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Sustainable Inland Transport Connectivity Indicators

National Connectivity Report - Georgia

Executive Summary (compiled by Mr. Mamuka Chikhladze, National SITCIN Consultant)

Informal document WP.5 (2021) No. 4

2020

National Connectivity Report
Executive Summary

Georgia

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1. Introduction

The Georgian National Connectivity Report (NCR) 2019 preparation process was generally divided into the following key phases:

- *Data-collection and meta-analysis,*
- *Relevant fact-finding missions and interviews with the stakeholders,*
- *Formulating findings and recommendations,*
- *Discussion of NCR results at national policy dialogue meeting with the national stakeholders*
- *Capacity-building workshops targeting the most pressing topics in inland transport policy based on the NCR recommendations and findings.*

The initial fact-finding mission were held by the project team to review the beneficiary country's transport system information and statistics and gather views and approaches from competent national authorities and relevant stakeholders. Government stakeholder consultations in Tbilisi were followed by visits to the border with Armenia (Sadakhlo-Bagratashen road and rail BCP)/ Border with Azerbaijan ("Red Bridge", near Kirach-Mughanlo) and "Gardabani" rail BCP as well as visit to the inland customs clearance and logistics zone near Tbilisi.

Around 20 representatives of different private companies were interviewed as well, most of them participated in a special survey and five out of them shared completed questionnaires.

In the SITCIN data collection process a large spectrum of private and public sector interlocutors including representatives from relevant NGOs participated:

- *Ministry of Economy and Sustainable Development (Transport Policy and Logistics Development Department, Land Transport Agency)*
- *Ministry of Finance (Revenue Service, Customs department)*
- *Georgian Railway and its undertakings*
- *Ministry of Regional Development and Infrastructure (Roads Department)*
- *Ministry of Internal Affairs*
- *Ministry of Environmental Protection and Agriculture*
- *Association of Freight Forwarders of Georgia (AFG member of FIATA)*
- *Georgian International Road Carriers Association (GIRCA)*
- *Road Safety Partnership (NGO)*

2. Country information

Following the introduction of a wide array of institutional reforms over the last two decades Georgia opened its door to the international community. Hence, Georgia has a liberal and free-market-oriented economic policy, significantly decreased the number of licenses and permissions for international transport and trade, simplified administrative procedures at border crossing points, and signed several preferential trade regimes with partner countries and regional organizations including USA, EU, and China. Considering Georgia's advantageous geographical location and developed, integrated and multimodal transport infrastructure, the country's ambitious objective is to become the transit gate for Euro-Asian trade and transport. Results are reflected in different well-recognized international rankings, where Georgia maintains strong positions among non-EU, post-Soviet member states.

2.1. Key economic indicators of Georgia

The Georgian economy remains on the path of sustained economic growth. Economic output expanded by 4.7 per cent in 2018, driven largely by growth in trade, hospitality and real estate, transport and financial sectors. Between 2010 and 2019[1], Georgia's GDP per capita grew at an average annual rate of 4.8 percent. Real GDP growth is projected to sharply slow to near zero in 2020 as the impact of COVID-19 adds to an already challenging external environment.

The country has a sound macroeconomic framework, an attractive business environment, and robust public financial management arrangements. Based on the Geostat data, export was increased annualy by 10% and import by 4.8% as of January 2020, comparing to the previous year.

Table 1: Key economic indicators

	2015	2016	2017	2018	2019E
GDP at current prices, billion USD	14.9	15.1	16.2	17.6	17.7
GDP real growth, percentage change	3.0	2.9	4.8	4.8	5.1
GDP per capita (at current prices), USD	4 012.6	4 062.1	4 358.5	4 722.0	4 763.5

Source: Geostat

Figure 1. Location of country Georgia

[1] 2019 data is estimated by Geostat and may be slightly changed after later revision

Source: Author, compiled from various sources.

- *Annual GDP growth average (2005-2017) – 5.4*
- *Nominal GDP CAGR '10 -'19 (E): 9.4%*
- *Inflation rate (e-o-p) 2019: 4.9%*
- *Human Development Index (2019) – 0.766 female / 0.786 male*
- *Trade (exports and imports as a percentage of GDP, 2019) – 107*

*(Source: HDR ranking (*http://hdr.undp.org/en/countries/profiles/GEO*), Geostat)*

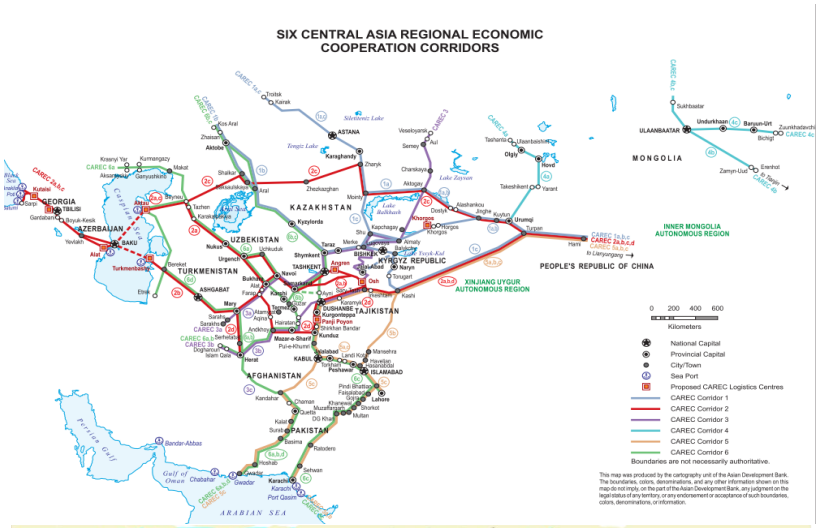
2.2. International connectivity of the inland transport system of Georgia

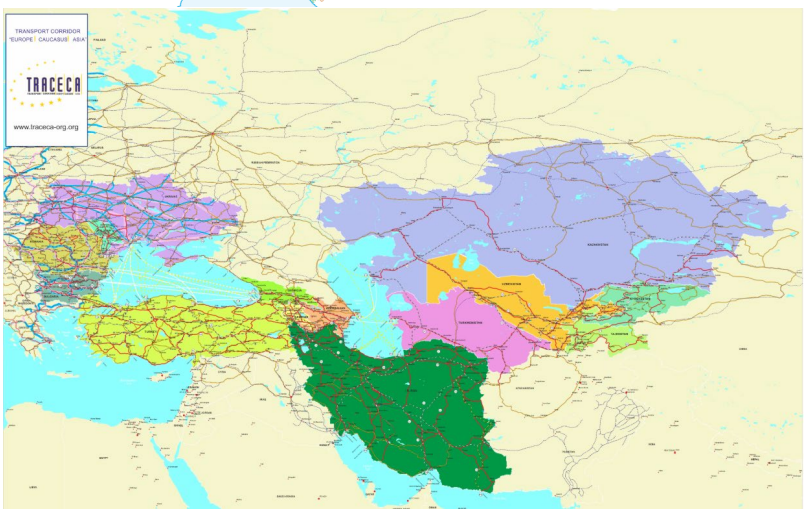
Located in the Caucasus region, on the coast of the Black Sea, Georgia is geographically well positioned as a gateway between Europe and Asia. The country is well situated for easy access to most major European, Central Asian and Middle Eastern markets.
To remain competitive in the logistics business Georgia pays attention to its integration into international corridors, also the country is making huge amounts of investments in infrastructure to support tomorrow`s demands.

1. ***International cooperation:***

- *Existing Transport corridors passing through Georgia are:*
  - *TRACECA – member since 1993*
  - *CAREC – member since 2016*

Figure 2: CAREC and TRACECA corridors





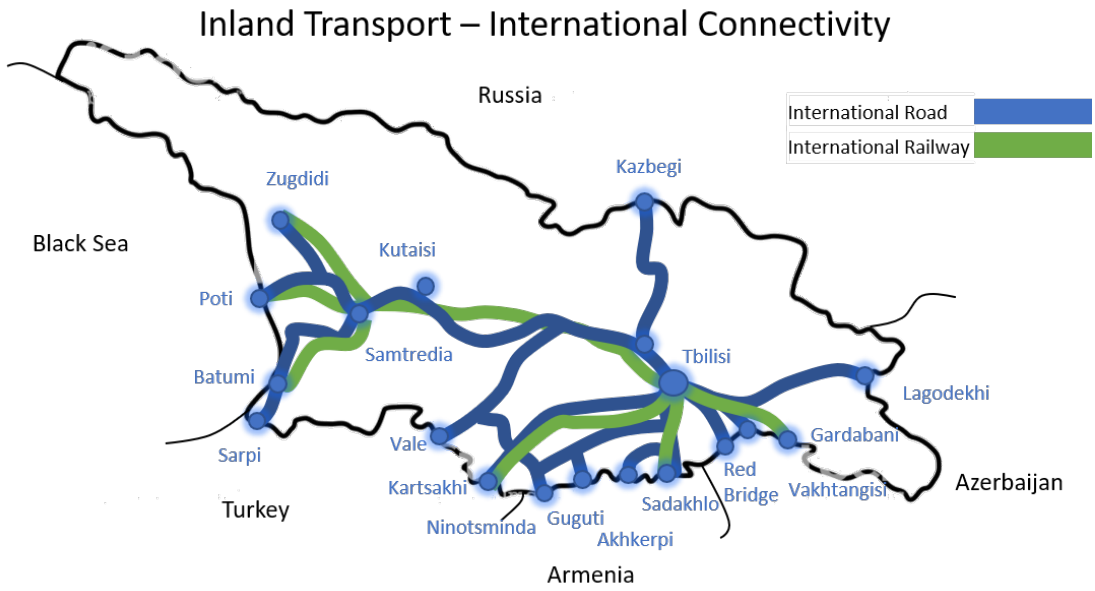
Source: CAREC (https://www.carecprogram.org/uploads/2017-carec-corridor-map-FIN-1.pdf), TRACECA (http://www.traceca-org.org/fileadmin/fm-dam/Routes_Maps/MAP_TRACECA_ROUTES_10_09_2017_300DPI.png), Adjusted by the Author

- *Development of New Transit Routes and Corridors*
  - *Black Sea - Caspian Sea Corridor (member states: Turkmenistan, Azerbaijan, Georgia, Romania)*
  - *Lapis Lazuli Route (member states: Afghanistan, Turkmenistan, Azerbaijan, Georgia, Turkey)*
  - *Persian Gulf-Black Sea Corridor (member states: Iran, Azerbaijan, Armenia, Georgia, Bulgaria, Greece, India (interested state))*
- *Road transport - bilateral intergovernmental agreements signed with 31 countries (Planned with 2 countries)*
- *Railway transport - bilateral intergovernmental agreements signed with neighbour countries (Azerbaijan, Armenia, Turkey, Russian Federation), Ukraine, Moldova, Uzbekistan, Kazakhstan, Turkmenistan, Kyrgyzstan, Tajikistan, Afghanistan*

2. Transport infrastructure:

- *Georgia has widely developed its inland transport network:*
  - *Roads length (total length – 20 000):*
    - *International roads – 1 595 km*
    - *National roads – 18 400 km*
  - *Railway lines length (total length –1 604 km*
    - *International rail lines – 836 km*
    - *Internal rail lines – 607 km*

Figure 3: Inland Transport – international connectivity



Source: Author, compiled from various sources.

2.3. Country's current position in international trade

The Logistics Performance Index (LPI)

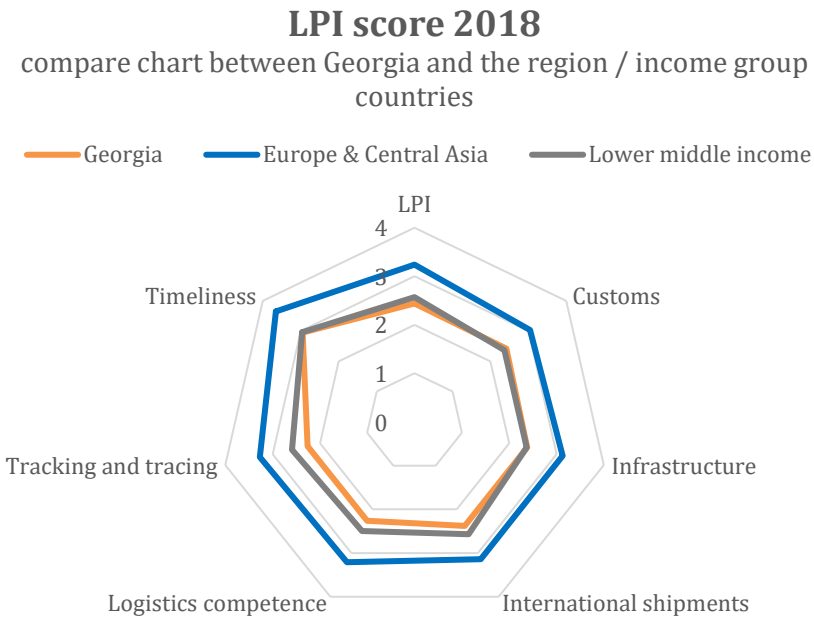
The Logistics Performance Index is an interactive benchmarking tool created to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance. The LPI 2018 allows for comparisons across 160 countries and scores range between 0-5, where 0 means the worst and 5 the best.

Table 2: Georgia's LPI ranking and score

	2010	2012	2014	2016	2018
LPI Rank	93	77	116	130	119
LPI Score	2.61	2.77	2.51	2.35	2.44
Customs	2.37	2.90	2.21	2.26	2.42
Infrastructure	2.17	2.85	2.42	2.17	2.38
International Shipments	2.73	2.68	2.32	2.35	2.38
Quality Logistics Services	2.57	2.78	2.44	2.08	2.26
Tracking and Tracing	2.67	2.59	2.59	2.44	2.26
Timeliness	3.08	2.86	3.09	2.80	2.95

Source: World Bank (www.lpi.worldbank.org)

Figure 4: LPI compare with Europe & Central Asia and Lower middle-income countries



Source: World Bank (www.lpi.worldbank.org)

Ease of Doing Business Ranking & Ease of Doing Business Score

Economies are ranked on their ease of doing business, from 1–190. A high ease of doing business ranking means the regulatory environment is more conducive to the starting and operation of a local firm.

Table 3: Georgia's ranking in accordance EODB 2017-19

Year	Rank	DTF score	Trading across border
2019	6	83.28	43
2018	9	82.04	62
2017	16	80.20	54

Source: World Bank, Doing Business Ranking (www.doingbusiness.org)

Georgia is the leader in the Region due to minimal compliances at border and documentary requirements by considering both time and costs to export:

Table 4: Border and documentary compliances – Georgia vs the Region (2019)

	Border Compliance		*Documentary Compliance*	
	Time to export (hours)	*cost to export (US$)*	*Time to export (hours)*	*cost to export (US$)*
Georgia	*6*	*112*	*2*	*0*
The Region	*22.1*	*157.5*	*24.3*	*97.9*

Source: World Bank, Doing Business Ranking (www.doingbusiness.org)

Georgia improved its score in Trading Across Borders from 47 to 38 (by 9 points) last year.
In recent years Georgia made some progress regarding simplification of doing business and achievements were reflected in an improved ranking in EO DB 2019 – were it is listed among top 6 countries with the best business environment in the world (190 countries participating in the ranking evaluation):

- *Georgia made **export and import documentary compliance faster** by improving its electronic document processing system, as well as, introduced an advanced electronic document submission option.*
- *Made **starting a business** easier by allowing voluntary value-added tax registration at the time of business incorporation. Previously, entrepreneurs had to make a separate visit to the Revenue Service for value-added tax registration after company registration. Georgia also enhanced its existing one-stop-shop for business incorporation, allowing entrepreneurs to start a company through a single procedure.*
- *Made **paying taxes easier** by levying income tax on distributed profits rather than on taxable profits. At the same time, Georgia made paying taxes more difficult by requiring value-added tax to be imposed on advance payments for goods and services.*
- ***Made enforcing contracts** more effective by introducing random and automatic assignment of cases to judges throughout the courts.*

3. SITCIN data collection in the context of Georgia

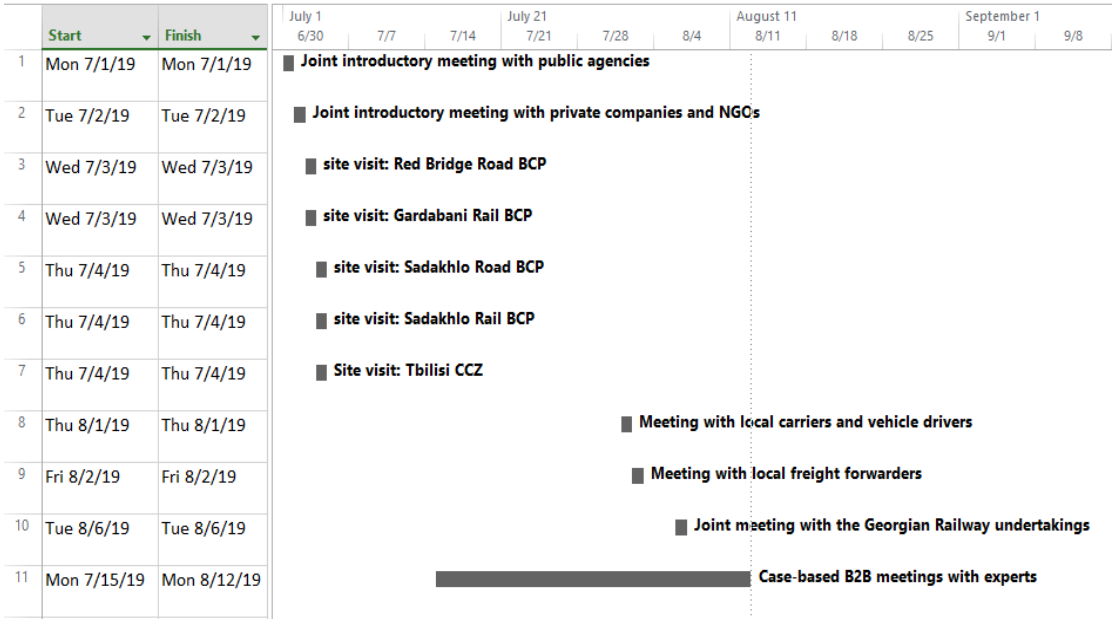
The data collection process was managed by the SITCIN national consultants aimed at measuring and monitoring all connectivity indicators. The data that are used to compile SITCIN can be categorized as follows:

1. *Quantitative data, which is subdivided by*
   a. *Discrete data, such as a number of accidents and a number of vehicles that are usually expressed in absolute terms or as ratios.*
   b. *Continuous data, which is used to measure the length of infrastructure (in kilometres), goods transported (in tonnes) or waiting time at borders (in minutes).*
2. *Qualitative data*

   In most cases qualitative data is used, which categorizes performance by very good to very poor – such as infrastructure condition - to produce an ordinal scale where the higher the value the better the performance.

Difficulties during data collection mostly were related to the language barrier of technical staff in different state and private entities. Also, misunderstanding of indicator definitions and the scoring system sometimes were key reasons for additional questions and detailed discussion with stakeholder agencies.

Figure 5: Timeframe of data collection activities



Source: Author, compiled from various sources.

Introductory meetings

The SITCIN team presented the draft Sustainable Inland Transport Connectivity Indicators to national stakeholders.

Fact-finding mission

The fact-finding missions were held by the project team to review the beneficiary country's transport system information and statistics and gather views and approaches from competent national authorities and relevant stakeholders.

In the framework of the fact-finding missions, SITCIN team visited:

- *Road BCPs: Red Bridge and Sadakhlo,*
- *Railway BCPs: Gardabani and Sadakhlo,*
- *Tbilisi CCZ.*

The purpose of the initial fact-finding mission was to conduct extensive consultations with national stakeholders, collect relevant data and information (on hardware/software, policies, and regulations), identify connectivity gaps and challenges.

Questionaires

Questionnaires were prepared for each stakeholder (state agencies and private organizations) based on the three dimensions of sustainability, in the economic, social and environmental spheres and across the road and rail modes. The questionnaires used different types of questions: multiple-choice, rating and Likert scale questions, also dropdown and open-ended questions were used.

Interviews

Several interviews were held with representatives from public and private stakeholder agencies and organizations to gather relevant information and data. Based on SITCIN indicators detailed questionnaires for each stakeholder were prepared considering specifications and profile of their businesses. Per the necessity, some questionnaires were translated in Georgian for simplification of the data collection process.

Meetings with experts

Interviews were conducted with stakeholders to gather information necessary to evaluate relevant indicators. For this purpose, several meetings were held with private and public sector representatives.

The following table shows the data collection method and related stakeholder agency/organization for each indicator category.

Table 5: Data collection methods

Indicator	***Data collection method***
EC-1: Efficiency *Measuring efficient process at BCPs*	*BCP visits at daytime. Interviews with Revenue Service, GIRCA, Georgian Railway*
EC-2: Time required at borders *Measuring time efficiency at BCPs*	*Interviews with Revenue Service, Georgian Railway*
EC-3: Cost *Measuring costs at BCPs*	*Desktop research, interviews with Customs agencies and transport operators/freight forwarders, Revenue Service, GIRCA, Ministry of Internal Affairs*
EC-4: Infrastructure *Measuring availability and quality of infrastructure*	*Desktop research, interviews with Road Department, Revenue Service, Land Transport Agency, Georgian Railway*
1-EC-5: Operations *Measuring efficiency of workflows*	*Desktop research, interviews with Transport and Logistics Policy development department, Revenue Service and Customs agencies, Land Transport Agency, Ministry of Internal Affairs, Georgian Railway*
1-EC-6: Intermodality/Combined Transport *Measuring modal share*	*Desktop research, interview with Transport and Logistics Policy development department, Land Transport Agency, Revenue Service, Georgian Railway, GIRCA, private companies*

1-EC-7: ICT and ITS *Measuring the provision of innovative services*	*BCP visits, interviews with Revenue Service (Customs and Border agencies), Transport Policy Department, Land Transport Agency, GIRCA, Ministry of Internal Affairs, Roads Department, Georgian Railway*
1-SO-1: Road Traffic Rules *Measuring the effectiveness of road signs and signals, road traffic rules, drivers' driving times enforcement*	*Desktop research, interviews with Transport and Logistics Policy development department, Roads Department, Ministry of Internal Affairs, Road Safety NGO, Revenue Service*
1-SO-2: Road Traffic Infrastructure *Measuring provision of infrastructure to reduce the number of traffic accidents*	*BCP visits, interviews with Revenue Service and Ministry of Internal Affairs, Roads Department, Georgian Railway, Revenue Service, Land Transport Agency*
1-SO-3: Vehicle Regulations *Measuring the effectiveness of harmonized vehicle regulations in increasing traffic safety*	*Desktop research, interview with Land Transport Agency, Ministry of Internal Affairs*
1-SO-4: Perishable Foodstuffs Transport *Measuring harmonization of regulations to promote facilitation of international transport of perishable foodstuffs*	*Desktop research, interviews with Ministry of Environmental Protection and Agriculture and Ministry of Internal Affairs, Revenue Service, Transport and Logistics Policy development department*
1-SO-5: Dangerous Goods Transport – Administrative *Measuring harmonization of regulations to reduce the number of deaths and illness from hazardous chemicals and contamination*	*Desktop research, interviews with Transport and Logistics Policy development department, Ministry of Internal Affairs, Land Transport Agency, Revenue Service, GIRCA, Georgian Railway*
1-SO-6: Dangerous Goods Transport – Infrastructure/Hardware Requirements *Measuring harmonization of regulations to reduce the number of deaths and illness from hazardous chemicals and contamination*	*Desktop research, interview with Roads Department, Land Transport Agency*
1-EV-1: Fleet *Measuring deployment of sustainable fleet*	*Desktop research, interview with Ministry of Internal Affairs, Land Transport Agency, Georgian Railway*
1-EV-2: Emission *Measuring the effectiveness of emission reduction measures*	*Desktop research, interviews with Transport and Logistics Policy development department, Land Transport Agency, Ministry of Environmental Protection and Agriculture, Georgian Railway, Revenue Service,*
1-EV-3: Infrastructure *Measuring the effectiveness of infrastructure regarding environment protection*	*Interviews with Ministry of Environmental Protection and Agriculture, Transport and Logistics Policy development department*

4. Country Score & SWOT Analysis

Table 13 summarizes the data evaluation results. The country overall score is 1013 points out of total 1468 points (sum of 175 indicators). Georgia is doing relatively well in safety and security, border crossing facilitation and infrastructure.
For each chapter, the maximum score is 70 (the other 30 points are considered only in case the inland water transport sector is developed in the country) and the maximum overall score is 100 points. In the 4th column (from left) of Table 13 the respective country`s Connectivity Index for each subchapter and overall score are shown. Subchapters are also divided by transport modes: Road and Railway transports (considering that inland waterways are not developed in Georgia this is excluded from the scoring table).

Table 6: Overall score – Georgia (2019)

NCR Chapters	Max score	Score	Connectivity Index
Road	340 points	268 points	78.8%
Rail	238 points	191 points	80.3%
4.1 Border Crossing Facilitation	**70 points**	**56 points**	**79.4%**
Road	120 points	85 points	70.8%
Rail	70 points	68 points	97.1%
4.2 Infrastructure	**70 points**	**56 points**	**79.4%**
Road	160 points	127 points	79.4%
4.3 Safety and Security	**70 points**	**56 points**	**79.4%**
Road	250 points	180 points	72.0%
Rail	30 points	30 points	100.0%
4.4 Transport of perishable foodstuffs & dangerous goods	**70 points**	**53 points**	**75.0%**
Road	40 points	16 points	40.0%
Rail	40 points	27 points	67.5%
4.5 Interoperability	**70 points**	**38 points**	**53.8%**
Road	130 points	27 points	20.8%
Rail	50 points	4 points	8.0%
4.6 Environment and energy	**70 points**	**12 points**	**17.2%**
Overall Road score	**1040 points**	**693 points**	**66.6%**
Overall Rail score	**428 points**	**320 points**	**74.8%**
Overall score	**1468 points**	**1013 points**	**69.0%**

Figure 6: Formula - Overall score calculation

$$country\ overall\ score = \frac{\sum country\ score\ by\ each\ subchapter * maximum\ overall\ score}{\sum maximum\ score\ by\ each\ chapter}$$

Country final/overall score is a weighted number. Each transport mode scores are weighted: roads – 0.42 and rail – 0.58 and the final Overall Country score is calculated based on the weighted scores (in case IWW is developed in the country the weights will be as follows: Roads – 0.25, Rail – 0.35, IWW – 0,40)[2]. ***The country weighted score is 69.6%.***

[2] Weights are not final and will be revised and approved based on the joint agreement of stakeholders from UNECE and SITCIN participant countries

Table 7: Weighted final country score

Transport mode	Max score	Score	Weighted max score	Weighted score	Connectivity Index
Road	1040 points	693 points	437 points	291 points	67%
Rail	428 points	320 points	248 points	186 points	75%
Total	**1468 points**	**1013 points**	**685 points**	**477 points**	**69.6%**

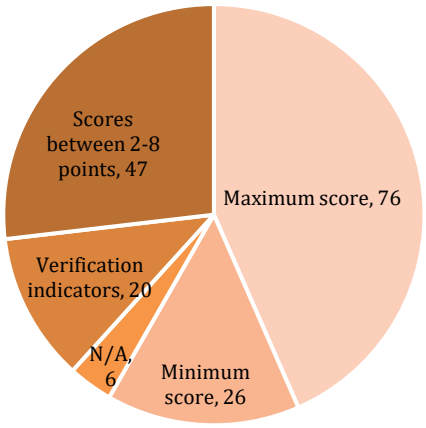
5. Conclusions and Recommendations

Conclusions and recommendations are developed and summarized based on results of data collection (surveys, interviews, consultations, desktop research, etc) and their detailed analysis, considering findings and statements defined in the SWOT analysis in the previous chapter.

Data were collected to evaluate 175 indicators for road and railway transport, only 6 indicators (3.4%) are not evaluated because: lack of access to the data of neighbour countries or such kind of data was not available.

As a result of data analysis, Georgia received the maximum score (10 points) in 76 indicators (43.4%) and the minimal score (0 points) - in 26 indicators (14.9%). 20 indicators (11.4%) were not scored by points, because they were verification indicators. Results of the rest 47 indicators range between 0 and 10 points (26.9%).

Figure 7: Data analysis results



5.1. Conclusions

Border Crossing Facilitation

General
Georgia is the leader in the region by simple border crossing procedures and is the pioneer by using electronic management and controlling systems, data exchange software, etc. Georgia has been progressing in approximation with international standards and follows modern requirements and demand. The key challenge for Georgia to facilitate border crossing is to have the same service quality and simplified border crossing procedures at the BCPs in adjoining countries as it is at domestic BCPs, especially adjoining BCPs in Armenia and Azerbaijan need improvements. At present, Azerbaijan and Armenia are open for further cooperation to improve border crossing procedures. One of the strengths of Georgia in the border crossing procedures is that customs clearance service is free of charge for export and transit containers. Also, drivers from main trade partner countries have visa-free access and no additional formal or informal fees.

Road transport
Staff resources at main road BCPs and inland clearance stations fully satisfy existing demand on the relevant services. Responsibilities between domestic BCP authorities are delegated and well-coordinated. Georgia ensures timely and effective data flow internally and internationally (with adjoining and partner countries) as well. At present, the main weakness seems to be coordination and delegation of necessary issues with the following adjoining countries: Azerbaijan and Armenia. Data provided by Azerbaijan and Armenian customs authorities are not completed and sometimes are not timely delivered. Also, Georgia has initiated to establish bilateral one-stop technology with Azerbaijan and in this regards relevant state authorities are working on technical and legislative details. Also, Georgia has a negotiation with Armenian customs authorities to start working on such technology.

Rail transport
Staff resources at all rail BCPs and inland clearance stations fully satisfy existing demand on the relevant services. GR offers clients a full-fledged advance electronic cargo information system allowing for pre-clearance. Customs operations: loading/unloading of shipment at BCPs, inspection charges, etc. for containerized, dry and liquid bulk cargos are free of charge in the country. Rolling stocks of the following 16 countries have access to the Georgian Railway network: Azerbaijan, Armenia, Lithuania, Latvia, Estonia, Ukraine, Belarus, Moldova, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Iran, Afghanistan.

Transport Infrastructure

General
Georgia has a strong intention to become a transit hub in the Caucasus and Central Asian region so lots of road infrastructure projects are in progress and a significant part of transit highway is already completed and operated following the international standards.

Road transport
While comparing road and rail transport it must be mentioned that there is more than one BCP on road transport with neighbouring countries when rail transport has one BCP per each neighbour country. Although having several roads BCP's, there is one main BCP per each neighbour and other BCP's act as supportive points with a lack of infrastructure. In accordance with the data received from private companies, rail BCP's perform satisfactorily from both sides of BCPs. Georgia initiated several road infrastructure projects to complete construction

of highway till all BCP's and place truck parking areas, maintenance points across the highway in order to fully satisfy traffic demand that is rising year by year.
Georgian road infrastructure mostly satisfies relevant SITCIN indicators requirements: a ratio of international roads, length of dual carriageway and IRI rating, but remains challenge length of international roads with design speed of at least 100 km/h, also there is no sufficient service facilities along international roads and tunnel management systems are not enough developed.

Rail transport
Both governmental and private stakeholders provided detailed and useful data for comparing road and rail conditions, availability, quality and safety of the transport infrastructure in the country. Rail infrastructure is in normal condition from the view of safety and security, but it needs improvement in quantity and condition of rolling stocks that is not satisfactory even for current rail traffic.
The Georgian railway infrastructure mostly satisfies relevant SITCIN indicators requirements: length of international and supplementary railway lines (including length of railway lines with at least two tracks), GR is participant of 11 different international corridors (2 Middle corridor(including BTK), south-west, lapis lazuli, Viking, Turkmenistan-Black sea, CAREC number 2 Corridor, TRACECA, TEN-T Eastern Partnership Network extension, OSJD, UN ESCAP Trans Asian Railway Network). GR has the main challenge regarding overaged and insufficient rolling stocks fleet, low commercial speed and unsecured siding at rail BCPs and international rail lines.

Safety and Security

General
Collected data shows that safety and security are at a normal level, road signs and signals exist both on international and local roads. Road traffic rules are also strengthening but the number of road accidents remains problematic.
Adequate regulations on the following training and examinations for drivers are in place in Georgia: minimum requirements of curriculum and qualifications of professional driving establishments (certificate of Professional Competence), requirements for obtaining a driving permit, including contents and procedure of both theoretical and practical exams, and requirements for training and certification for driving instructors and retaining for professional drivers. Also, equipment of all vehicles participating in international transportation with tachographs is mandatory.

Transport of perishable foodstuffs and dangerous goods

General
Georgia has significant improvements in the control and coordination of transportation of dangerous goods both by road and rail transport modes. Governmental agencies from Georgia and neighbouring countries actively cooperate in controlling of transport documentation, permissions, marking and labelling of packaging following the requirements based on the classification of dangerous goods for transport.
Collecting data for this indicator was a bit complicated because the Georgian government facilitates the transportation of perishable foodstuffs, but private companies have problems at BCP's from adjoining countries. Also, officially Georgia is part of the ATP convention, but there is no responsible public agency who can answer if the convention requirements are harmonized with the national legislation or not.

Classification, marking and labelling of packaging, placarding and marking of containers and vehicles, required documentation of dangerous goods for transport, also, procedures for approval and revocation of approval of inspection bodies in Georgia are in accordance with the internationally agreed provisions.

Intermodality

General
The geographical location of Georgia gives a wide choice for transportation intermodality while moving cargo between Europe, Central Asia, Caucasus. Multimodal/intermodal/combined transportation is well implemented on both road and rail transport and share of containerized cargo is rising year by year to the Georgian, Armenian and Azerbaijan directions, when cargo movement to Central Asian direction is mainly performed by multimodal means (Reloading cargo from containers into rail wagons).
National law adheres to global intermodal transport agreement, but the share of multimodal, intermodal and combined cargo transported by road transport remains low in Georgia – 21% (when more than 78% of railway transportations are multimodal, intermodal or combined). Containerisation process is in progress, but it holds a still small part of total cargo transportation. At present, the Georgian railway transports only 18% of total cargo by containers, and there is no data on share containerized cargo transported by road transport. Shipping lines refuse to send their containers in the Central Asian countries because of two main reasons: on the one hand, it is risky to return empty containers and on the other hand, the return time is huge and related to delays and storage and demurrage charges.

Environment

General
Data collection shows that Georgia has the worst results regarding environment due to the age of road and rail fleet (cars, buses, trucks, rolling stocks and locomotives), level of stringency of national vehicle emission legislation, regulations on CO2 and noise emissions, implementation of technical adaptation measures in road and rail transport, number of alternative fuel road vehicles, etc.
It must be noted that Georgia is progressing towards a higher share of alternative fuel vehicles among total fleet by simplification of registration procedures: registration of EVs is free of charge.

5.2. Recommendations

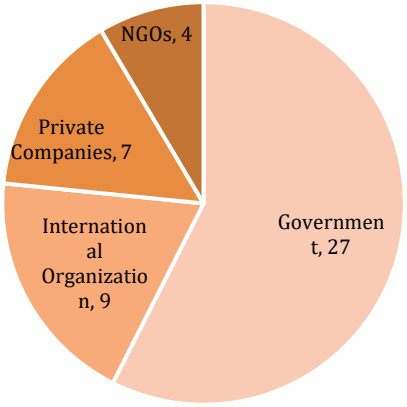
Recommendations are divided by 4 main pillars: (1) Transport policy, (2) Facilitation, procedures and institutions, (3) Infrastructure, and (4) Environment, Safety and Security.

In each pillar recommendations are addressed to 4 main shareholders:

1. Government and its agencies (G)
2. International organizations (I)
3. Transport business – private companies and relevant associations (P)
4. Non-governmental organizations (N)

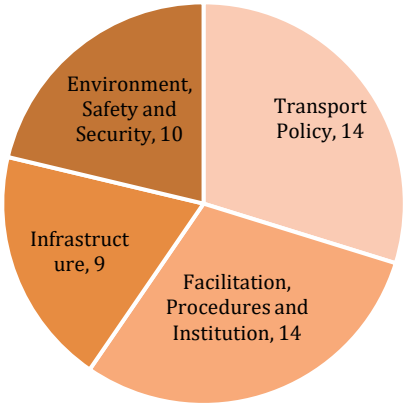
Based on SITCIN data analysis, specific recommendations are formulated and addressed to the relevant governmental and non-governmental stakeholders, out of which 27 are for the public agencies, 9 – for international organizations, 7 – for the private sector and 4 for NGOs.

Figure 8: Recommendations divided by stakeholders



Recommendations are divided by 4 pillars as follows: Transport policy (14), Facilitation, procedures and institutions (14), Infrastructure (9) and Environment, Safety and Security (10).

Figure 9: Recommendations divided by main pillars



Transport Policy

G *Considering requirements of the Association Agreement between EU and Georgia (transport-related EU directives and regulations under DCFTA), the Georgian Railway should finalize the separation of railway undertakings (including financial*

	independence) in the next couple of years and complete legislative changes to ensure open access of private operators on the Georgian railway network.
I	*Considering that political approaches regarding trade and transport of some neighbour countries are not predictable and stable, relevant international organizations (e.g. UN, WTO) should activate the necessary tools to prevent such instability in the region to ensure a business-friendly environment for international and national transport, logistics and trade companies.*
P	*The private sector should consider threats coming from unstable trade partners and diversify their business using alternative reliable transport routes.*
G I	*The government of Georgia should negotiate with border crossing authorities of the neighbour countries to expand customs clearance working hours at adjoining BCPs to ensure efficient transport connectivity of the region. In this process international organizations should have their contribution to support joint regional transport and border crossing facilitation projects.*
G P N	*The relevant governmental organizations should arrange discussions with the private sector and NGO representatives prior to the adoption of transport-related new legislation, regulations or policy. Private companies and NGOs, on their side, should ensure active involvement and cooperation in the transport policy development process.*
G	*The Georgian Railway, the Roads Department and the Customs Agency should develop a more interactive and fast information exchange system considering the needs of the private sector to have more flexible and timely public services.*
G	*The Ministry of Environmental Protection and Agriculture of Georgia should review national legislation and analyse if it is harmonized with the ATP requirements regarding the list of perishable foodstuffs and corresponding transport conditions, requirements for testing and approval, requirements for classification of special equipment, harmonization of a certificate of compliance.*
G	*The Roads Department should ensure the existence of application of tunnel categorization based on the internationally agreed rules and availability and free access of relevant information on tunnel classification (including road signs and signals, notifications of tunnel prohibitions/restrictions and alternative routes).*
G	*Requirements for construction, testing and approval of packaging, tank and bulk containers based on international agreed rules are in the process of elaboration and the Land Transport Agency should timely finalize the document.*
G	*The government of Georgia, by active involvement of the relevant state authorities, should ensure effective enforcement of all requirements of legislation that are in force at present.*
I	*UNECE should ensure periodic evaluation of SITCIN and support effective cooperation between member countries to facilitate connectivity of inland transport.*

Facilitation, procedures and institutions

G	*Revenue service should continue negotiations with adjoining border-crossing authorities from the neighbour countries (from Azerbaijan and Armenia) to establish bilateral one-stop technology at adjoining BCPs and improve coordination and delegation mechanism.*
G	*The Ministry of Internal Affairs in cooperation with the Land Transport Agency and the Revenue Service should develop a fleet management system, whereby vehicles can be tracked from a Traffic Control Centre using GPS navigation devices together with communication facilities and digital cartography.*

I P	*International organizations, namely UN, should facilitate inland transport connectivity improvement between the Caucasus and the Central Asian countries to establish common platforms and joint systems to give opportunity to private companies, including shipping lines to send their containers in the Central Asian countries, to minimise risk to lost empty containers, artificial delays and extra charges (storage and demurrage).* *International organizations should organise necessary workshops for relevant state authorities and private companies with an aim to share the latest tendencies and guidelines of the transport industry.*
G	*At present, traffic at BCPs is separated for vehicles under cover of valid international customs transit documents (such as TIR) only in some cases. The Revenue Service should ensure the implementation of such separation at Georgian BCPs as needed.*
G	*Traffic management systems and control centre are provided only for 34% of long tunnels and tunnels with heavy traffic and they are equipped with emergency exits and access for emergency services and tunnel equipment as per AGR. In the future the Roads Department should cover all such tunnels with the relevant tunnel management systems and the provisions of safety equipment.*
G	*The Ministry of Internal Affairs in coordination with other relevant state agencies should develop following information and communication support systems: Telecommunication Networks (TLC), Systems for automatically locating vehicles (AVLS), Protocols for the electronic exchange of data (Electronic Data Interchange/EDI), Cartographic databases and information systems providing geographical data (Geographic Information System/GIS), Systems for the collection of traffic data, including Weigh-In-Motion (WIM) and systems for the automatic classification of vehicles, Systems for counting the number of users of a public transport system (Automatic Passenger Counters/APC).*
P	*Around, 4% of trucks are equipped with GPS systems at present. Private companies should consider equipping owned vehicles by track and trace devices to improve an efficiency of truck management.*
G	*The international railway network in Georgia is equipped with the manually controlled block. To improve operations efficiency, the Georgian Railway should target to apply a moving block signalling system on the majority of the international railway network.*
P I	*At present, the average waiting time for road vehicles, defined as the waiting time for road vehicles to deliver or collect loading units at rail terminals, takes 20-25 minutes (in peak hours it may take 35-40 minutes). Private companies, by relevant business associations and international organizations support, should elaborate and implement efficient management platforms to reduce such waiting time.*
P I N	*Private companies, Georgian International Road Carriers Association (GIRCA), Association of Freight Forwarders of Georgia, international organizations and NGOs should actively cooperate to provide necessary short-term trainings and long-term education courses related to the transport connectivity.*

Infrastructure

G	*The government of Georgia, particularly the Ministry of Regional Development and Infrastructure and the Ministry of Finance should continue active cooperation with International Financial Institutions to negotiate necessary loans to finalize construction of East-West Highway and including all necessary infrastructure to develop Electronic Toll Collection (ETC) systems in Georgia. The Roads Department should guarantee effective supervision of the tendering and construction process to*

	ensure safety and quality of road infrastructure. After completion of the East-West highway, Georgia should have more international road network with design speeds of at least 100 km/h.
G	*The Georgian Railway needs fundamental renovation of rolling stock and locomotive overaged fleet to ensure safety and ability to operate. This, together with relevant infrastructure development, should increase the commercial speed of international railway lines as well.*
G	*The Georgian Railway should develop secured sidings at railway BCPs for cargo security.*
I	*European Union Agency for Railways (ERA) in closy coordination with the government of Georgia and the Georgian Railway, should support the integration process of the Georgian Railway in the Pan-European railway network, including technical and legislative harmonization. It should also support the Baku-Tbilisi-Kars project development process and support three-lateral cooperation between Georgian, Azerbaijan and Turkish railways to ensure inland connectivity between EU and Central Asian countries.*
G	*The Roads department in parallel with ETC development should actively work to change road maintenance approach and set Performance Based systems and issue Performance Based Contracts (PBC) to ensure approximation of roads and its infrastructure conditions with international standards.*
G	*Revenue Service should develop appropriate free parking and terminal facilities with support services at road BCPs open for international goods traffic and cooperate with border crossing authorities from the neighbour countries to ensure the same infrastructure from their sides as well.*
G	*At present, three service facilities and several small-sized stop and rest areas operates along E60 (East-West Highway). In the future, in parallel with the construction of the highway, such service facilities should be constructed along all international roads by the Roads Department and the capacity of such rest and service areas should satisfy existing and future road traffic needs. It is notable, that the need from private companies on such infrastructure is very high.*
G	*Revenue Service should continue modernization of equipment and increase staff resources at secondary BCP's in order to avoid queuing issues.*
N	*Relevant NGOs / watchdog organization should actively control public tenders and construction processes of infrastructure projects to avoid any risk of corruption, fraud, nepotism and alerting the public when they detect actions that go against the public interests.*

Environment, Safety and Security

G	*The Land Transport Agency should finalize the elaboration of national vehicle regulations for new vehicles in accordance with the international agreements.*
I	*International organizations (UN) should continue active contribution towards peacekeeping in the region to avoid any international threat on the security of the international route: to keep secured rail and road infrastructure from an unstable environment.*
N	*Regularly conduct road safety research and improve public awareness on road safety and its importance.*
G	*The Ministry of Internal Affairs and the Ministry of Economy and Sustainable Development should continue approximation of its legislation in the area of technical safety of light vehicles, trucks and buses with the EU acquis according to provided*

	timeframe in Association Agreement. In this regard, the government of Georgia should do its best to avoid any risk of corruption. The Ministry of Economy and Sustainable Development should continue further improvement of periodic technical inspection requirement criteria in accordance to the EU acquis provided in AA. In this regard, the government of Georgia should do its best to avoid any risk of corruption
I *P*	*Relevant international organizations, oriented on climate change, environmental protection and sustainable energy, should actively cooperate with the private sector to promote and improve their awareness on benefits and advantages of the usage of vehicles on alternative fuel and especially EV.*
G	*The Ministry of Environmental Protection and Agriculture of Georgia should finalize the national vehicle emission legislation/standards concerning the minimum emission standards for new vehicles and step-by-step require Euro 6 (or equivalent) for new vehicles, combined with the Real Driving Emissions (RDE) and the Worldwide Harmonized Light Vehicle Test Procedure (WLTP).* *Also, approximate national law to measure CO2 emissions through WLTP or New European Driving Cycle (NEDC) or equivalent. In this regard, vehicle penalties/fees should be applicable based on the measured CO2 emission level. Also, Land Transport Agency should review the application of noise regulations, restricting the amount/duration/source of noises: tire combined with wet grip, audible warning signals (horn), Acoustic Vehicle Alerting Systems (AVAS) for electric vehicles.*
G	*The Georgian Railway should plan technical adaptation measures to project climate change impacts on the railway transport system and develop them.*
G	*In aim to have more environmentally friendly and sustainable transport services for passengers, the Georgian Railway is recommended to improve its passenger infrastructure, widen service network for international and local passengers as well and ensure a modal shift of passenger transportation from road to railway.*
G	*The Ministry of Environmental Protection and Agriculture in cooperation with the Roads Department should develop and implement technical adaptation measures to project climate change impacts on the road transport system and propose adaptation options.*