



# EXPORT LOGISTICS SURVEY



# EXPORT

# LOGISTICS SURVEY

*Disclaimer: This survey was conducted by Export Development Association (EDA) within the framework of a capacity building grant awarded by the USAID Agriculture Program. It does not represent the views of the U.S. Agency for International Development or the U.S. Government.*

# CONTENTS

4	THE LIST OF ACRONYMS
5	INTRODUCTION:OVERVIEW OF THE TRANSPORTATION & LOGISTICS SECTOR IN GEORGIA
5	Transportation Services Market
6	Georgia's Logistical Competitiveness
8	Railway
9	Air Transport
10	Sea Transport
11	Land Transport
12	The Severity of Logistics Problems
13	Legislation
13	Shipping Insurance
13	Pre-Shipment Inspection Procedures
14	DIGITALIZATION OF THE PROCEDURES & DOCUMENTATION
14	LACK OF LOGISTICAL INFRASTRUCTURE (WAREHOUSES, TERMINALS)
15	PRODUCTION CAPACITY & EXPORT MARKETS
15	Review of the Georgian Agri Exports - Main Destinations & Potential
16	Export Destinations by Perishability of Products
17	Logistically Competitive Destinations for Perishables
21	Quantitative Analyses of the Production Statistics
22	UPCOMING LOGISTICAL PROJECTS
22	Anaklia Deep-Sea Port
22	Kutaisi International Airport (Cargo Terminal)
23	FOOD LOGISTICS TRENDS IN DEVELOPED MARKETS
24	RECOMMENDATIONS
24	World's Best Practices: Suitable for Opportunities of Georgia
25	Recommendations to Increase Competitiveness
26	<u>ANNEX 1</u> : EXISTING FLIGHTS FROM GEORGIAN AIRPORTS
29	<u>ANNEX 2</u> : THE LIST OF THE RESPONDENTS & SURVEY METHODOLOGY
29	Survey Demographic and Methodology
31	<u>ANNEX 3</u> : ROADMAPS OF EXPORT PROCEDURES PER TRANSPORT MODE
32	<u>ANNEX 4</u> : AGRICULTURE PRODUCTS EXPORT BY EACH TRANSPORTATION MODE
50	<u>ANNEX 5</u> : INCOTERMS 2020

**GDP** Gross Domestic Product

**CIS** The Commonwealth of Independent States

**EU** European Union

**TEU** Twenty Equipment Unit' or a '20-foot container'

**FTL** Full truckload

**LTL** Less-than-truckload

**LCL** Less than Container-Load

**INCOTERMS** International Commercial Terms

**TEU** Twenty Equipment Unit' or in other terms a '20-foot container'.

**TMS** Transportation Management Systems

**TSM** Time Slot Management

**LPI** Logistics Performance Index

**BSO** Business Support Organization

**EAA** European Economic Area

**MENA** Middle East and Northern Africa

**WB** World Bank

**EDA** Export Development Association

**MOESD** Ministry of Economy and Sustainable Development of Georgia

**ADB** Asian Development Bank

## INTRODUCTION: OVERVIEW OF THE TRANSPORTATION & LOGISTICS SECTOR IN GEORGIA

The transport and logistics sectors are crucial to Georgia's economy, especially when you consider that transport and warehousing currently accounts for 6.5% of GDP. Given that the sector's growth is outpacing GDP growth by a wide margin, it is anticipated that the sector's significance will rise over the next few years. For instance, the increase of the real gross domestic product in 2022 was 10.1%, while the growth of the transport and logistics sector was 28.4%. The industry is developing for various reasons, not only a result of the redirection of transit freight to Georgia due to the crisis in Ukraine, but even before the war began in 2021

when the sector increased by 28.9% from the previous year. The only industries behind the transportation and logistics sector in terms of growth are information technology and energy. Compared to GEL 3.305.0 million in 2021, the sector's overall output was worth GEL 4.078.6 million. Overall, the Georgian corridor had a 20.5% rise in freight turnover in 2022, totaling 27.9 million tons of cargo. When you factor in expanding infrastructure, new project implementation, and overcoming various obstacles along the way, there is still plenty of room for expansion.

## TRANSPORTATION SERVICES MARKET

Out of 13 surveyed transportation companies, all are multi-modal in spite of 50% of all their shipping inquiries aligned with land transportation. Demand for maritime, rail, and air shipments are distributed almost equally. Although seven of the surveyed companies can provide temperature-con-

trolled transportation services for full or Less Container Load (LCL) cargo (small batches) they have mentioned (see next chapter) that regular and affordable LCL is rarely accessible.

Availability of Logistic Services

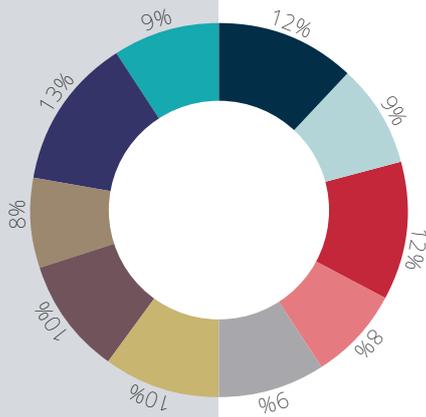


Figure 1: Availability of Logistic Services

- Land Transportation
- Air Transportation
- Maritime Transportation
- Railway Transportation
- Cargo Packing/Dislocation
- Cargo Warehousing/Storing
- Door to Door Delivery
- Temp. Control (LTL/LCL)
- Container Shipping
- Brokerage

Inquires by Transportation Modes

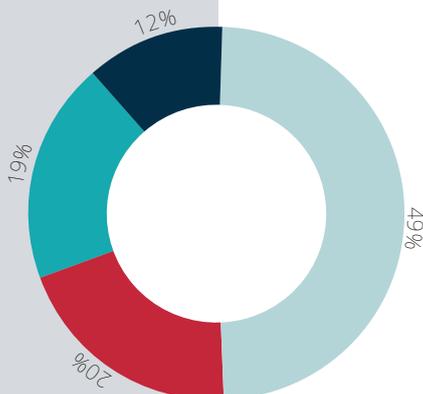


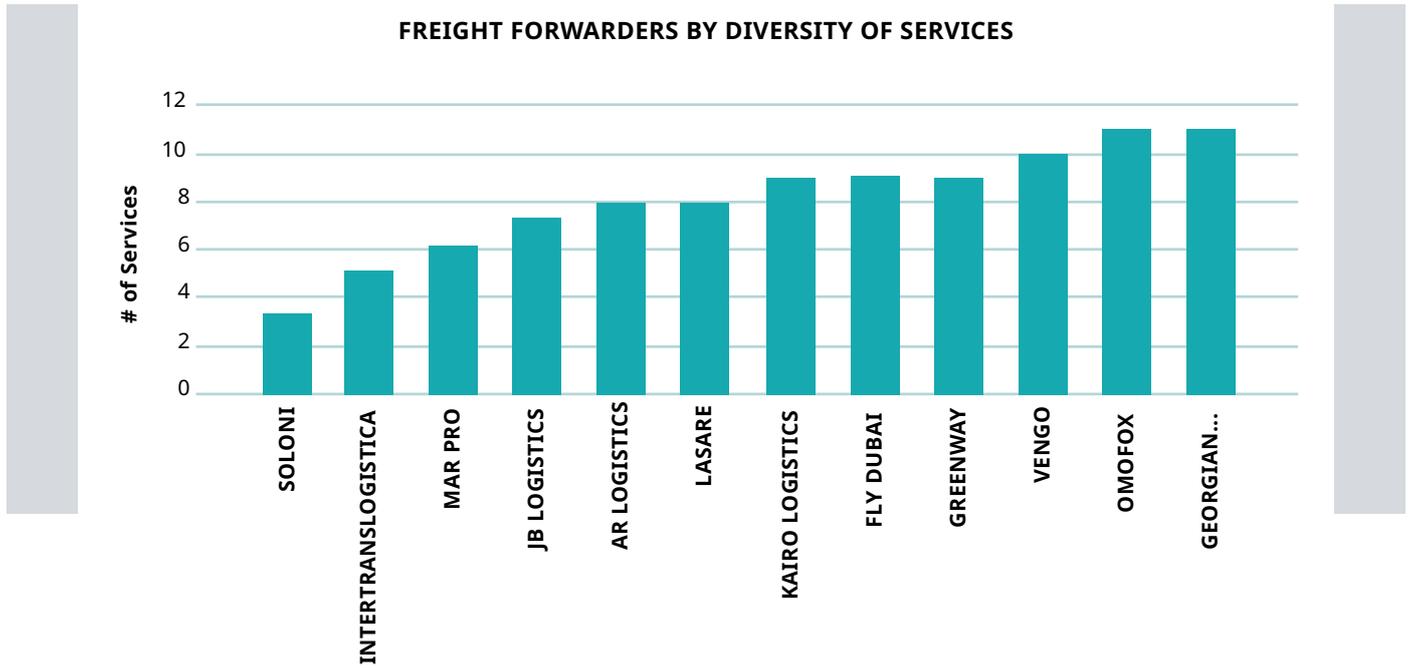
Figure 2: Inquiries by Transportation Modes

- Land
- Air
- Marine
- Rail

The market for transportation services is not concentrated. All but one company (Soloni Ltd) provides at least five

different services to exporters, giving the impression of healthy competition.

Figure 3: Freight Forwarders by Diversity of Services



**GEORGIA'S LOGISTICAL COMPETITIVENESS**

There are four channels of transportation Georgian exporters use for international trade of consumer goods: sea, land, rail, and air. While Georgia maintains an infrastructure that provides access to all of these shipping channels, the country's logistical competitiveness remains low.

assessment, Georgia's position is better than its peers in the income group (100th) but worse compared to the region of Europe and Central Asia (69). Because different sample sizes are applied to two comparison years, the overall assessment scores are more informative. For 2023, Georgia's LPI accumulated 2.7 points which is an improvement of its 2018 result (2.44) and almost matches its best the performance year 2012 (2.77).

In the World Bank's biannual Logistical Performance Index (LPI), Georgia ranked 119<sup>th</sup> among 160 countries<sup>1</sup> in 2018 and 79<sup>th</sup> among 139 countries in 2023. As of the last as-



<sup>1</sup> Logistical Performance Index 2023 [reference]

LPI assessment is used as a benchmark for EDA in this research. Some experts argue that the index is somewhat subjective due to its survey methodology<sup>2</sup>, relying on an online survey of logistics professionals and freight forwarding service providers that ignores the opinions of logistics service recipients. Nevertheless, LPI is the most comprehensive, broadest, and most reliable source of information for comparison available today.

While EDA's survey methodology and sample size cannot be compared with LPI due to the latter's complexity and scale, it still provides some useful insights into current-day logistics in Georgia and provides the opportunity to analyze contrasting target groups (service providers vs recipients). EDA, therefore, has compared 2023 ranking results based on the opinions of freight carriers but also those expressed by Georgian exporters and business support organizations.

The international LPI score uses six key factors to benchmark countries' performance: customs, infrastructure, international shipments, logistics competence, tracking, and tracing, and timeliness. These factors represent areas for policy regulation indicating the main inputs to the supply chain (customs, infrastructure, and services). The supply chain performance outcomes are measured by indicators of time, cost, and reliability (timeliness, international shipments, and tracking and tracing).

The ranking is calculated by a weighted average of scores for each of these factors assessed on a scale of 1 (worst) to 5 (best). While the ranking provides indicators that depend on other countries' performance, the score is an independent measure of quality regardless of how others perform.

EDA's survey touches upon all of the LPI areas but focuses primarily on problem mapping of all involved parties (exporters, BSOs, freight forwarders, government, and quasi-government agencies) and their opinion of possible solutions. It ranks problems individually for each target group by three categories of severity (low, medium, high).

**(1) Efficiency of the clearance process** (i.e., speed, simplicity, and predictability of formalities) by border control agencies, including customs, is assessed by 2.6 points out of 5, a moderate improvement from the 2018 indicator (2.42) but still far behind its best result of 2012 (2.9). The Customs efficiency is Georgia's second weakest area after Infrastructure.

When assessing logistics problems by severity, Georgian respondents assigned the lowest level of importance to customs operations, which contradicts LPI 2023 results. When speaking of their experiences, exporters mentioned problems associated with understaffing in customs departments and insufficient qualification of staff to handle certain documentary transactions. An emphasis was placed specifically on complicated procedures for acquiring a certificate of origin, enabling exemptions from import duties during export to countries where Georgia has a tariff preference.

**(2) Quality of trade and transport-related infrastructure** (e.g., ports, railroads, roads, information technology) is assessed by the WB by 2.3 points. This is the lowest of all six performance areas, a slight decline from its 2018 result (2.38) and a drastic decrease from the 2012 result (2.85).

EDA's survey assessed the quality of infrastructure and information systems by gauging industry concerns related to the ease of arranging LCL space, indirect shipping and the availability of steady temperature control during transportation. These barriers were ranked second to transportation price and duration by exporters and BSOs and second for the carriers (price was the highest concern for them as well). Related problems mentioned by producers of high and medium-perishability products included the lack of cargo terminals for air shipments within a short radius of production; almost exclusively West Georgia. Furthermore, companies mentioned unmet demand for direct flights to target markets from the only existing cargo terminal (Tbilisi). They stated that securing LCL space during harvest season is nearly impossible due to a lack of regular cargo flights to target markets. They also mention that space availability depends on the unpredictable volume of passenger-cargo loads. As for temperature control, the lack of infrastructure at post-harvest handling sites (pre-cooling), throughout the route to the Tbilisi cargo terminal, and inside the passenger's plain cargo section, are all unacceptable challenges.

The interviewed exporters of low perishability products have fewer infrastructure-related problems, primarily finding space for their LCL shipments and lengthy waiting times due to increased post-war traffic and a narrow corridor (the complex landscape) at Larsi customs on the Russian border.

**(3) Ease of arranging competitively priced shipments** has always been problematic for Georgian exporters. With the exception of 2010 (2.73 points), we are seeing signs of improvement with a score of 2.7 points.

The price of transportation was deemed a priority by all respondent groups during interviews, based on the reshuffling of global, and especially regional, logistics. According to the respondents, worldwide inflation of energy prices and the recent blacklisting of the Black Sea due to security issues has had a tremendous impact on transportation prices. In turn, this has effectively eliminated profitability for food exports, especially fresh produce. This is particularly important for producers of less perishable products who, in order to maintain price competitiveness, have been forced to switch from motorway shipping to more affordable sea freight. While cheaper, sea freight is a considerably less reliable mode of transport due to regional conflicts and weather-related changes to maritime schedules.

**(4) Competence and quality of logistics services** (e.g., transport operators, customs brokers) is assigned 2.6 points by the LPI, a vast improvement over 2018 (2.26) and lagging just behind its best score in 2012 (2.78).

---

<sup>2</sup> Logistics Performance Index, Wikipedia, Citing 10-12 [reference]

Exporters and business support organizations in Georgia do not raise significant concerns over the competence of logistics services. Only several companies with extensive export experience, primarily exporters of low and medium-perishability products using land or multimodal transportation modes, complain about the competencies of customs officers and logistics companies. Their concerns are linked to the rigidity of assigning proper HS Codes or preferential rules relating to point of origin, especially when dealing with exports to the EU. For transportation companies, the inability to properly train and keep long-distance truck drivers has made it necessary for exporters to provide repeated instructions with every shipment (trainings for the transportation service providers through existing or new associations is recommended). In every situation where the qualifications of the logistics service provider were questioned, the problem was traced to flawed management or operating systems. As for high perishability product exporters, their primary concerns are linked to the lack of competition, and resulting higher prices, in the full insurance market.

**(5) Ability to track and trace consignments** was Georgia's weakest area of performance in terms of ranking, putting it in the last 10th percentile of countries (132 among 160). There has been significant improvement in 2023 (2.8 points) over 2018 (2.26 points), placing it in the top 60% of the cluster. It is also the best performance and rank over any previous year.

While it is important to recognize the LPI methodology for tracking and tracing of outgoing shipments from other countries to Georgia, EDA's needs assessment focuses on outward shipments, meaning that indicators could vary. It is important to note that none of the EDA's respondents reported any issues with tracking and tracing their export shipments. Considering that it is common for Georgian producers to place mini-trackers with their cargo, allowing them to receive live updates on movement and temperature, they do not need to rely upon or trust the carrier's service. On a very basic level, not trusting carriers is another indication of poor service quality.

**(6) Timeliness of shipments reaching their destination** within the scheduled or expected delivery time has always been one of Georgia's best logistical performers, especially in 2023 with a score of 3.1, an improvement over the 2018

indicator of 2.95. It is worth noting that the assessment is given by freight forwarders shipping to Georgia (not from). Because Georgia's imports are three times the volume of exports, the local logistics industry is more experienced and better prepared to receive, rather than send, shipments.

While EDA was predisposed to measuring the timeliness of outward shipments along with LPI, there have been no complaints about maintaining planned transportation schedules. This being said, the overall duration of transportation to target markets is the second most problematic issue among all respondents. For exporters, the problem is the amount of time needed to reach target markets (where demand is strong) and the perishability of fresh fruits and vegetables.

The reasons for lengthy shipments are common for all exports, caused by a global reshuffling of the logistics industry over the last 3 years.

In summary, the severity of logistic problems identified for Georgia in 2023 by LPI are similar to those identified by EDA's respondents. These changes, whether good or bad, seem to have happened due to a global rearrangement of shipping routes beyond the control of Georgia.

Deterioration of 2018 quality scores in the logistic performance index compared to the country's historical average<sup>3</sup> (2010-2016), combined with matching concerns identified by the supply chain participants in EDA's 2023 survey, show no trace of relevant policy reforms or the implementation of sizable infrastructure projects over the assessment period. The 2023 improvement of scores seems promising in the services area, but infrastructure quality still struggles with diminishing rankings and scores.

While Georgia's volume of cleared cargo turnover has increased by 24% and its value by 31% during the last years (2015-2021), its pace still lags behind the rate of trade development. At the same time, the unit value of import cargo has not changed considerably while the export unit value has increased by 30%<sup>4</sup>. This indicates that Georgia has diversified and/or upgraded the overall quality of its export products and is attracting higher prices, requiring a higher quality and range of logistic infrastructure sites and services primarily for outward shipments.

## RAILWAY

14.8 million tons of goods were transported in 2022, a 21.8 % increase over the same figure from the previous year. 12.8 % of this volume was shipped domestically, 28.6 % was shipped internationally (excluding transit), and 58.6 % was shipped in transit (see figure 1). The overall amount of cargo moved in 2021 increased by 9.7% over the previous year, despite a decline in both domestic and foreign shipments (in contrast to transit, this data includes cargo whose final destination is Georgia or the starting point of shipment is

Georgia). International shipments climbed by 18.8%, while transit increased by 28.6% in 2022. Cargo exported from the country accounts for 30.1% of the volume moved by railway in the international transportation mode, while freight imported into the country accounts for 69.9%. Armenia was the final destination for 22.2 percent of all railway traffic in 2022, followed by Kazakhstan with 9.6 percent and the Russian Federation with 8.4 percent. 14.9 percent of the entire amount of cargo moved in transit in 2022 was delivered to

<sup>3</sup> 2010-2016 scores of WB Logistic Performance Index were averaged and compared to 2018 analogue

<sup>4</sup> GeoStat External Trade 2015-2021.

Turkey, 7.8 percent to the Netherlands, 6.7 percent to Italy, and 3.5 percent to China. Agricultural products (13.7%), other raw materials for industry (42.2%), food, drink, and tobacco (20.8%), and other metal products (12.7%). A total of 1.998 million tons of food, drinks, and tobacco, as well as 307 thousand tons of fish & other fishery products and forestry products, were sent locally & internationally. These statistics represent connections with CIS nations that are currently being handled by train in advance of the completion of the Akhalkalaki-Kars railway. The project's first phase is expected to be finished in 2024, at which

point the throughput will increase to 5 million tons. Due to the absence of adequate railcars and high costs of shipping, perishable goods are not transported by railway. It is, however, frequently used to carry wine, mineral water, and non-alcoholic drinks to CIS states. Every type of agricultural commodity could be shipped by railway if the proper railcars were available. As with other modes of transportation for perishable goods, it is crucial to regulate storage temperatures within railcars. Table 1 provides statistical information on the exported agricultural commodities from Georgia by railway.

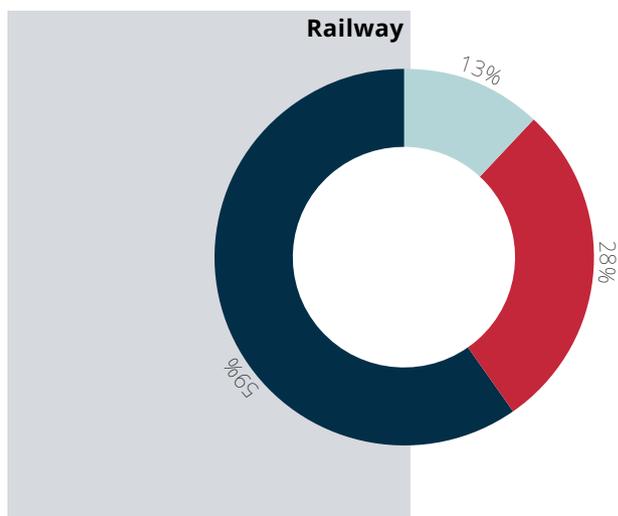


Figure 4: Cargo movement by railway, 2022. Source: National Statistics Office of Georgia

See Annex 3: Roadmaps & Export Procedures per Transport Mode.

## AIR TRANSPORT

The Shota Rustaveli Tbilisi International Airport, David the Builder Kutaisi International Airport, and the Alexander Kartveli Batumi International Airport are three major international airports in Georgia. Tbilisi and Batumi international airports are operated by TAV while Kutaisi Airport is operated by United Airports of Georgia. At Georgian airports in 2022, 1,600 cargo flights were operated, handling 17.9 thousand tons of cargo. This is less than the 18.2 thousand tons that were shipped in 2021 and significantly less than volumes in the years before the pandemic (32.6 thousand tons in 2016, 25.6 thousand tons in 2019). It should be emphasized that this volume of cargo includes mail in addition to other commodities and that only 3,000 tons (out of 17.9 thousand tons) is shipped out of the country (see figure 2). Just a small portion of high-value perishable agricultural items, such as herbs, fresh fruits & vegetables, which are mostly sold to the CIS countries (Moldova, Russian Federation, Ukraine, Kazakhstan, Kirgizstan) are delivered by air. According to the Statistics Department, 62% of all Georgian commerce is conducted through Tbilisi Airport, including cargo flights. In addition, Kutaisi Airport will be equipped with the necessary infrastructure to handle agricultural exports shortly, with "large-scale" infrastructure improvements for GEL 47 million (\$17.87 million) underway. As stated by United Airports of Georgia, as part of the long-term general plan for the expansion of the airport, they intend to finish designing a new 3.5-kilometer runway at the Ku-

taisi International Airport in 2023. While only small cargo planes can land at Kutaisi Airport, the new, longer runway will make it possible to accommodate all passenger and cargo aircraft types and boost capacity (the existing runway capacity can only handle 100 tons of airplanes). Moreover, a temperature-controlled warehouse and a customs clearance zone are needed to finalize export declarations and phytosanitary inspection.

A new airport will be built in Trabzon in the upcoming years, equipped with cargo terminals and other logistical infrastructure. The goal is to transform Trabzon into a major logistics center that includes a 3 million square meter airport with a 15 million passenger capacity annually along with a 70,000 square meter terminal constructed by the Turkish Government. Before the end of 2023, the Government hopes to hold a tender for the airport, creating an undeniable opportunity for Georgian exporters, particularly those in western Georgia, to utilize the Trabzon airport for product shipping.

A new airport will be built in Georgia in the upcoming years, according to the Georgian government. The former military airfield in Vaziani will be the potential location. The initiative aims to establish Georgia as the regional hub for aviation.

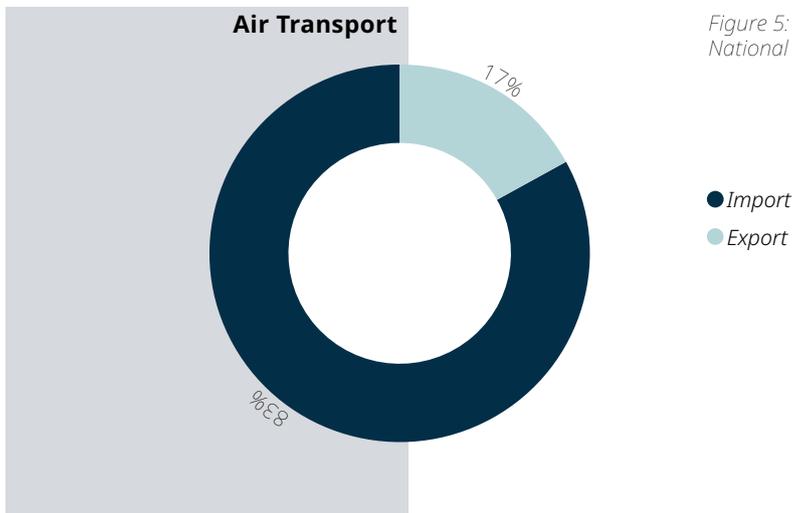


Figure 5: Cargo movement by air, 2022. Source: National Statistics Office of Georgia

See Annex 3: Roadmaps & Export Procedures per Transport Mode.

## SEA TRANSPORT

Georgia's major port is Poti Port operated by APM Terminals. It has a storage capacity of 235,000 m<sup>2</sup>, comprising 5,000 m<sup>2</sup> of warehouses and 14 automated terminals. Many infrastructure projects are now underway to modernize its facilities and boost handling capacity. The current handling capacity, which is 9–10 million tons per year, will eventually rise to 25 million tons per year. With the construction of a new container terminal, the current capacity of 650,000 TEU containers annually will be increased to 1.5 million TEU<sup>5</sup>.

The Batumi Port, configured to export oil and petroleum-based products, maintains 11 berths totaling 2.3 kilometers in length, can process 8.8 million tons of liquid cargo and 2.3 million tons of general cargo per year. The International Container Terminal Services Inc., a Philippine-based corporation, has been in charge of operating the Batumi Container Terminal since 2008.

While suspended and is currently the subject of international arbitration, the Government plans to issue a public tender and restart building of the Anaklia Port project this year. When the first development phase is finished, Anaklia Port will have a capacity of 7 million tons annually. There are six phases to the entire project. The goal is to build a port that can accommodate post-Panamax size ships, Handy-max and Aframax ships as well as deep-sea vessels up to

10,000 TEU. The largest ships that Georgia's ports could accommodate before the Anaklia Port expansion could only transport 1,500 TEU. Some 8,000 workers will reside at the port, which is a component of the new "Silk Road," and a related Free Industrial Zone will be alongside (FIZ). As a technically feasible location for a deep-sea port in Georgia, the Anaklia Port project is crucial to the growth of container shipping. According to data from the Ministry of Economy, the total volume of cargo processed in the seaports of Poti and Batumi in 2022 was 12.4 million tons, an increase of 12.8% from 2021. (11.0 million tons). A total of 477,094 TEU of containers were processed at Poti and Batumi seaports in 2022, an 18.9% increase from 2021(401,386 TEU).

Cargo turnover is distributed as follows:

- Poti Seaport: In 2022, the volume of cargo handled there totaled 7.7 million tons, an increase of 9.0% from 2021 (7.1 million tons). Among these, the volume of containers processed in the Poti seaport in 2022 totaled 357,623 TEU, an increase of 18.3% over 2021 (302,213 TEU).
- Batumi Sea Port: In 2022, 4.7 million tons of cargo were processed there, representing a 19.7% increase from 2021 (3.9 million tons). There were among them 119,471 TEU containers processed in the Batumi Sea port in 2022, a 20.5% increase from 2021 (99,173 TEU).



<sup>5</sup> Twenty Equipment Unit' or a '20-foot container'

Figure 6: Poti & Batumi ports cargo shipment in 2022 (unit - TEU). Source: National Statistics Office of Georgia



Just a small portion of agricultural products such as those that can be stored for extended periods or have few alternatives for shipping, such as nuts to China, are shipped by sea. As a result, hard to find, temperature-controlled containers are needed and tend to be considerably more expensive. Statistics on maritime transportation include the portion of items exported by land that are sent by ferry to Europe.

The potential for Georgian ports includes shipping of perishable goods over short distances to nations along the Black Sea, as well as non-perishable goods over larger

distances. The trade data (table 3) demonstrates the enormous potential for Georgia’s ferry service. Once a sea route between Georgia and Romania is developed, it will become a vital link for Georgian exporters. A new weekly ferry operating from the Poti Port to Constanta (Romania) will have a capacity of 110 trailers, take approximately 48 hours, and will be implemented in Autumn 2023. Currently, there are 2 vessels available for ferry service from Batumi Sea Port to Bulgaria (8 times per month). The capacity for both ferries totals 180 trailers. Both, existing and future ferry lines are accommodated with temperature control systems and can carry perishable goods.

See Annex 3: Roadmaps & Export Procedures per Transport Mode.

## LAND TRANSPORT

The majority of Georgia’s agricultural exports are transported by road, a comparatively quick and affordable option, making use of both FTL<sup>6</sup> and LTL<sup>7</sup> technologies. Products shipped in this manner require a lengthy shelf life, somewhere between 4 to 90+ days, assuming the goods are maintained at a proper temperature and humidity. This anticipates storage before transit, time spent on the road, storage at the final destination, as well as time spent on the shelf. Given that the majority of exported goods command prices that cannot absorb the costs of air transportation, and that transit time in Europe is 8–17 days, ground transportation by road is essentially the only affordable option.

Recognizing that the majority of agricultural goods are transported by road, this is Georgia’s primary distribution

route to export markets. According to the numbers shown below (table 4), the majority of agricultural goods delivered by road in 2022. When exporters compare its relative flexibility and simplicity, it is clear why exporters choose land transportation. Unfortunately, not all export directions, such as those to the Gulf region, are suited for land transportation (see the chapter “The Severity of Logistics Problems”). Similarly, land transportation to EU countries for 8–17 days is not acceptable for perishable items (such as raspberries). For other products, when temperatures can be properly maintained and the items have been adequately packed, land transportation becomes a completely worthwhile option. Sadly, over the past few years, the costs of transportation, not only for land, have almost tripled.

See Annex 3: Roadmaps & Export Procedures per Transport Mode.

<sup>6</sup> Full truckload (FTL)

<sup>7</sup> Less-than-truckload (LTL)

## THE SEVERITY OF LOGISTICS PROBLEMS

Based on interviews with exporters and forwarders, numerous logistical problems were identified, the majority shared by all. They agreed that increased transportation prices were the primary factor influencing competitiveness, followed by duration of transportation and indirect routes to reach desirable destinations. Recognizing these three issues are so interdependent, they cannot be discussed separately.

The transportation price reflects the impact of indirect shipping. At the same time, this also extends the duration of shipping and is the root cause of the competitive disadvantage. Georgia lacks direct sea, rail, or air connections to most of its target markets. This situation worsened amid a post-COVID reduction in traffic followed by war-related rearrangement of international transportation routes. Georgian export goods are being shipped via indirect routes, more than ever, while global inflation of energy prices adds to the problem. Furthermore, indirect shipment also means that containers are subject to changes in transport during

the shipment, raising the risk of temperature fluctuations and subsequent quality of perishable goods.

The price issue is especially acute for low and medium-perishability food producers as their profit margins are lower compared to those of fresh product exporters who are the most concerned about shipping duration during the window of a seasonal advantage of soft fruits and vegetables. Later, when their target markets start to be supplied by better-positioned competitors, the prices drop, and reduced margins can no longer resist expensive transportation. Therefore, the price again becomes an issue. If fruits don't get into markets in time, producers lose product due to perishability. If they do not ship during the right season, producers lose their premiums. Some producers said that selling 20-30% of the harvest during a particular 2-3-week seasonal window provides enough premium to cover the risk of loss of all the remaining harvest. Despite this situation, access to freight insurance services was not highly ranked by respondents.

Other challenges associated within the food logistics & transportation sector (A to Z):

- **Aged trucks:** Recognizing that road transportation is relied upon for the majority of exported goods into Europe, the industry is faced with significant challenges, the greatest being an aged fleet of vehicles, primarily trucks, that cannot meet the EURO 3 criteria or find it difficult to obtain export permits to Europe (EURO 6 standards are required). It is especially challenging for carriers to compete with Turkish firms that rely on these older trucks for exports into Russia or moving containers in the Caucasus or Central Asia regions. Considering that Georgian carriers do not have the resources to make improvements, or they must direct investments into employees, warehouses, and other equipment, it is unlikely that this situation will improve any time soon.
- **Air cargo terminal:** The only location from which Georgian goods may be transported internationally by air is Tbilisi. The airports at Kutaisi and Batumi in western Georgia are not equipped with cargo terminals. In some cases, charter flights are organized during peak season, but not on a regular basis. As a result, businesses that supply fresh foods from western Georgia must first transport their goods to Tbilisi before shipping by air, effectively lengthening delivery times and raising costs. For exporters who transport goods into the Gulf region, there are only 2 options: sea and air. Due to the exceptionally long delivery times for transport by sea (40+ days), it is impossible to use this method for perishable goods. The situation in Iran makes road transportation unfeasible as do other Gulf nations that refuse to allow vehicles into their territory via Iran.
- **Barriers to LTL shipments:** Due to a shortage of export LTL cargoes, several businesses are attempting to combine shipments but are having difficulties. With unpredictable departure times, estimating the amount of time trucks need to refuel and transit times that last longer than one month makes LTL shipments less appealing.
- **Competition between Georgian and foreign transportation service providers:** A number of foreign transportation service providers have started operating in Georgia. According to the Georgian transportation service providers surveyed, the larger truck capacities and lower prices offered by these foreign operators, when compared to their own, prevents them from competing effectively.
- **Communication:** The communication between exporters and suppliers of logistics and transportation services is an issue. Exporters are frequently unaware of the shipping provider and the services they have to offer. To create long-term and sustainable economic ties that will boost Georgia's agricultural exports, limitations in communication need to be overcome.
- **Custom-bonded warehouses:** Regulatory issues requiring a custom-bonded warehouse as a consolidation point for already-cleared goods creates significant challenges to exporters.
- **Education:** Both exporters and transportation service providers have recognized a lack of educational institutions offering up-to-date programs related to logistics and shipping, forcing them to take on the responsibility of educating their staff. At the same time, it is difficult to find individuals that fully understand the importance of proper product packaging, regulating temperatures, identifying shelf life, loading a vehicle, etc. as well as critical issues associated with post-harvest management.
- **Ferry lines:** Insufficient frequency and the absence of significant ferry lines are among the most challenging infrastructure issues. The vast majority of exports must travel 1500 kilometers through Turkey to reach markets in Europe. These issues could be mitigated if ferry lines would avoid exports of alcoholic drinks, meat and phar-

maceutical products. A ferry service between Romania and Georgia is expected to run in the autumn, which should help alleviate these challenges.

■ **GENSET generators:** The essential equipment for short-distance transportation of temperature-controlled goods is limited to a small number of transportation companies.

## LEGISLATION

The Government has put in place a variety of supporting policy measures, such as streamlining border crossing processes, lowering taxes, and signing free trade agreements, intending to position Georgia as a regional logistics center. Generally speaking, transportation businesses do not see any issues with Georgian law; nevertheless, they do raise concerns about the rules and the bureaucracy that surrounds their execution, especially complex restrictions associated with regional warehousing operations. Using a bonded warehouse as a regional HUB means that licensed owners can manage these operations, especially for LTL goods. For exporters, consolidation can require more than a month. The best procedure would be to allow customs clearance, then keep goods in transit in a bonded warehouse until the other cargo becomes available. One such example is a wine exporter sending a single pallet of wine to the EU. The forwarding company needs to find other goods to complete the truck (for euro pallets - 32, for "American" fruit pallets - 23).

## SHIPPING INSURANCE

Since Georgian insurance companies are often re-insured by European entities, virtually any form of transport shipment insurance is accessible. With representatives in Georgia to assist with claims, it is relatively easy to resolve compensation. When carrying perishable temperature-controlled cargo, the majority of transportation companies employ data logs to lower insurance risks. Warehouses also carry a wide variety of insurance packages. CMR insurance (transport providers' liability insurance), cargo insurance, warehouse stock, and internal operations insurance are typically required for export deliveries. Small logistical facilities, warehouses, and transportation & forwarding firms have little trouble obtaining these insurance policies from Georgian insurance companies and provide them to clients. Customers can purchase insurance for both dry and temperature-controlled warehouses like G&A Group, Lilo 1, etc. Although there are no significant variations between pricing in this country and those in Europe, high costs are still an issue. Most businesses have CMR insurance, so all of their transportation is covered by the carrier's liability insurance. The clients' lack of preparation in the area of insurance, particularly when they seek full coverage for loss in the event of an insured incident, can be a problem if the damage exceeds the CMR compensation. As a result, some

■ **Warehousing:** Several businesses maintain warehouse hubs in Europe, giving exporters a destination for samples and small batch deliveries that will help them establish a foothold in new markets. While not yet embraced by exporters, there are concerns about warehousing of perishable foods.

businesses ensure the cargo themselves, factoring this expense into the transportation costs.

As customer specifications for food products from customers are becoming stricter, and as high reputation end sellers (such as retail chains) make their entry specifications stricter, self-insuring has become increasingly more common in recent years. In addition to the shipping insurance product and public liability insurance, they are also requested from specific buyers.

## PRE-SHIPMENT INSPECTION PROCEDURES

When products are being prepared for export, trade channel participants (buyers, suppliers, traders, and service providers) conduct pre-shipment inspections. The objectives of a pre-shipment inspection are to verify the amount and quality of the goods and confirm they match the market's safety standards.

Procedure:

1. Inspection visit
2. Quantity checking
3. Random selection
4. Inspect production process & hygiene
5. Conformity assessment
6. Safety testing
7. Inspection reporting

While pre-shipment inspection processes are often carried out by the exporters themselves, they are mostly handled by internationally accredited companies. The paperwork is not generated by the transportation providers and do not encounter any serious issues in this area. Typically, papers are received in digital format without creating any delays in shipment. Although not needed for customs clearance services in Georgia nor overseas, importers occasionally require pre-shipment inspections. Previously required in Georgia until 2002, this mandate has been eliminated, relying entirely on the importer/buyer.

These international companies provide pre-shipment inspection services:

- [Bureau Veritas](#) - UK & Ireland
- [SGS](#) - Switzerland
- [Tuvsud](#) - Germany
- [PROQC](#) - International
- [RINA](#) - International
- [DNV](#) - Norway
- [Cotecna](#) - USA
- [Intertek](#) - UK (has the branch office in Batumi and provides the service locally)
- [Alex Stewart International](#) - Latvia
- [Geo-Chem Middle East](#) - UAE

These countries require a pre-shipment inspection:

- Angola
- Bangladesh
- Benin
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Central African Republic
- Democratic Republic of Congo

- Cote d'Ivoire
- Egypt
- Ecuador
- Ethiopia
- Guinea
- India
- Indonesia
- Iran
- Kuwait Liberia
- Madagascar
- Malawi
- Mali
- Mauritania
- Mexico
- Mozambique
- Niger
- Senegal
- Sierra Leone
- Togo
- Uzbekistan

The majority of countries on the list above demand inspections for exports that exceed specified amounts. There are occasions when all imported goods, regardless of value, must undergo inspections.

## DIGITALIZATION OF THE PROCEDURES & DOCUMENTATION

The Georgian Government, including the Revenue Service, is generally moving toward digitizing operations. Most transportation firms employ electronic pre-declaration of shipments and maintain electronic interactions with customs. To improve customs operations using digital technologies, and to deliver a high level of service, the Revenue Service has started automating customs processes using robots and artificial intelligence technologies. The robot receives papers, scans and prints them, then reads and interprets the data from ID cards. In addition, the robot functions are being integrated to effectively communicate with other databases and software robots. Artificial intelligence is used to accept documents, digitize them, notify the user of document errors, print declarations and issue certificates of origin. While precise dates of implementa-

tion for robotic and artificial intelligence operations are not yet established, the robots will be located in Revenue Service offices.

The Revenue Service has implemented an automated system for declarations/data in "eCustoms." This system introduces a list of procedures that enables individuals to declare goods in advance of arrival to Georgian customs territory. "Asycuda" software performs these operations, currently servicing 1083 users, 862 of which are unique businesses. This has encouraged pre-declaration of goods before entering the customs territory of Georgia. Although shipping companies frequently issue Bills of Lading in electronic format, transport papers such as CMR are rarely utilized in this format.

## LACK OF LOGISTICAL INFRASTRUCTURE (WAREHOUSES AND TERMINALS)

A small percentage of transportation companies maintain their own warehouses. While in high demand, there is a noticeable lack of warehouse facilities in Georgia. This demand has been influenced by several variables. Due to its advantageous location, Georgia has attracted a large number of multinational logistics companies including Gebrüder Weiss, DB Schenker, Diplomat Georgia, Gosselin, and Netlog, all breathing fresh life into the logistics sector. The expansion of containerized freight has created de-

mand for suitable dry warehouse space with value-added services in addition to cargo storage. A-class warehouses are extremely rare, as are the warehouses that provide internal logistical services (i.e., Lilo1, G&A Group, A Logistics Company). Without many temperature-controlled facilities, logistical services are costly. For small and medium-sized agribusinesses interested in consolidating their export cargo, this is crucial information. Even though there isn't much demand for the storage of dangerous products, some

firms reported having trouble finding adequate space. Large corporations (mostly wine producers, but others such as Kula) maintain their own warehouses and attempt to handle all aspects of logistics on their own, while some consider outsourcing. Over the past three years, interest in outsourcing warehouse operations has grown. Sadly,

there are no entities offering high-quality services due in part to infrastructure issues such as a lack of suitable facilities and equipment as well as equipment-related issues. In addition, there are no educational institutions providing training and job placement in logistics, forcing businesses to hire staff on their own.

## PRODUCTION CAPACITY & EXPORT MARKETS

### REVIEW OF GEORGIAN AGRI EXPORTS - MAIN DESTINATIONS & POTENTIAL

Georgia's economy relies in part on agriculture, rapidly becoming a key player in world markets. The country has been expanding exports including fruits, vegetables, wine, tea, nuts, and honey and anticipates even greater volumes in the years ahead.

Unfortunately, Georgian agricultural exports remain dependent on Russian markets. The primary reasons for this are:

- Easy logistics: Due to relatively short distances, it is easy to transfer products from Georgia to Russia even by land.
- Georgian products are competitive: Knowing that Russians have a broad understanding of Georgia and its products, the costs associated with marketing are not essential to drive demand in Russian markets.
- Payment conditions: Russian importers frequently provide pre-payment terms considered advantageous for Georgian exporters, particularly when local enterprises lack operating capital.

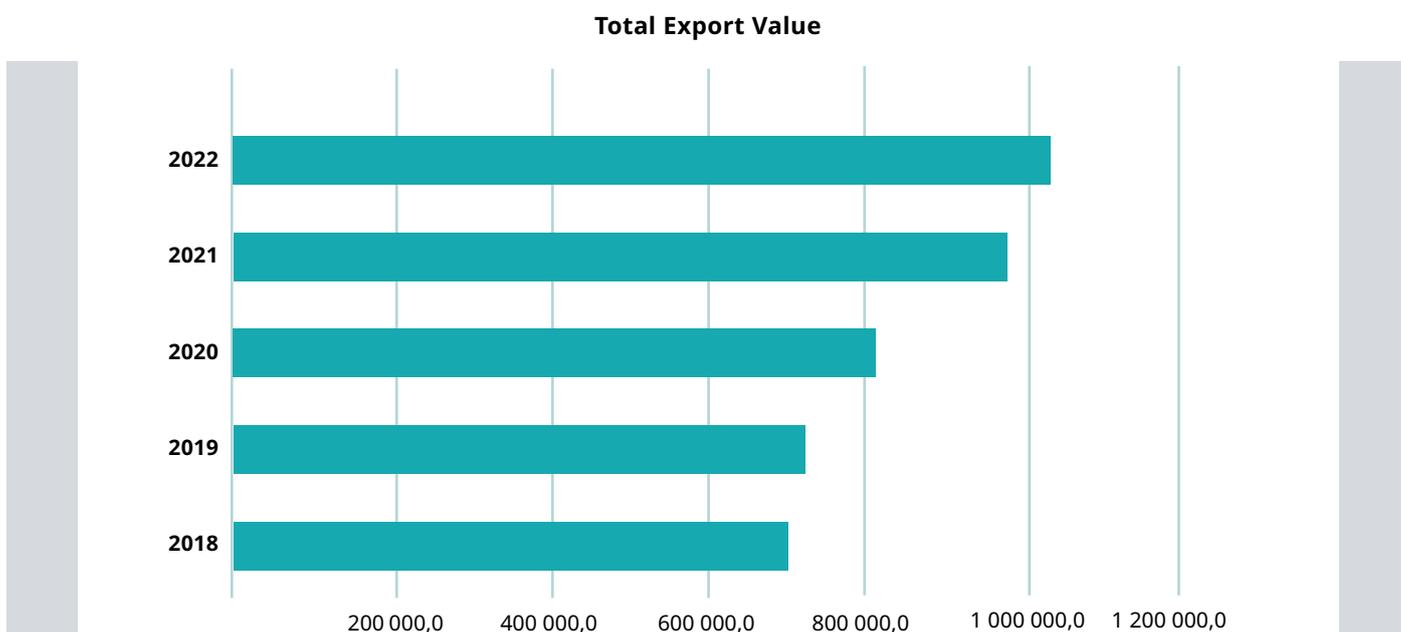
- Quality: Russia accepts products at all quality levels, import regulations for food are liberal, and international food safety standards and certifications are not essential.

Based on these issues, the cost of exports to Russia is low, keeping Georgian products competitive.

Due to the preferential trade agreements with countries and regions including EU, EFTA, CIS, China, Hong Kong, Turkey, USA, Canada, and Japan, Georgia has the opportunity to expand its exports to these developed markets with zero or reduced import duties. With fairly liberal import policies for food items (low import taxes) in the Gulf region, along with negotiations for a free trade agreement with the UAE underway, this region is particularly attractive for several reasons:

- Low distance
- High purchasing power
- Import dependence on food products is high

Figure 7: Export of agriculture products under the hs codes 04 to 23 - 4 digits. Source: National Statistics Office of Georgia



## EXPORT DESTINATIONS BY PERISHABILITY OF PRODUCTS

Of the 31 surveyed producers exporting food and beverage products to 48 destinations, 60% are trading with low-risk products. Only 10% of these include highly perishable products.

The European Economic Area (EAA) is the most frequently mentioned destination with exports going to half of the region's countries, all EU members. High and medium perishability products represent 40% of the exports designated for these markets. The remaining 60% are low-risk products.

About half of the Commonwealth of Independent States (CIS) are serviced by the respondents. Almost all who export to CIS countries also export to Russia. In spite of proximity and better logistical connections to markets in this

region, high and medium-risk products represent only 35% of exports to CIS and 43% to Russia.

The same companies report exports to 13 out of the 16 MENA (Middle East and Northern Africa) countries. While these numbers are close to those associated with EAA markets, high and medium perishables constitute 50% of the share. MENA seems to be the most popular market for Georgian fresh food and is supplied exclusively via air.

Markets in the Americas which are the farthest from Georgia, represented by USA, Canada, and Argentina, attract exports of primarily low-risk (70%) products and zero exports of highly perishable foods. Not surprisingly, air routes are too expensive, making maritime the only shipping mode used.

Figure 8: Export Destinations



Figure 9: Export Destinations by Perishability

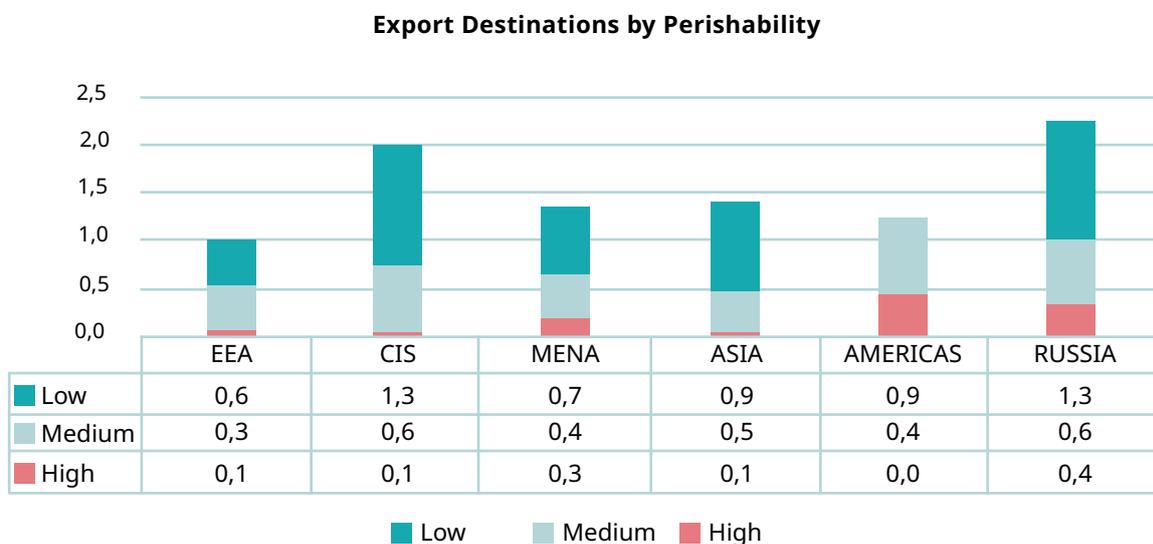


Table 5: Export Destination Regions of Surveyed Exporters

EAA		CIS		MENA		ASIA		AMERICAS	
1.	Netherlands	1.	Kazakhstan	1.	Qatar	1.	China	1.	USA
2.	Germany	2.	Armenia	2.	Kuwait	2.	Japan	2.	Canada
3.	Italy	3.	Azerbaijan	3.	Saudi Arabia	3.	Philippines	3.	Argentina
4.	France	4.	Ukraine	4.	United Arab Emirates (Dubai)	4.	Taiwan		
5.	Poland	5.	Belarus	5.	Bahrain	5.	Hong Kong		
6.	Czech Republic	6.	Russia	6.	Israel	6.	Vietnam		
7.	Norway			7.	Algeria	7.	Malaysia		
8.	Greece			8.	Libya	8.	Korea		
9.	Republic of Cyprus			9.	Tunisia	9.	Indonesia		
10.	Hungary			10.	Egypt	10.	India		
11.	Romania			11.	Morocco				
12.	Slovakia			12.	Jordan				
13.	Estonia			13.	Iraq				
14.	Latvia								
15.	Lithuania								
*Includes UK		*All former USSR except Russia and EU members		*WB definition		*Excludes CIS and MENA		*North and South	

## LOGISTICALLY COMPETITIVE DESTINATIONS FOR PERISHABLES

Perishable fruits and vegetables grown in Georgia have a shelf life as short as 2 days (soft fruits like berries) and as long as 60 days (hardy greens). In general, producers of highly perishable foods try to ship their goods using air transportation. This being said, the cost of air freight to reliably export soft fruits to Europe does not allow sufficient profit margins unless the fruit is delivered during the window of seasonal advantage or have highly valued attributes such as organic certification, special packaging or unique taste. While all value-added factors need to be promoted and factored into specific marketing budgets, the seasonal advantage is the only attribute that provides a natural competitive advantage.

While Georgian producers have limited capacity for value-added fresh products as well as the ability to invest in promotion, a workable short-term strategy would focus on markets that can be reached within the minimum perishability timeframe during the high season.

EDA analyzed all direct and indirect shipping routes leading to Europe which could be used by Georgian producers to

supply perishables within a maximum of 10 days. While this could provide a competitive and logistical advantage, priority destinations should also be large enough and display sufficient demand to validate high volume exports of fresh fruits and vegetables.

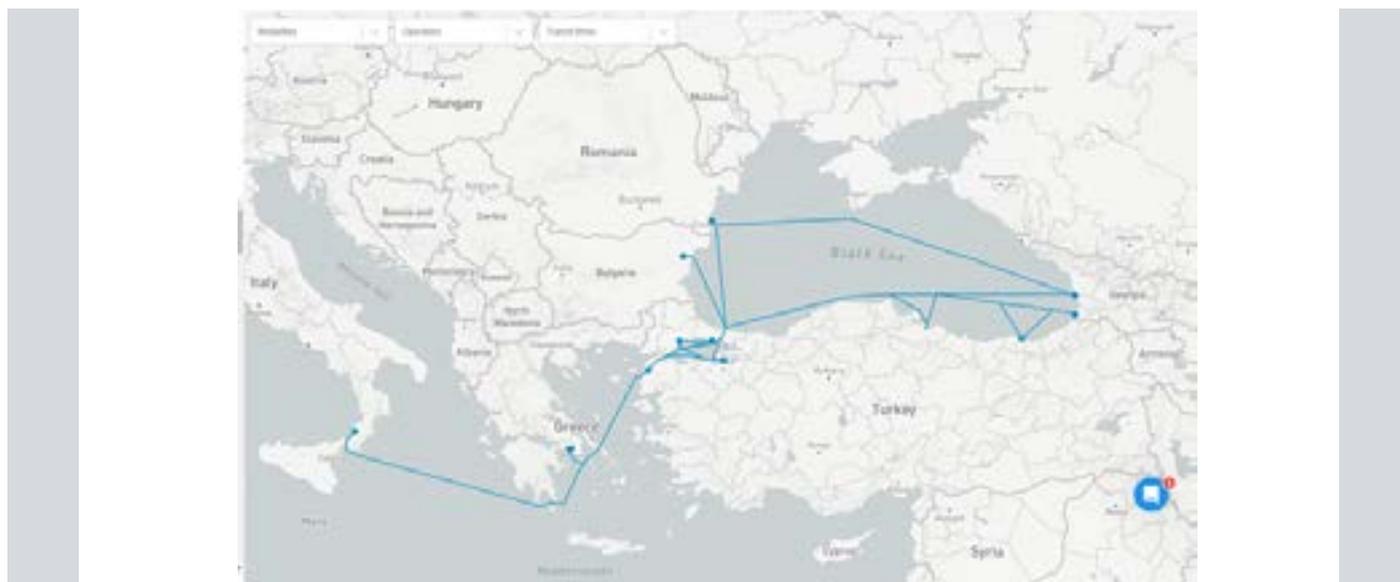
When factoring the price of shipping, exporters should first explore maritime transportation alone or combined with rail or motorway options. The fastest and most expensive route is via air.

According to Routescanner.com, a global logistics portal that holds live data on 0.8 million transportation schedules offered by 175 freight forwarders, there are a total of 34 direct maritime connections via the Black Sea from Poti and Batumi ports. These routes are offered by five international freight forwarders: CMA CGM, Hapag Lloyd, MSC, Zim and Evergreen, usually with a once-a-week frequency. Out of these routes, the shortest direct connections of up to 10 days are to Turkey, followed by Greece and Romania. The longest route is to the South Italian port of Gioia Tauro, just 5 hours by land to Palermo or Naples.

Table 6: Shortest direct maritime connections from Georgia to Western destinations via the Black Sea (Source: [www.routescanner.com](http://www.routescanner.com))

FROM PORT	DESTINATION PORT	MENA	ASIA	AMERICAS
BATUMI	TRABZON	0.5	MSC	1
POTI	ISTANBUL	2	MSC, HAPAG-LLOYD	1
POTI	ATHENS	3	HAPAG-LLOYD	1
POTI	CONSTANTA	4	ZIM	1
	GIOIA TAURO (5hr to Napoli or Palermo by road)	10	MSC	1

Pic. 1. Direct maritime connections from the ports of Poti and Batumi



Note: The table is for demonstration purposes only. Duration and schedules may change due to various distractions like weather, security level, etc.

These routes can also be used to connect to various European destinations using multimodal transportation. Since perishables are very sensitive to changes in transport and the risk of interrupted temperature control, EDA has identified door-to-door routes to European cities that are up to 10 days in duration and require two or fewer transfers from ship to rail or truck.

As the table below demonstrates, the logistically most advantageous multimodal destination is Bucharest with only

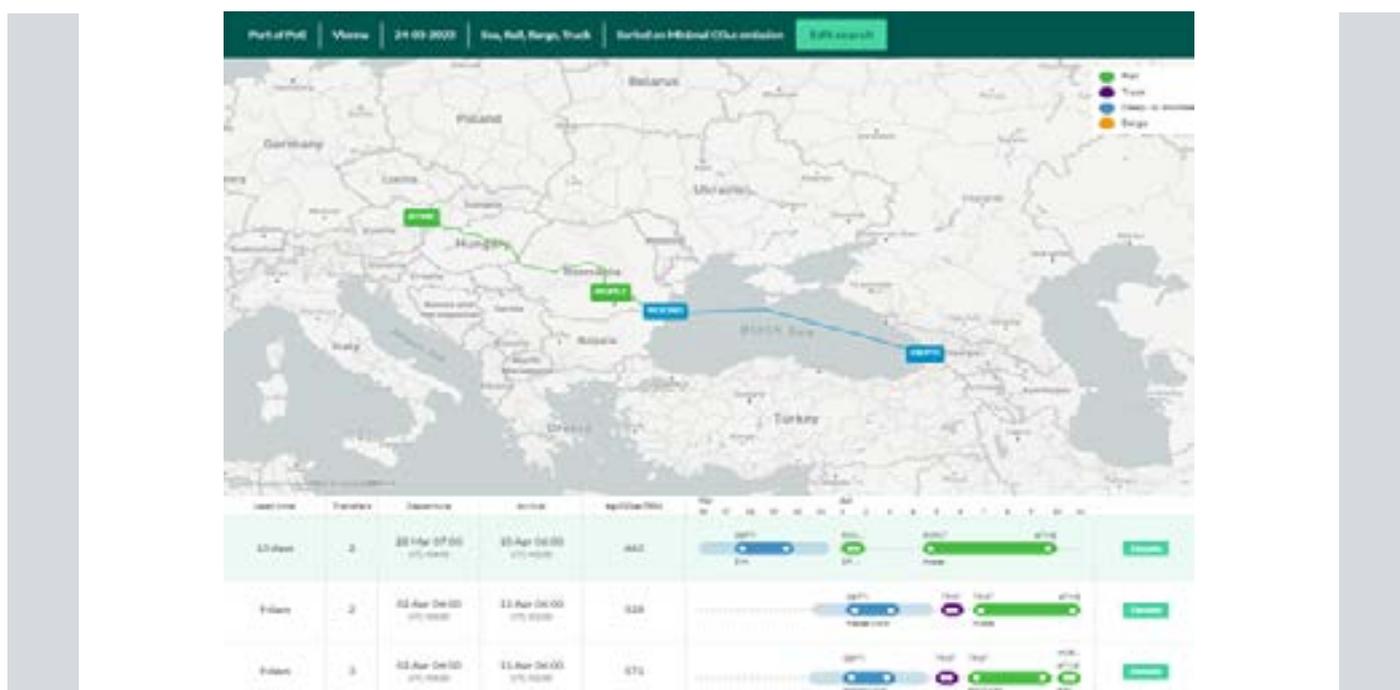
one change of transport from Constanta port to Romania's capital. Budapest comes second, with either one or two transfers depending on how much time an exporter has, and on which dates the cargo is shipped. The longest route is to Vienna and Bratislava, requiring 10 days and two changes of transport. All other European cities, even those that are geographically closer, require 12+ days for transportation and can hardly compete with motorway transport that can travel uninterrupted from the farm/factory to the final European destination in 14-18 days.

Table 7: Sample multimodal short routes from Georgia to European cities (Source: [www.routescanner.com](http://www.routescanner.com))

FROM PORT	TO FINAL DESTINATION	DAYS	TRANSFERS
POTI	BUCHAREST	4	1
POTI	BUDAPEST	8	2
POTI	BUDAPEST	10	1
POTI	VIENNA	9	1
POTI	VIENNA	9	2
POTI	BRATISLAVA	10	2

Note: The table is for demonstration purposes only. Duration and schedules may change due to various distractions like weather, security level, etc.

Pic. 2. Sample routes from Poti to Vienna



In some cases, when there are stable, long-term orders for a regular supply of low and medium perishables, multi-modal maritime routes to Europe may be more cost-effective than motor transport.

The table below provides an international standard for the storage and transportation of fruits and vegetables given proper packing and stable temperature conditions. Based

on the number of validity days, EDA calculated logistically advantageous destinations using non-air transportation with a primary focus on more cost effective maritime routes. As described in the previous chapter, only destinations within a 10-day radius of Georgian ports were analyzed because longer routes can rarely compete with motorway transport.

Table 8: Product table (source: [https://www.tis-gdv.de/tis\\_e/inhalt.html/](https://www.tis-gdv.de/tis_e/inhalt.html/))

PRODUCT	PACKAGING	STORAGE TEMPERATURE	MAXIMUM VALIDITY DAYS	REF CONTAINER	LOGISTICALLY CONVENIENT NON-AVIA DESTINATIONS
Parsley	50-300 gr individual sealed packages	0	30-60	CONDITIONAL	Any European Destination
Celery Leaves, Fresh	50-300 gr individual sealed packages	0	30-90	CONDITIONAL	Any European Destination
Leek	50-300 gr individual sealed packages	0	60-90	CONDITIONAL	Any European Destination
Nut Oils	Bulk or retail	4-15	90+	CONDITIONAL	Any European Destination
Dried Fruits	Bulk or retail	4-20	90+	CONDITIONAL	Any European Destination
Nut Paste (hazelnut, almond, walnut)	Bulk 50+ kg tanks	5-20	90+	CONDITIONAL	Any European Destination
Hazelnut and Almond Oils	Bulk, bags	5-20	90+	CONDITIONAL	Any European Destination
Bay leaves, Fresh	Bulk, carton boxes or bags	5-25	90+	CONDITIONAL	Any European Destination
Raspberries, Fresh	Closed or open punnet for retail	(-0.5) - 0	2-3	YES	Trabzon

Raspberries, Fresh	Bulk in carton boxes	(-0.5) - 0	2-3	YES	Trabzon
Blackberries, Fresh	Closed or open punnet for retail	(-0.5) - 0	2-3	YES	Trabzon
Blueberries, Frozen	Bulk or retail	-18	90+	YES	Any European Destination
Strawberries, Frozen	Bulk or retail	-18	90+	YES	Any European Destination
Blackberries, Frozen	Bulk or retail	-18	90+	YES	Any European Destination
Raspberries, Frozen	Bulk or retail	-18	90+	YES	Any European Destination
Cherries, Frozen	Bulk or retail	-18	90+	YES	Any European Destination
Almonds	Bulk, bags	5-25 (with ventilation)	90+	YES	Any European Destination
Hazelnuts	Bulk, bags	5-25 (with ventilation)	90+	YES	Any European Destination
Walnuts	Bulk, bags	5-25 (with ventilation)	90+	YES	Any European Destination
Kiwi, Fresh	Bulk, carton boxes or bags	(-0.5) - 0	90+	YES	Any European Destination
Apple, Fresh	Bulk or retail	(-1) - +4	90+	YES	Any European Destination
Blueberries, Fresh	Closed or open punnet for retail	(-0.5) - 0	14	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Cucumber, Fresh	Bulk or retail	10-12	10-14	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Cucumber Light-Skinned, Fresh	Bulk or retail	10-12	10-14	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Blueberries, Fresh	Bulk, in special carton boxes	(-0.5) - 0	14	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Cherries, Fresh	Closed or open punnet for retail	(-1) - 0	14-21	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Sweet Cherries, Fresh	Closed or open punnet for retail	(-1) - 0	14-21	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Sweet Cherries, Fresh	Bulk, in special carton boxes	(-1) - 0	14-21	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Fennel, Fresh	50-300 gr individual sealed packages	0-2	14-21	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Mandarins, Fresh	Bulk, carton boxes, or plastic open boxes	4-7	14-28	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Scallions	50-300 gr individual sealed packages	0	21-28	YES	Trabzon, Istanbul, Athens, Gioia Tauro, Bucharest, Budapest, Vienna, Bratislava
Pink Tomato, Thin-Skinned, Fresh	Closed or open punnet for retail	8-10	4-7	YES	Trabzon, Istanbul, Athens

Cherry Tomato, Fresh	Closed or open punnet for retail	8-10	4-7	YES	Trabzon, Istanbul, Athens
Strawberries, Fresh	Closed or open punnet for retail	(-0.5) - 0	5-7	YES	Trabzon, Istanbul, Athens
Peach/Nectarine/ Apricot	Bulk or retail	(-0.5) - 0	7-21	YES	Trabzon, Istanbul, Athens, Bucharest (soft), Gioa Tauro Budapest, Vienna, Bratislava (hard)

To validate the above destinations, especially those countries within the European Union, it is suggested that additional research be conducted, confirming whether re-

stricted distribution areas around selected ports and cities outside of a preferred supply radius could downgrade the route's competitiveness.

## QUANTITATIVE ANALYSIS OF PRODUCTION STATISTICS

All of the fruits and vegetables outlined below have a history of continuous production in Georgia, mostly for export during the Soviet Union era. The majority of farms and orchards today have been reduced in size and divided among

small farmers who face difficulties in achieving meaningful economies of scale. According to the National Statistics Office of Georgia, the fruit and vegetable crops in 2022 produced an average of 375K tons.

Table 9: Primary production in Georgia, 2022. (Source: National Statistics Office of Georgia)

Primary Production (2022)		
Name of the Food	Units	Volume (000 tons)
Vegetables	Tons	127.9
Apple	Tons	74.9
Plum	Tons	15.9
Cherry	Tons	7
Apricot	Tons	2.6
Peach & Nectarine	Tons	31.4
Walnut	Tons	7.6
Hazelnut	Tons	33.2
Almond	Tons	7.5
Persimmon	Tons	10.2
Kiwi	Tons	1.6
Mandarin	Tons	49.1
Table Grape	Tons	5-6
Strawberry	Tons	1.4
Raspberry	Tons	1.2
Blueberry	Tons	1.5

Table 10: Production of processed foods in Georgia, 2022 (January-September). (Source: National Statistics Office of Georgia)

Processed Food (2022: January-September)		
Name of the Food	Units	Volume
Fruit & Vegetable Juices	tons	13244.2
Processed Food (Sauces, Jams)	tons	3759.7
Dried Fruits	tons	280.1
Wine	decalitre (ths.)	8280.3

## UPCOMING LOGISTICAL PROJECTS

### ANAKLIA DEEP-SEA PORT

The Government of Georgia has announced that development of the Anaklia port will begin in 2023. A request for expressions of interest for the construction of Anaklia's deep-sea port was publicly disclosed in February 2023. A state company, the National Agency of State Property, will be established by the Georgian government to update the paperwork at the deep-sea port of Anaklia, allowing development projects to proceed. The state would hold 51% of the port, and a possible investor is anticipated to compete

internationally for the remaining 49%. Identification of potential investor(s) is scheduled for July 2023 with the assistance of overseas consultants. The resulting company will be established between the state and the selected investor as a public-private partnership. Within the framework of this partnership, the selected investor will raise all the necessary funds for implementation of the project, enabling construction at the port to begin.

### KUTAISI INTERNATIONAL AIRPORT (CARGO TERMINAL)

A variety of issues confront producers that wish to export their goods to international markets, transportation being one of the most crucial. It is challenging to maintain a specific temperature regime during air transport, especially when the product is highly perishable. Exporters cannot utilize standard cargo aircraft but must load the freight into passenger aircraft, which is much more difficult due to a shortage of space. In addition, Georgia does not have direct flights to many locations. This forces shipments to be carried by transit planes, frequently resulting in delayed deliveries and spoiled goods. In the season 2022, berry farmers were significantly impacted by these sorts of logistical challenges.

The development of a cargo terminal in Kutaisi, made available with funding from a Public-Private Partnership (PPP), has long been anticipated by local exporters, making it simpler to ship goods overseas. Since Kutaisi airport charges are generally cheaper, exporters anticipate shipping costs from the Kutaisi terminal will be less expensive than those from Tbilisi terminals. While the Government has revealed the layout of the cargo terminal, it remains unclear when it will be completed.

Using internal resources, the United Airports of Georgia is researching the feasibility of a cargo terminal at Kutaisi Airport. Available data indicates that, due to considerable growth in the demand for high-quality services, and contrary to opinions in previous years, the presence of a terminal in 2023 will be meaningful. According to the company's new management strategy, converting the airport into a cargo hub is one of the priorities for Kutaisi Airport. An existing study provides an initial evaluation of needs. The United Airports of Georgia will collaborate with a consulting firm (not yet identified), to carry out additional re-

search. By the end of 2023, they hope to establish a cargo terminal at the airport. Regarding full-service operations at Kutaisi Airport, including cargo services, the Union of Airports is in negotiations with several companies.

Recognizing that the Kutaisi International Airport does not offer cargo services, the development of a 3.5 km long runway and cargo terminal is being considered by the Georgian government. Wizz Air, a Hungarian airline that flies out of Kutaisi Airport, does not offer a cargo service. Fly Aristan, an Air Astana subsidiary, began operations at Kutaisi Airport in 2021 and offers a belly freight service (Belly Freight: the delivery of products through passenger aircraft). While it has flights to five locations in Kazakhstan, there is no terminal that will support the transfer of goods.

The Ministry of Economy and Sustainable Development of Georgia has already informed the 10 largest cargo operators in the world that a decision to build a cargo terminal at Kutaisi Airport that will serve all business entities has been decided. To support this endeavor, negotiations are underway with the Public-Private Partnership Agency.

With cargo utilizing various sizes of cargo planes, expanding the runways is required for comprehensive freight operations. There is discussion among potential investors to look after an expanded runway as well as development of a warehouse facility. Even though budgets are relatively modest, appropriately sized planes can be obtained using existing resources. In addition, as previously mentioned, there must be consistent demand for regular cargo flights. Similar data is provided to airlines by intermediary logistics firms. The United Airports of Georgia will be undertaking a comprehensive review and evaluation of these crucial factors.

Logistics and food delivery are highly complex issues. Modernization and digitization of the food distribution process were especially stimulated by the pandemic. TMS<sup>8</sup> innovation is one of the latest trends in transportation, responding to significant industry growth in a user-friendly manner. Companies have increasingly turned to TMS technologies to help them manage the rising costs of freight. Some of the main reasons businesses adopt TMS technologies include modeling, network planning, load balancing, selecting less expensive modes of transportation, and multi-stop network optimization. The fact that innovation has been advancing significantly over the past few years is a major factor in TMS growth. The leading international trends for food logistics and transportation in developed markets are listed below.

- Artificial intelligence - One of the important elements of transportation management systems is artificial intelligence. AI may be employed to effectively organize shipments and research obstacles like capacity, rules, and service hours. The ideal number of stops before shipments are late is revealed to shippers, along with which carriers consistently achieve on-time service standards and which do not. Shippers may increase efficiency without lowering the quality of service with the help of AI.
- Real-time visibility solutions are being propelled to new levels by the advent of visibility solutions at the container level. For the transportation management industry, this dynamic capability is essential to ensuring positive outcomes, allowing shippers to know where things are at all times, at the warehouse, the shop, or at the final destination. While crucial for all forms of transportation, real-time visibility is most useful for over-the-road shipments. Visibility for land transportation is based on system integration with truck carriers. The carriers, in turn, track the equipment on their trucks or through a smartphone app. Ocean transport is quite different from land transportation, adding macro-factors including waves and wind speeds, which significantly impacts total travel time. When compared to land and sea, air freight is simpler to anticipate based on the network and speed of movement.
- TSM<sup>9</sup> - There is increasing interest in time slot management as a trend in transportation. Time slot management aids in the organization of warehouse resources, providing critical information to warehouse staff relating to truck arrivals. Some of this information includes who is arriving, the time of their arrival, the location where the truck will be entering, the time it is loaded, the paperwork that has to be picked up and signed, and the time it will leave the warehouse or yard.
- Green logistics - zero-emission vehicles - Current trends in transportation are carbon-free, waste-free, and battery-powered transportation, all responding to both global warming and the growing scarcity of fossil-fuel resources. Rechargeable, battery-powered vehicles are growing in popularity as the solution to environmental sustainability for the transport industry, marked by the

global boom in the use and sale of electric vehicles. Supply chain management software - Several types of software, from transportation to inventory management, are being developed and tailored to strengthen and improve supply chain processes. They assist with cost control, forecasting, decision-making, can address risks such as delayed shipments and logistical errors and enhance customer service and communication. For major retailers, real-time analytics has also proved an effective tool for analyzing consumer demand and behavior.

- Blockchain technology - Blockchain, a decentralized encryption technique, is a revolutionary technology in logistics and transportation that will transform mobility. It is being used by a large number of organizations to store, record, and monitor ownership and transaction data and support their supply chain strategies. By increasing efficiencies and enhancing customer service, it provides transparency. Blockchain technology enables the connection of all supply chain parts to a single platform. With the use of this information, businesses may develop a plan to adopt quicker routes, minimize unnecessary delivery processes, lower error rates, and save time.
- Drone logistics - Drones are being used with increasing frequency in stock management, offering tremendous benefits to warehouse facilities. Software that plots the facility and tracks inventory is loaded onto the drones. Drone operators can subsequently locate and compare drone viewings to actual inventory records. The drones also record photos and videos, integrating them into the data system.



<sup>8</sup> TMS - transportation management systems

<sup>9</sup> TSM - Time Slot Management

## WORLD'S BEST PRACTICES: SUITABLE OPPORTUNITIES FOR GEORGIA

**Case #1 - Moldova (fruits)<sup>10</sup>**

In an effort to find alternative markets for fresh fruits and vegetables that can replace exports to Russia, Moldova and Georgia are in a similar position. Association Moldova Fruit (MFA), representing more than 180 members (growers, processors, exporters, and service providers), supported by donors, assists the sector with market entry into European markets (apples and plums are a priority) and Gulf markets (apples). As part of USAID's 'Moldova High-Value Agriculture Activity HVAA' project (2016 – 2022), annual workshops (per crop) were held for defining joint market action plans. These action plans were led by MFA and always included postharvest and logistical components including the development of new packaging, testing, demonstration of new technologies, and improving shipping of perishables in refrigerated sea containers. HVAA co-financed the implementation of the action plans as a way to reduce the risks for the private sector and increase overall efficiency. The actionable items include:

- a series of inward and outward trade missions with Gulf importers to better understand the general market requirements, buyers' specific preferences and the best practices and technologies applied by their "best suppliers," resulting in (1) direct contacts and negotiations of exporters with importers that confirmed the economic feasibility of exports to the Gulf and (2) additional technologies to be brought to Moldova to start shipping to the Gulf
- coordinated procurement (by MFA) of technologies:
  - a bushel-type box through a cardboard manufacturer in Romania; initially it was branded by MFA, but later some exporters developed their branding using the same technical specifications for the box
  - plastic liners and cardboard trays (tray liners) were brought from Italy
  - ethylene removal sachets were brought from Spain and Poland
  - temperature loggers were brought from multiple European vendors
- 5 pilot shipments by exporters to different buyers in the Gulf under the technical supervision of HVAA. While these were fully commercial operations in the eyes of the importers, HVAA supported the exporters by covering their shipping costs (Moldova - Gulf).
- A Moldovan delegation met the first containers at arrival (30 days of sea transit), checked quality, and collected feedback from importers.
- The entire exercise was documented in the "Shipping to Distant Markets in Sea Containers Guide" that was shared with the entire industry, so that other exporters could start shipping to distant markets.

Moldova has only two port options (Odessa and Constanta)

for maritime shipments. Exporters also considered shipping by road to a port in Turkey, then loading onto a vessel. Since the project was unable to find an expert to assist with the review of logistical options, exporters worked collaboratively to test and develop pilot programs and evaluate outcomes.

A similar approach was applied to apple exports to the Gulf, plum exports to Germany and other crop/market combinations.

**Case #2 East Africa (flowers, ornamental plants, fruits, and vegetables)<sup>11</sup>**

Since East Africa exports to Europe during winter months, European countries (including Netherlands, UK, Denmark) frequently lead the development of logistics from countries such as Kenya, Uganda, Tanzania, and Ethiopia. With flowers as the highest priority commodity, (European) governments will facilitate efficient, competitive and sustainable logistics. For example, the switch from air to sea transportation was entirely initiated and (financially) supported by (Embassies of) European countries to lower the footprint that exports of perishable products to their countries represented.

These activities are organized through bilateral or multilateral strategic partnerships between African and European countries and implemented by public-private partnerships. These are some of the transit times via sea by various carriers from Mombasa (Kenya) to European destinations:

- Rotterdam (NL) via Jeddah (Saudi Arabia) 28-35 days, CMA weekly sailing
- Marseille (France) via Jeddah (Saudi Arabia) 25-32 days, CMA weekly sailing
- Genoa (Italy) via Jeddah (Saudi Arabia) 22-29 days, CMA weekly sailing
- Rotterdam (NL) via Salalah (Oman) & Algeciras (Spain), 24-38 days, Maersk weekly sailing
- London via Salalah (Oman), 28-42 days, Maersk weekly sailing
- Rotterdam (NL) via King Abdullah port (Saudi Arabia) days, 24-42 days, MSC not weekly
- Genoa (Italy) direct, 21-31 days, Messina every 10 days

Priority fields in the development of logistics from East Africa to Europe in recent years have been:

- Investigation of conditions and development of methods to maintain shelf life in refrigerated containers
- development and sharing of Standard Operating Procedures (SOPs) to ensure common practices for logistics in general, and quality assurance in particular.  
Example: [Kenyan authorities](#)

<sup>10</sup> Freshplaza [[reference](#)]

<sup>11</sup> [[Reference 1](#)] [[Reference 2](#)] [[Reference 3](#)] [[Reference 4](#)] [[Reference 5](#)]

Example: [KEPHIS](#) (Plant health inspection)

Example: [flower trader](#)

### Case #3 Latin America (fruits and vegetables)<sup>12</sup>

Peru, Ecuador, Colombia, Brazil, and Mexico are among the leading suppliers of fresh fruits and vegetables to European (and American) markets during the off-season. Sea freight, valued by European importers for efficiency and quality, has been standardized and is highly competitive. Common transfer times from several Latin American ports to Rotterdam in the Netherlands are:

- Sao Paulo (Brazil) – Rotterdam (NL) 18-20 days
- Guayaquil (Ecuador) – Rotterdam (NL) 19-21 days
- Lima (Peru) – Rotterdam (NL) 21-22 days
- Colima (Mexico) – Rotterdam (NL) 15-22 days

### RECOMMENDATIONS TO INCREASE COMPETITIVENESS

The primary recommendation that came out of company interviews is the need for a strong transport-logistics association that will maintain close contact, respond quickly to member needs, particularly those mentioned in this study, and work with the government to find workable solutions. These same companies would also welcome the expansion and strengthening of organizations that are already active but only address a narrow range of concerns, such as FIA-TA, IRU, and GLA. Recognizing that the industry struggles to meet escalating challenges, access to up to date and relevant education is essential to its survival. Further state sponsored incentives are desired that would support businesses that have elected to retool and invest in new vehicles.

#### 1. Related to logistics

a. Develop and establish warehouse facilities in target markets, creating hubs for handling plus re-distribution. Criteria for locations should respond to shipping times from Georgia, the hub and to final destinations. Good examples in Europe are Romania, Germany, and the Netherlands. The best in the Gulf is UAE (Dubai).

##### **Romania**

Since Romania is the closest maritime destination (4 days), exploring and developing markets for highly perishable products such as berries, starting with a hub near Constanta should be considered along with a commercial representative/agent on-site. Some useful contacts:

- [Coscotrax](#) (fruit trading, logistics, cold storage, ripening, pre-packing, import/export clearance and fumigation, quality control)
- [Logistic Service SRL](#) (freight forwarding company on the Romanian market, located in Constanta Port)
- [Orion](#) (domestic & international logistics and transport services, based in Constanta)

■ Cartagena (Colombia) – Rotterdam (NL) 14-16 days

Resource: [Searates](#)

Key strengths that contribute to the good logistical performance in the majority of ports in Latin America are:

- good accessibility from the hinterland by road, water, and/or rail
- the scale of supplies: a large number of available exporters with substantial volumes of fruit and vegetables that are easily transportable in refrigerated containers
- scale of the terminal operation: area (m<sup>2</sup>), number of docks, number of container places, number of pallets places, number of cold storage facilities
- dedicated facilities and services for temperature-controlled warehousing, quality inspection, and labs.
- fully standardized digital infrastructure

##### **Germany**

Germany is one of the largest EU markets for agri-food products. At the same time, it has good infrastructure as well as commercial connections with other EU markets. Shipping times by air are short while maritime and/or road options are rather challenging for highly perishable goods (> 10 days). For less perishable products, Germany is an ideal market. Some useful contacts:

- [DB Schenker](#) (German-based, global player in multimodal logistics of perishables)
- [HHLA](#) (fruit logistics, Hamburg)
- [Fruchthansa](#) (added value logistics for fruits, nearby Cologne)

##### **Netherlands**

The Netherlands, the #1 European hub for the re-distribution of agri-foods throughout Europe is a challenging destination for highly perishable products. It is, however, well suited to less perishable goods. Air transportation from Georgia provides short shipping times while water and/or road conveyance requires at least 15 days. In the region around the port of Rotterdam, all modalities (maritime, air, road, and rail) come together. Inbound: maritime, air, and road; Outbound towards the hinterland: road, rail, and waterways. Just a couple of many logistical service providers are:

- [Cool Control](#) (warehousing, customs clearance, quality control, value-added logistics)
- [LBP](#) (sea- and airfreight, warehousing, customs clearance, quality control, value-added logistics)

##### **UAE (Dubai)**

b. Develop and show/share SOPs for the entire post-harvest phase: harvesting, pre-cooling, handling, storage, packaging, loading pallets and/or containers, and transport.

<sup>12</sup> [\[Reference\]](#)

- Example: “Shipping to Distant Markets in Sea Containers” Guide Moldova
- Example: [SOP packaging fruits/vegetables in India in corrugated boxes](#)
- Example: [SOP mangoes](#)

c. Invest in (innovative) technologies to extend the shelf life of highly perishable products (special plastics, ethylene removals, temperature loggers, etc.). Much expertise is available in the market and most of these technologies and materials are crop specific.

Example - blueberries:

- [Tis-dgv](#)
- [Prime-fresh](#)
- [Perfotec](#)
- [NCBI](#)

Develop an air cargo terminal in West Georgia, specifically Kutaisi, so that shippers can easily reach both Europe and Gulf markets by air. Due to its vicinity to expanding berry production in West Georgia, as well as increasing herb production in Imereti, having a specialized and well-functioning airport for agri-food cargo will be a noteworthy step forward. It will also save a considerable amount of time and reduce costs compared to cargo facilities in Tbilisi. For highly perishable products, this is the only option that will allow producers to reach export markets in the Gulf and Europe within short export windows.

The competitive advantage of this cargo terminal in the long term requires refrigerated warehousing facilities (with various temperature regimes for perishable commodities), an up-to-date digital infrastructure, an effective tracking & tracing system, all compatible with modern communication technologies (think of blockchain technology and other e-communication in the supply chain).

To provide a one-stop-shop solution for the industry, the terminal should also include:

- laboratory facilities
- infrastructure and facilities to ease the preparation

of LCL batches

- transportation companies / multimodal shippers

d. Redirecting the focus of (co-)investments and incentive programs by the Government of Georgia to create a better balance between existing farmer/company-based programs (such as subsidies for orchards or postharvest facilities) and sector-based support. Focus more on investments in logistical (cold chain) infrastructure that goes beyond the influence and mandate of the private sector, especially (refrigerated) warehousing and port facilities/services.

For themes a, b and c mentioned above, the private sector (producers, processors, exporters, as well as their associations) currently bears full responsibility. Achieving greater collaboration and less fragmentation, all coordinated by a single entity (company or association) that represents the members/sector would be indispensable. This organization would play a vital role in logistics and export development and work with the government to overcome pressing industry challenge. For theme d, the Government of Georgia should take the lead in dialogue with the sector. Implementation of improvements to infrastructure should be pursued through public-private partnerships.

## 2. Beyond logistics

Enhance cooperation with the knowledge and education sector.

Training, education, and applied research on themes such as postharvest and logistics can be strengthened and developed if the private sector (producers, processors, exporters, as well as their associations) strengthens ties with schools, universities, and research institutions. The objectives will include:

- improve curricula on these themes
- feed applied for research programs
- develop internship and apprenticeships programs in which students are challenged to solve real-life problems

## ANNEX 1: EXISTING FLIGHTS FROM GEORGIAN AIRPORTS

The list of the existing flights from Georgian airports (Tbilisi, Batumi & Kutaisi) is following:

TBILISI INTERNATIONAL AIRPORT			
AIRLINES	DESTINATIONS	FREQUENCY	CARGO
AEGEAN A/L	ATHENS	2	+
AIR ARABIA	SHARJAH	11	+
AIR ASTANA	ALMATY	3	+
AIR BALTIC	RIGA	2	+
AIR FRANCE	PARIS	1	-
ARKIA ISRAEL AIRLINES	TEL AVIV	2	-
BELAVIA	MINSK	7	+
BUTA AIRWAYS	BAKU	21	+

EL-AL ISRAEL AIRLINES	TEL AVIV	7	+
FLY DUBAI	DUBAI	16	+
FLYNAS	RIYADH	3	+
GEORGIAN A/W	AMSTERDAM	2	+
	PARIS	2	
	TEL AVIV	7	
	VIENNA	2	
	YEREVAN	7	
GULF AIR COMPANY	BAHRAIN	2	+
ISRAIR AIRLINES	TEL AVIV	4	+
JAZEERA AIRWAYS	KUWAIT	3	+
KUWAIT AIRWAYS	KUWAIT	2	+
LUFTHANSA	MUNICH	7	+
PEGASUS AIRLINES	ISTANBUL	15	+
	ANTALYA	2	
	ANKARA	2	
POLISH AIRLINES	WARSAW	3	+
QATAR AIRWAYS	DOHA	7	+
QESHM AIR	TEHRAN	2	+
SCAT AIR	AKTAU	3	+
TURKISH A/W	ISTANBUL	29	+
UZBEKISTAN AIRWAYS	TASHKENT	2	+
VARESH AIRLINES	TEHRAN	2	+
JORDAN AVIATION	AMMAN	1	+
FLY ONE ARMENIA	YEREVAN	4	+
AIR ARABIA ABU DHABI	ABU DHABI	5	+
AZAL	BAKU	5	+
AIR MOLDOVA	CHISHINAU	3	+
ATA AIRLINES	TEHRAN	2	-
FLY ARNA	YEREVAN	3	-
TBILISI AIRWAYS	TEL AVIV	1	+
	YEREVAN	3	
AIR CAIRO	SHARM EL SHEIKH	1	+
CHINA SOUTHERN AIRLINES	URUMQI	1	+
CARGOLUX AIRLINES	BAKU	1	+
GEO SKY	ZHENGZHOU, HENAN	2	+
	PARIS	2	
AIREST	ARAD	1	+
MNG AIRLINES	ISTANBUL	1	+

**BATUMI INTERNATIONAL AIRPORT**

AIRLINES	DESTINATIONS	FREQUENCY	CARGO
AK-AIR GEORGIA	NATAKHTARI	3	N/A
ARKIA ISRAEL AIRLINES	TEL AVIV	1	N/A
BELAVIA	MINSK	4	N/A
EL-AL ISRAEL AIRLINES	TEL AVIV	3	N/A
ISRAIR AIRLINES	TEL AVIV	5	N/A
PEGASUS AIRLINES	ISTANBUL	2	N/A
TURKISH A/W	ISTANBUL	4	N/A

**KUTAISI INTERNATIONAL AIRPORT**

AIRLINES	DESTINATIONS	FREQUENCY	CARGO
<b>WIZZ AIR</b>	ATHENS	2	N/A
	BARCELONA	1	N/A
	DORTMUND	2	N/A
	MEMINGEN	2	N/A
	GDANSK	2	N/A
	KATOWICE	3	N/A
	LARNACA	2	N/A
	MILAN	2	N/A
	PRAGUE	2	N/A
	RIGA	2	N/A
	ROME	2	N/A
	VILNIUS	2	N/A
	WARSAW	5	N/A
	WROCLAW	2	N/A
	KRAKOV	2	N/A
	BUDAPEST	2	N/A
	ABU DHABI	5	N/A
	THESSALONIKI	2	N/A
	BERLIN	2	N/A
VIENNA	2	N/A	
PARIS	1	N/A	
TALLINN	1	N/A	
<b>FLY ARISTAN</b>	AKTAU	2	N/A
	ATYRAU	2	N/A
	ASTANA	2	N/A
<b>AK AIR GEORGIA</b>	MESTIA	1	N/A
<b>BELAVIA</b>	MINSK	4	N/A

**SURVEY DEMOGRAPHIC AND METHODOLOGY**

EDA used a semi-structured interview method to gauge information about the status quo and potential of the logistics industry in Georgia with a focus on export development and diversification of fresh, frozen, bottled, and canned food and beverages (F&B). Particular attention was paid to the cold chain for perishable products.

The research team used five different questionnaires for interviewing exporters, freight forwarders, business support organizations, public and private transport infrastructure management companies, and relevant government

agencies.

Overall, 54 key informants engaged in the logistics industry were interviewed:

- F&B exporters (31)
- Transportation companies (13)
- Trade/Sectoral Associations (6)
- Donor Organization (1)
- GoG Agencies (3)

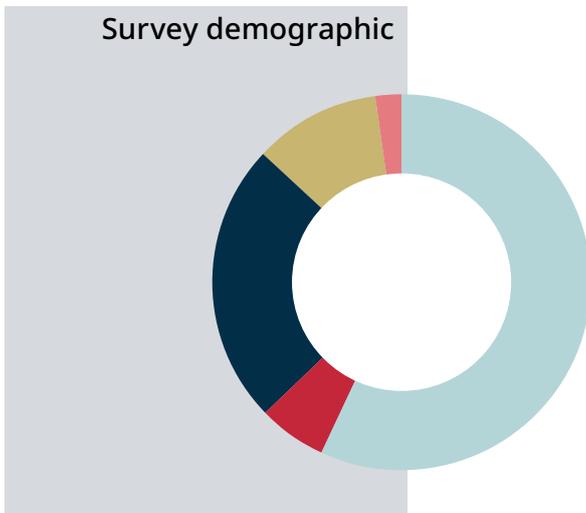


Table 7. Survey demographic

- Transportation Service Providers
- Associations
- Donor Organizations
- Exporters
- GoG Agencies

The primary data in the form of responses to fixed questions were reviewed using quantitative analysis, whereas responses to open-ended questions were processed using qualitative analysis. Exporters' and freight forwarders' responses were subjected mainly to quantitative analysis (see charts in respective subchapters) due to their higher numbers and largely structured interviews. The stakeholders' questionnaires included more space for narrative information and were therefore analyzed through the qualitative method.

The largest informant group, F&B respondents, were assigned attributes based on the survey's area of interest,

including the level of the perishability of their exported products (high, medium, and low) and export region (EEA, CIS, MENA, AISA, AMERICAS, RUSSIA).

Exporters who reported export products with varying degrees of perishability were represented separately for each product group, export geography and difficulties associated with the relevant perishability/geography. For quantitative analysis of challenges, the respondent list was split into the private sector (exporters – some duplicated, BSOs) and service providers (freight forwarders, transport infrastructure managers). Qualitative analysis of problems and solutions included all respondents without exclusion.

Table 8. Export Products Grouped by Perishability Level

PERISHABILITY LEVEL	DEFINITION	PRODUCTS
HIGH	14 or fewer days from harvest to table, with or without temperature control requirement	Berries, soft stone fruits, soft-skinned garden vegetables – fresh or frozen.
MEDIUM	14+ days with temperature control	Frozen berries, fresh or dried stone fruits, citrus, fresh herbs
LOW	14+ days without temperature control requirement	Bottled/canned/sealed F&B - juices, compotes, wine, sauces, jams, spices

More than half of respondents (18) produce medium and high perishability products and slightly less than half (15)

ship low-risk cargo.

### Surveyed Exporters by Perishability of Products

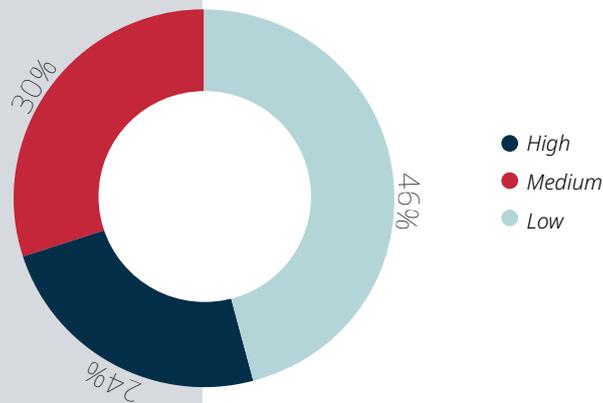


Figure 6. Surveyed exporters by perishability of products.

\*Sum of respondents is 33 due to the double counting of 2 respondents producing different perishability products

### Surveyed stakeholders:

#	Business Type	Company	Product / Service
1	Exporter	Agrolane	Blueberries
2	Exporter	Agritouch	Blueberries
3	Exporter	FCO	Blueberries
4	Exporter	Blue Valley	Blueberries
5	Exporter	Agrostore	Fresh Berries & fruits
6	Exporter	Campa	Juices
7	Exporter	Georgia's Natural	Juices
8	Exporter	Achinebuli	Juices
9	Exporter	Dabi	Spices
10	Exporter	TMT	processed fruits & vegetables
11	Exporter	Kula	processed fruits & vegetables
12	Exporter	KTW	processed fruits & vegetables
13	Exporter	GNP	processed fruits & vegetables
14	Exporter	Georgian Nectar	Juices
15	Exporter	Kareli Fruits	Dried Fruits
16	Exporter	August Fruit Company	processed fruits & vegetables
17	Exporter	BPC	Juices
18	Exporter	Farconi	Herbs & Spices
19	Exporter	Nutsge	Hazelnut
20	Exporter	GPR	Hazelnut
21	Exporter	Aer Company	Hazelnut
22	Exporter	Laurus	Bay Leaves
23	Exporter	Kartveli	Wine
24	Exporter	Gemuani	Dried Fruits
25	Exporter	Caucasan	Medicinal & Culinary Herbs
26	Exporter	Geopriprava	Bay Leaves
27	Exporter	Golden Farms	Blueberry
28	Exporter	Blue-Berry	Blueberry
29	Exporter	Ellen & Company	Hazelnut

30	Exporter	Westnut	Hazelnut
31	Exporter	Nergeta	Kiwi
32	Transportation Service Provider	Georgian Trans Expedition	Transportation (all modes)
33	Transportation Service Provider	Intertranslogistica	Railway and sea transportation
34	Transportation Service Provider	Vengo	Transportation (all modes)
35	Transportation Service Provider	Soloni	Transportation (all modes)
36	Transportation Service Provider	JB Logistics	Transportation (all modes)
37	Transportation Service Provider	Mar Pro	Transportation (all modes)
38	Transportation Service Provider	Omofox	Transportation (all modes)
39	Transportation Service Provider	Fly Dubai	Air Transportation
40	Transportation Service Provider	Qatar Airways	Air Transportation
41	Transportation Service Provider	Kairos Logistics	Transportation (all modes)
42	Transportation Service Provider	Greenway Logistics	Transportation (all modes)
43	Transportation Service Provider	APM Terminals Poti	Sea Transportation
44	Transportation Service Provider	Lasare	Air Transportation
45	BSO	Georgian Logistics Association	Logistics
	BSO	Georgian Berry Producers Associations	Berries
46	BSO	Almond and Walnut Producers Association	Almond & Walnut
47	BSO	HEPA	Hazelnut
48	BSO	Georgia & Asia-Africa Chamber of Commerce	Chamber
49	BSO	Girca	Transportation
50	GoG Agency	LEPL Enterprise Georgia	Trade Development
51	GoG Agency	MOESD - Transport and Logistics Development	Transportation & Logistics
52		Policy Department	
53	GoG Agency	United Airports of Georgia	Air Transportation
54	Donor Organization	ADB	Donor Organization

### ANNEX 3: ROADMAPS OF EXPORT PROCEDURES PER TRANSPORT MODE

Documentation		Timelines for Documentation	Obligatory	If required by the importer
Document / Certificate	Issuing Body / Institution			
Commercial Invoice & Contract	Exporter	N/A	●	●
Packing List	Exporter	N/A	●	●
Phytosanitary Certificate (for primary products)	LEPL National Food Agency	1 day	●	●
Phytosanitary Certificate (for packaging materials)	LEPL National Food Agency	1 day	●	●

Hygienic (Health) Certificate	LEPL National Food Agency	Approx. 10 days	●	●
The Declaration of Conformity / Compliance (for food packaging)	Packaging materials producer or Exporter	Approx. 10 days	●	●
MSDS [Material Safety Data Sheets] Certificate	Accredited Labs	Approx. 10 days	●	●
Wax Coating for Fresh Fruits	Exporter or Service Provider	N/A	●	●
Certificate of Origin (EURO 1, preferential, non-preferential, Form A)	LEPL Revenue Service	1 day	●	●
Halal Certificate (for Gulf states)	Accredited organization	Approx. 2 weeks	●	●
Stamped Commercial Invoice by Importer County's Embassy or Chamber of Commerce & Industry of Georgia (for Gulf states)	Embassy or Chamber of Commerce & Industry of Georgia	1 day	●	●
Railway Bill (Railway)	Transportation service provider	1 day	●	●
Airway Bill (Air)	Transportation service provider	1 day	●	●
CMR (Land)	Transportation service provider	1 day	●	●
Conosament (Sea)	Transportation service provider	1 day	●	●

#### ANNEX 4: AGRICULTURE PRODUCTS EXPORT BY EACH TRANSPORTATION MODE

Table 2. Agriculture products exported by air in 2022. Source: National Statistics Office of Georgia

HS Codes (2-digit)	Transport Mode	Country	000 USD
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Bahrain	2634.3
<ul style="list-style-type: none"> <li>Chapter 10: cereals</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Austria	34.9
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Bulgaria	0.1
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 16: preparations of meat, fish, crustaceans, mollusks, or other aquatic invertebrates, or insects</li> <li>Chapter 18: cocoa and cocoa preparations</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	UAE	837.2
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> </ul>	Air	USA	458.2

<ul style="list-style-type: none"> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 16: preparations of meat, fish, crustaceans, mollusks, or other aquatic invertebrates, or insects</li> <li>Chapter 17: sugars and sugar confectionery</li> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Burundi	0.1
<ul style="list-style-type: none"> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> </ul>	Air	Bhutan	89.5
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	UK	13
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Germany	167.8
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> </ul>	Air	Denmark	10.1
<ul style="list-style-type: none"> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Spain	78.3
<ul style="list-style-type: none"> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> </ul>	Air	Estonia	9.7
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Turkey	6.6
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Japan	66
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>	Air	India	19
<ul style="list-style-type: none"> <li>Chapter 16: preparations of meat, fish, crustaceans, mollusks, or other aquatic invertebrates, or insects</li> <li>Chapter 17: sugars and sugar confectionery</li> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Air	Israel	7.2
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Italy	12.8
<ul style="list-style-type: none"> <li>Chapter 18: cocoa and cocoa preparations</li> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Canada	315.6

<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>			
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 10: cereals</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Kenya	6.9
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Cyprus	0.3
<ul style="list-style-type: none"> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	South Korea	26.1
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Air	Latvia	6.3
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Air	Lithuania	12.3
<ul style="list-style-type: none"> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> </ul>	Air	Luxemburg	0.2
<ul style="list-style-type: none"> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Moldova	72.6
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Montenegro	0.9
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Niger	0.2
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Nigeria	0.2
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Netherlands	295.6
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Norway	8.7
<ul style="list-style-type: none"> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Oman	7.7
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Poland	13.6
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Russia	3.5
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Greece	8.9
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit;</li> <li>industrial or medicinal plants; straw and fodder</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Saudi Arabia	77.2
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>	Air	France	63.5
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>	Air	Senegal	2.1
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>	Air	Singapore	540.9

<ul style="list-style-type: none"> <li>Chapter 16: preparations of meat, fish, crustaceans, mollusks, or other aquatic invertebrates, or insects</li> <li>Chapter 18: cocoa and cocoa preparations</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Somalia	14.4
<ul style="list-style-type: none"> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	China	31.3
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Thailand	3.5
<ul style="list-style-type: none"> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> </ul>	Air	Tajikistan	0.3
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Finland	0.1
<ul style="list-style-type: none"> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Uzbekistan	126.1
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Ukraine	25.7
<ul style="list-style-type: none"> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Hungary	16.1
<ul style="list-style-type: none"> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 18: cocoa and cocoa preparations</li> </ul>	Air	Kuwait	40
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Kazakhstan	2.2
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Qatar	28.1
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 21: Miscellaneous edible preparations</li> </ul>	Air	Kirgizstan	28.3
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Sweden	0.2
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Switzerland	4.2
<ul style="list-style-type: none"> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Czech Republic	29.7
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 05: products of animal origin, not elsewhere specified or included</li> </ul>	Air	Hong-Kong	41.4
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Air	Belgium	2.8

Table 1. Agriculture commodities exported by railway in 2022. Source: National Statistics Office of Georgia

2022			
HS Codes (2-digit)	Transport Mode	Country	000 USD
<ul style="list-style-type: none"> <li>▪ Chapter 09: coffee, tea, maté, and Spices</li> <li>▪ Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>▪ Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	Mongolia	1994.2
<ul style="list-style-type: none"> <li>▪ Chapter 09: coffee, tea, maté, and Spices</li> <li>▪ Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	Kazakhstan	44233
<ul style="list-style-type: none"> <li>▪ Chapter 17: sugars and sugar confectionery</li> <li>▪ Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Railway	Azerbaijan	14684.3
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	Belarus	3050.3
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	France	1.1
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	Lithuania	76.1
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	Netherlands	5.9
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	Russia	39245.2
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	Tajikistan	791.5
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Railway	Ukraine	294.7
<ul style="list-style-type: none"> <li>▪ Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Railway	Armenia	7942
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> <li>▪ Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Railway	Turkmenistan	990.6
<ul style="list-style-type: none"> <li>▪ Chapter 22: beverages, spirits, and Vinegar</li> <li>▪ Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Railway	Uzbekistan	5940

Table 3. Agriculture products exported by sea in 2022. Source: National Statistics Office of Georgia

HS Codes (2-digit)	Transport Mode	Country	000 USD
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Australia	1303.2
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 14: vegetable plaiting materials; vegetable products not elsewhere specified or included</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Austria	460.7
<ul style="list-style-type: none"> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers</li> </ul>	Sea	Albania	52.9

<ul style="list-style-type: none"> <li>and ornamental foliage</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	UAE	2787.8
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Sea	Argentina	758.4
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	USA	13629.3
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	New Zealand	21.7
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Bahrein	67.4
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Belgium	144.4
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Brazil	484
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Bulgaria	956.4
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Burkina Faso	31.9
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	UK	2645.5
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 14: vegetable plaiting materials; vegetable products not elsewhere</li> </ul>	Sea	Germany	23588.4

<ul style="list-style-type: none"> <li>specified or included</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>			
<ul style="list-style-type: none"> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 14: vegetable plaiting materials; vegetable products not elsewhere specified or included</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Denmark	59.4
<ul style="list-style-type: none"> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> </ul>	Sea	Egypt	33.9
<ul style="list-style-type: none"> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Spain	5600.9
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Estonia	1031.7
<ul style="list-style-type: none"> <li>Chapter 05: products of animal origin, not elsewhere specified or included</li> </ul>	Sea	Vietnam	322
<ul style="list-style-type: none"> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Sea	Turkey	676
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Japan	1825.6
<ul style="list-style-type: none"> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	India	192.1
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 10: cereals</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Sea	Jordan	889.9
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Iceland	2
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 17: sugars and sugar confectionery</li> <li>Chapter 18: cocoa and cocoa preparations</li> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> </ul>	Sea	Israel	12640.3

<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 14: vegetable plaiting materials; vegetable products not elsewhere specified or included</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Italy	18087.5
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 17: sugars and sugar confectionery</li> <li>• Chapter 18: cocoa and cocoa preparations</li> <li>• Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Canada	1336.6
<ul style="list-style-type: none"> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Kenya	488.2
<ul style="list-style-type: none"> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Cyprus	520.3
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Korea	301.9
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Costa-Rica	17.5
<ul style="list-style-type: none"> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 17: sugars and sugar confectionery</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Latvia	5213.8
<ul style="list-style-type: none"> <li>• Chapter 10: cereals</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> </ul>	Sea	Lebanon	75.1
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>	Sea	Libya	1722.3
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> </ul>	Sea	Lithuania	6824.8

<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Malaysia	279.4
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Mali	51.3
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Malta	2
<ul style="list-style-type: none"> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> </ul>	Sea	Morocco	15.7
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Sea	Mexico	960.1
<ul style="list-style-type: none"> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> </ul>	Sea	Moldova	256.2
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 21: Miscellaneous edible preparations</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>	Sea	Nepal	223.2
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Niger	0.1
<ul style="list-style-type: none"> <li>• Chapter 09: coffee, tea, maté, and Spices</li> </ul>	Sea	Nigeria	66.2
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Sea	Netherlands	3879
<ul style="list-style-type: none"> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 21: Miscellaneous edible preparations</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> </ul>	Sea	Norway	371.3
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>	Sea	Peru	3718.4
<ul style="list-style-type: none"> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> </ul>	Sea	Poland	9356.3
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 09: coffee, tea, maté, and Spices</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 21: Miscellaneous edible preparations</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Sea	Portugal	1138.1
<ul style="list-style-type: none"> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> </ul>	Sea	Romania	63.5
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Russia	107.7
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Sea	Greece	2071.2
<ul style="list-style-type: none"> <li>• Chapter 14: vegetable plaiting materials; vegetable products not elsewhere specified or included</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 21: Miscellaneous edible preparations</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Sea	South Africa	252.7
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>			

<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Saudia Arabia	3438
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 10: cereals</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>• Chapter 17: sugars and sugar confectionery</li> <li>• Chapter 18: cocoa and cocoa preparations</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	France	15177.7
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Serbia	137.7
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Singapore	8332.1
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Syria	1.9
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Slovakia	568.4
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Slovenia	18
<ul style="list-style-type: none"> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> </ul>	Sea	Somalia	32.8
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> <li>• Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Sea	Taiwan	1878.9
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Thailand	5.3
<ul style="list-style-type: none"> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>	Sea	Tunisia	1736.9
<ul style="list-style-type: none"> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 10: cereals</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Ukraine	23058.1
<ul style="list-style-type: none"> <li>• Chapter 23: residues and waste from the food industries;</li> </ul>	Sea	Hungary	45.9

prepared animal fodder	Sea	Philippines	2,038.0
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Finland	188.8
<ul style="list-style-type: none"> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Kuwait	255.8
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Qatar	82.7
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Sweden	398.8
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Switzerland	17.9
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Czech Republic	676.9
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	China	18337.2
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 05: products of animal origin, not elsewhere specified or included</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Sea	Hong Kong	752.9

Table 4. Agriculture products exported by road in 2022. Source: National Statistics Office of Georgia

HS Codes (2-digit)	Transport Mode	Country	000 USD
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Austria	801.9
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 10: cereals</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 16: preparations of meat, fish, crustaceans, mollusks, or other aquatic invertebrates, or insects</li> <li>Chapter 18: cocoa and cocoa preparations</li> </ul>	Land	Azerbaijan	49504.6

<ul style="list-style-type: none"> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>			
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	UAE	1085
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	USA	641.6
<ul style="list-style-type: none"> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Land	Belarus	28225.9
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Belgium	257.5
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Bulgaria	387.3
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	UK	832.9
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Germany	17838.5
<ul style="list-style-type: none"> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> </ul>	Land	Denmark	539

<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 10: cereals</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 18: cocoa and cocoa preparations</li> </ul>	Land	Iraq	1168.7
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Spain	3752.7
<ul style="list-style-type: none"> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Estonia	2378.5
<ul style="list-style-type: none"> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 10: cereals</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>• Chapter 14: vegetable plaiting materials; vegetable products not elsewhere specified or included</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 18: cocoa and cocoa preparations</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> <li>• Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Land	Turkey	20019.9
<ul style="list-style-type: none"> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• fats; animal or vegetable waxes</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Turkmeni- stan	1794.3
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Japan	177.9
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Land	Jordan	249.6
<ul style="list-style-type: none"> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 10: cereals</li> <li>• Chapter 17: sugars and sugar confectionery</li> <li>• Chapter 18: cocoa and cocoa preparations</li> <li>• Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Iran	3439.4
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Iceland	12.8
<ul style="list-style-type: none"> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt;</li> </ul>	Land	Israel	927.1

<ul style="list-style-type: none"> <li>starches; inulin; wheat gluten</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Italy	13594.5
<ul style="list-style-type: none"> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Cyprus	361.7
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	South Korea	18.9
<ul style="list-style-type: none"> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 18: cocoa and cocoa preparations</li> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Latvia	4284
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Land	Libya	126.5
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Lithuania	7246.3
<ul style="list-style-type: none"> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Luxembourg	11.3
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Land	Mexico	137.5
<ul style="list-style-type: none"> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Moldova	4053
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Land	Montenegro	217.5
<ul style="list-style-type: none"> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Mongolia	333.7
<ul style="list-style-type: none"> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> </ul>	Land	Netherlands	1135.4

<ul style="list-style-type: none"> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Norway	129.2
<ul style="list-style-type: none"> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Poland	11088.7
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Portugal	9.3
<ul style="list-style-type: none"> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Romania	388.3
<ul style="list-style-type: none"> <li>• Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 10: cereals</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 17: sugars and sugar confectionery</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> <li>• Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Land	Russia	372954.6
<ul style="list-style-type: none"> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Greece	947.7
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Saudia Arabia	484.5
<ul style="list-style-type: none"> <li>• Chapter 05: products of animal origin, not elsewhere specified or included</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> </ul>	Land	France	5299.8

<ul style="list-style-type: none"> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>			
<ul style="list-style-type: none"> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Serbia	117.2
<ul style="list-style-type: none"> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>	Land	Singapore	38.4
<ul style="list-style-type: none"> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Slovakia	389.2
<ul style="list-style-type: none"> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Slovenia	70.4
<ul style="list-style-type: none"> <li>Chapter 04: dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included</li> <li>Chapter 05: products of animal origin, not elsewhere specified or included</li> <li>Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>Chapter 07: edible vegetables and certain roots and tubers</li> <li>Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>Chapter 09: coffee, tea, maté, and Spices</li> <li>Chapter 10: cereals</li> <li>Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>Chapter 14: vegetable plaiting materials; vegetable products not elsewhere specified or included</li> <li>Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>Chapter 16: preparations of meat, fish, crustaceans, mollusks, or other aquatic invertebrates, or insects</li> <li>Chapter 17: sugars and sugar confectionery</li> <li>Chapter 18: cocoa and cocoa preparations</li> <li>Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> <li>Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Land	Armenia	86795.6
<ul style="list-style-type: none"> <li>Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> </ul>	Land	Taiwan	41.8
<ul style="list-style-type: none"> <li>Chapter 21: Miscellaneous edible preparations</li> <li>Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Tajikistan	499.6

<ul style="list-style-type: none"> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 17: sugars and sugar confectionery</li> <li>• Chapter 18: cocoa and cocoa preparations</li> <li>• Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Uzbekistan	5653.2
<ul style="list-style-type: none"> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 10: cereals</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 16: preparations of meat, fish, crustaceans, mollusks, or other aquatic invertebrates, or insects</li> <li>• Chapter 18: cocoa and cocoa preparations</li> <li>• Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Ukraine	30956.3
<ul style="list-style-type: none"> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Hungary	125.6
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Finland	44.6
<ul style="list-style-type: none"> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Kuwait	22.4
<ul style="list-style-type: none"> <li>• Chapter 06: live trees and other plants; bulbs, roots, and the like; cut flowers and ornamental foliage</li> <li>• Chapter 07: edible vegetables and certain roots and tubers</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> <li>• Chapter 13: lac; gums, resins, and other vegetable saps and extracts</li> <li>• Chapter 14: vegetable plaiting materials; vegetable products not elsewhere specified or included</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 17: sugars and sugar confectionery</li> <li>• Chapter 18: cocoa and cocoa preparations</li> <li>• Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> </ul>	Land	Kazakhstan	5072.7

<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 17: sugars and sugar confectionery</li> <li>• Chapter 19: preparations of cereals, flour, starch or milk; pastrycooks' products</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> <li>• Chapter 23: residues and waste from the food industries; prepared animal fodder</li> </ul>	Land	Kyrgyzstan	2247.5
<ul style="list-style-type: none"> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Sweden	406.2
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 14: vegetable plaiting materials; vegetable products not elsewhere specified or included</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Switzerland	1092.5
<ul style="list-style-type: none"> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 11: products of the milling industry; malt; starches; inulin; wheat gluten</li> <li>• Chapter 15: animal, vegetable, or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes</li> <li>• Chapter 20: preparations of vegetables, fruit, nuts, or other parts of plants</li> <li>• Chapter 21: Miscellaneous edible preparations</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Czech Republic	3793
<ul style="list-style-type: none"> <li>• Chapter 09: coffee, tea, maté, and Spices</li> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	China	1190.9
<ul style="list-style-type: none"> <li>• Chapter 08: edible fruit and nuts; peel of citrus fruit or melons</li> <li>• Chapter 12: oil seeds and oleaginous fruits; miscellaneous grains, seeds, and fruit; industrial or medicinal plants; straw and fodder</li> </ul>	Land	North Macedonia	10.3
<ul style="list-style-type: none"> <li>• Chapter 22: beverages, spirits, and Vinegar</li> </ul>	Land	Hong-Kong	14.5

## Incoterms 2020

Description	EXW	FCA	FAS	FOB	CFR	CIF	CPT	CIP	DAP	DPU	DDP
	Ex Works	Free Carrier	Free Along-side Ship	Free On Board	Cost & Freight	Cost Insurance & Freight	Carriage Paid To	Carriage Insurance Paid to	Delivered at Place	Delivered at Place Un-loaded	Delivered Duty Paid
Packaging	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.
Loading Charges	IMP.	EXP.*	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.
Delivery to Port/Place	IMP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.
Export Duty& Taxes	IMP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.
Origin Terminal Charges	IMP.	IMP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.
Loading On Charges	IMP.	IMP.	IMP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.
Carriage Charges	IMP.	IMP.	IMP.	IMP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.	EXP.
Insurance	EXP/ IMP.***	EXP./ IMP.	EXP./ IMP.	EXP./ IMP.	EXP./ IMP.	EXP.	EXP./ IMP.	EXP.	EXP./ IMP.	EXP./ IMP.	EXP./ IMP.
Destination Terminal Charges	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.**	IMP.**	EXP.	EXP.	EXP.
Delivery to Destination	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	EXP.	EXP.	EXP.
Import & Taxes Security Clearance	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	IMP.	EXP.

\* Seller is responsible if a term is FCA at seller's facility.

\*\* If the seller incurs costs under its contract of carriage, a seller cannot recover the costs from the buyer without the buyer's agreement.

\*\*\* Depends on negotiation between exporter and importer