is important to recognize the boundaries of enforcement-centered strategies. Borders in the region are extremely porous; there are countless small dirt roads bypassing official customs posts, allowing the entry of contraband products, including non-iodized salt. Traders who actively seek to avoid iodization rules will always find a way of doing so, no matter how much is invested in enforcement capacities. However, strengthened enforcement capacities can help to increase compliance by the bulk of traders. At the same time, it is important that better enforcement does not come at an additional

cost to those producers and traders who are already following the rules. This could be done, for instance, by providing exemptions or fast-track procedures for pre-selected high-trust traders.

### **3.3 Non-Tariff Barriers (NTBs)**

Non-tariff barriers (NTBs) can be defined as any regulatory measure, besides tariffs, that hinders trade flows. They come in many different types.

An important category of NTBs relates to cumbersome bureaucratic requirements and procedures. To conduct regional trade, producers and traders need to arrange a large number of certifications and other types of documentation. The time investment and financial resources that are required to obtain these add to the cost of trading salt. There seem to be opportunities for streamlining processes to reduce the regulatory burden. In Ghana, for instance, there are two separate agencies undertaking salt inspections, and it is not always clear for producers which one they need, or both. Furthermore, traders often need to obtain quality certificates in both the exporting and the importing country, even if they certify the same underlying product standard.

Many traders refer that one truck of salt may be subjected to countless controls during its journey, whereby the same documents are checked multiple times. Ghanaian truckers, for instance, point out that the number of checkpoints between Accra and the border with Burkina Faso can be as high as 40, many of them run by the police.

The high number of different permits and certificates is not only costly, but also adds uncertainty to the trading process. A delay in obtaining one permit can mean that a whole truck of salt is held up, resulting in higher costs for the economic actors involved. Poorly harmonized standards add to the uncertainty. Production in Ghana, for instance, is covered under three different quality standards, leaving room for misinterpretation. As pointed out in Chapter 2, the salt iodization norms of UEMOA and ECOWAS continue to be different, despite efforts at harmonization. In terms of trucking regulations, differences in axle load standards were also mentioned as a hurdle for road transport. Others note that faulty weighbridges may find trucks to be overloaded even when it is not the case.<sup>27</sup>

Thinking about fostering regional trade in iodized salt, there is an apparent paradox. Regulations, certificates and controls are needed to guarantee the quality of the traded salt and its iodization. On the other hand, however, the large number of different certificates and lack of harmonization between different agencies, both within and between countries, adds unnecessarily to the cost of trading, thereby hampering the trade in iodized salt. Currently, the system is stacked against those traders aiming to adhere to all the rules and regulations. Those actors only trading iodized salt and playing by all the rules face additional costs, delays and

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<sup>27</sup> Byiers, B. and P. Karkare (2022). 'Actors and interests along the Dakar-Bamako corridor'. ECPDM and Enda-Cacid, September 2022.

uncertainties. On the other hand, those willing to trade non-iodized salt, or those who trade iodized salt but do not bother to get all the required documents, get away with this and gain an advantage vis-à-vis their law-abiding competitors. Thus, although control procedures are needed for regulating regional trade and guaranteeing safety, excessively cumbersome and lengthy procedures undermine this same goal. It makes it more likely that traders give up on playing by all the rules.

There have been efforts to reduce the transaction costs of cross-border trade. Through effective lobbying, Ghanaian civil society actors such as the Borderless Alliance, have contributed significantly to harmonized regulations and made progress on simplifying procedures. The amount of bureaucratic hurdles facing regional traders continues to act as a break on trade, however. Political economy dynamics can often help explain why policies aimed at reducing transaction costs fail to be effectively implemented on the ground.

### **3.4 Value chain organization**

Both Senegal and Ghana have a dualistic production structure. On the one hand is a limited number of formal medium and large-sized commercial salt-producing companies. In both Ghana and Senegal, this group accounts for between 50% and 80% of total production. Almost all of this salt is properly iodized. In general, the quality, in terms of product characteristics and packaging, is high. On the other hand are thousands of small-scale artisanal informal salt producers. There have been efforts to organize these in associations and cooperatives. Through such institutional structures, some producers got access to salt iodization equipment. It has been challenging to keep the cooperatives functioning, however, and most small-scale producers continue to operate in a very isolated manner. Most of the non-iodized salt or not adequately iodized salt in circulation in the region comes from such small-scale producers.

Regarding salt trading, there is a similar dynamic. In many importing countries, the import of salt is dominated by a relatively limited number of formal trading companies. They mostly trade high-quality iodized salt, from the formal salt producing companies, with whom they often have direct links. On the other hand, small-scale informal traders tend to buy from intermediaries and have no direct links to the producers. Most of the non-iodized salt is traded through this channel. Some of the informal traders also engage in other practices that undermine transparency on salt quality. In Togo, for instance, some traders import salt from Ghana through the informal channel, but then, once the produce has crossed the border, repackage it in bags of larger salt companies, falsely suggesting that the salt has been iodized. Such practices may undermine incentives for quality upgrading. In Burkina Faso, observers identify the informal traders as the 'weak link' in promoting the circulation of high-quality salt.

The salt value chain does not operate in a vacuum and interacts with other regional value chains, such as livestock, an important export product of countries like Burkina Faso. Many livestock exporters do not have access to formal cross-border financial services, which presents a challenge. Selling their produces in Ghana, they receive Ghanaian cedis. Exchanging these

for CFA in Burkina Faso is challenging and expensive. Furthermore, holding on to the cash cedis brings many risks, such as robbery during the journey back and exchange rate fluctuations. For this reason, Burkinabé exporters of livestock to Ghana prefer to buy goods there, which they can sell back home in Burkina, such as salt. Many of these traders are not aware of quality criteria for salt, and they simply look for the lowest price, which often leads them to buy non-iodized salt.

In the past, many countries in the region, including Burkina Faso and Togo, had associations of importers and transporters. In fact, being a member of the importers association used to be one of the prerequisites for being allowed to import salt. The advantage of this was the higher degree of control. It made it easier to ensure that only iodized salt was being imported. In most countries, however, the importers associations have turned out not to be sustainable. Gradually, new entrants into the salt trade, not belonging to the association, would manage to get their salt across the border and into the country, and slowly erode the function of the official importers association. Today, none of the selected countries require association membership, so there is no longer much added value to being a member. As a result, only a few associations have survived, including the Ivorian chapter of the regional association of salt importers, APISI-UEMOA,

Some stakeholders stress the need to revive the national and regional importer associations, and reintroduce the prerequisite to be a member in order to be allowed to import. Another suggestion by stakeholders is to facilitate trade between formal economic actors. In such a system, a registered importer who directly imports from a listed formal salt producer in Ghana or Senegal could have a fast-track treatment in terms of trade procedures.

Others advocate to seek to bridge the gap between the artisanal producers and the larger industrial firms. If the larger firms and processors were to buy salt from the artisanal producers, then quality control could become more feasible.

### **3.5 Lack of infrastructure and processing facilities**

Another concrete barrier to the regional trade of iodized salt is the poor or lacking infrastructure. Although road conditions along some of the main trade corridors in West- and Central Africa have improved in recent decades, there remains much scope for further improvement. Many secondary trade corridors are still in need of significant upgrading. Finally, many roads linking specific salt-producing areas in Senegal and Ghana to the trade corridors remain poor. Salt traders throughout the selected countries lament the state of the roads.

Since many of the salt-producing areas of Ghana and Senegal are located relatively close to the coast, transport by sea could be a feasible option for certain destinations, cheaper than road transport. Indeed, some salt is already exported by maritime vessels, from Dakar to Abidjan.

Recently, Ghana saw its first ever sea export of salt.<sup>28</sup> The lack of regional shipping services is a constraint, however, on increased use of this means of transport.

As described in Chapter 2, Senegal and Ghana have not managed to gain an entry into important markets like Nigeria, Cameroon, DRC and the Central Africa Region in general. More market research will be needed to identify concrete possibilities and the changes that will be necessary to take advantage of them. There could very well be coordination problems around maritime transport, for instance. As long as regional shipping is underdeveloped, gaining a foothold in such markets may be difficult, while expanding exports to those countries would boost shipping services.

This is also linked to the lack of processing infrastructure. For salt to be transported by boat, it needs to be properly dried and packed. If not, the quality deteriorates quickly on-board, as the salt starts lumping together. Further investment in processing could thus help open up new markets.

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<sup>28</sup> B&FT Online (2022). MIIF eyes multi-billion dollar salt industry. Available at: <https://thebftonline.com/2022/08/03/miif-eyes-multi-billion-dollar-salt-industry/>



## Chapter 4: The road ahead to reducing iodine-deficiency

This report has provided an overview of current trends and dynamics around the regional trade of salt in West and Central Africa (WCA). It draws on official trade data and the information presented in five dedicated country case studies, documenting current practices, barriers and opportunities. Going forward, it will be important to start an inclusive and constructive dialogue on the regional trade dimension of iodized salt. Representatives from the different sectors (public, private, civil society), thematic working areas (health, trade, economic development) and countries will need to come together to deconstruct the complex problems around the promotion of iodized salt trading and identify concrete actions that can help to tackle them.

Here we would like to list a number of opportunities, based on the findings of this report, that can inform the dialogue and the process going forward.

### **A strong collective effort beyond national borders and sectors**

One important over-arching message is the need to approach these recommendations from a regional perspective. Finding the solutions and associated opportunities should be a collective effort. Secondly, though, the evidence shows that regional solutions that are designed in top-down fashion tend to disappoint in terms of results. It is important to start with identifying concrete problems on the ground, and then see if and how regional approaches can help solve them, with special attention to finding ways to create coalitions for change by aligning the interests of key stakeholders from different sectors.

To feed into these collective efforts a number of subsequent opportunities can be distilled:

- **Opportunities for improved data collection**

A substantial share of regional trade in WCA concerns informal trade, which is often not included in official trade data. An increased understanding of such dynamics in the trade of salt would increase the ability to design effective policies. Improving data collection is not straightforward. It is possible, however, to connect with existing initiatives, such as the CILSS, which has been collecting informal trade data for various agricultural commodities. Providing support to CILSS to start collecting data on salt as well, along different trade routes throughout the region, could be an opportunity in this regard.

- **Opportunities to access new markets**

Important markets in the region, such as Nigeria, Cameroon and the DRC, import a lot of their salt from far away non-African countries, such as Brazil. Investing in detailed market research will help understand why this is the case and identify concrete actions that could be taken to support Senegalese and Ghanaian salt producers to gain access to those markets. Such an expansion of export markets further away could allow formal salt

producers to benefit from economies of scale, with positive spin-off effects on the supply of iodized salt for the domestic market and for trading with neighboring countries.

- **Opportunities to better connect the region**

Infrastructure is a vital precondition for smooth regional trade and requires continued investments. This includes, on the one hand, general trading infrastructure such as roads along major transport corridors, and port and shipping facilities. Boosting maritime salt trade in particular could help unlock some of the new markets further away, like the DRC. There is also a need, however, to improve secondary roads connecting salt-producing areas to transport corridors.

- **Opportunities for regional collaboration to reduce Non-Tariff Barriers.**

Non-tariff barriers, such as differences in quality standards, or duplications of required certificates, act as a break on trade, and encourage informality and evading of rules and regulations. Continued efforts are needed to tackle NTBs, both in general and those specific to the trade in salt. It would be a recommended opportunity to explore collaboration with and strengthening of regional bodies, such as ECOWAS and UEMOA, civil society organizations such as Borderless Alliance and salt traders, for instance through their regional association APISI-UEMOA.

- **Opportunities to reduce compliance costs for high-trusted suppliers of iodized salt.**

Traders wanting to play by all the rules, who only trade high-quality iodized salt and make sure they have all the required documents, incur significant compliance costs. Their opportunistic competitors who manage to avoid compliance and simply look for the cheapest salt and highest margin, thus gain a relative advantage. It would be an opportunity to explore how regional collaboration could pilot fast-track priority schemes, whereby trusted traders, transporting salt from trusted suppliers, receive certain advantages. For instance, importing countries could decide to accept, for those cases, quality certificates from the country of origin, no longer requiring additional tests and certificates from the importing country. Such benefits could be conditional on being a member of the official salt importers association, which used to exist in many countries, but are now mostly moribund. Fast-tracking initiatives could also be tied to pilots on digital certificates for trading salt.

- **Opportunities for a fresh approach to enforcement**

Renewed attention is needed to equip enforcement agencies, such as customs, with the necessary equipment, financial and human resources required to enforce iodization norms. It is important, however, to consider the sustainability of such investments. They need to be part of longer-term national strategies for Universal Salt Iodization, rather than financed as part of programmes of limited duration funded by donor agencies. Finally, enforcement should be smart, targeting high-risk transactions, while avoiding putting additional burden on trusted suppliers and traders.

- **Opportunities for strengthening the link between the formal and informal sectors**

In the salt-producing countries of Senegal and Ghana, the limited number of formal medium-large companies and the multitude of small informal salt-producers operate in separate ecosystems. Non-iodized salt comes predominantly from the small informal operators. Doing away with informal salt production is neither politically feasible nor economically desirable, as it provides a source of income for tens of thousands of households. It would be an opportunity to collectively identify how to strengthen the links between these producers and the larger formal companies. An option would be to set up pilot schemes whereby the larger companies buy salt from the small-scale informal producers and then focus on the drying, iodizing, processing and packaging of the salt. Governments and partners could support downstream investments, on the condition that salt companies purchase part of their salt from the small producers.

- **Opportunities to target awareness raising activities..**

Besides dedicated efforts to improve the supply and trade of iodized salt, the demand side also requires continued attention. An opportunity to improve results in this area is to better target awareness raising efforts, by identifying particular networks or communities where skepticism of iodized salt is widespread. Another dimension of awareness raising is related to the promotion and upgrading of the salt industry in Ghana and Senegal. When policymakers and other stakeholders are more aware of the potential economic benefits of such a strategy, it will be more feasible to develop and implement coherent policies to support the sector's transformation.



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