

1. RISK RELATED GLOBAL INDICES

Index	Data Highlights	Sources
INFORM Risk Index	Overall Risk: 3.5 (Medium – rank 91 of 191) Hazard & Exposure: 2.6 (rank 85 of 191) Natural Hazard: 4.5 Human Hazard: 0.1 Vulnerability: 5 (rank 51 of 191) Socio-Economic Vulnerability: 2.9 Vulnerable Groups: 6.6 Lack of Coping Capacity: 3.2 (rank 133 of 191) Institutional: 4.4 Infrastructure: 1.7	DRMKC INFORM Risk Index, 2023 Dataset Country Risk Profile
World Risk Index (WRI)	Overall Risk: 3.79 (rank 104 of 192) Exposure: 0.73 Vulnerability: 19.67 Susceptibility: 19.29 Lack of Coping Capacities: 8.78 Lack of Adaptive Capacities: 44.96	World Risk Report, 2022 Statistical Table
Human Development Index (HDI)	HDI Value: 0.802 (Very High Human Development) Rank: 64 of 191	Human Development Index, 2021 (UNDP)
Gender Inequality Index (GII)	GII value: 0.280 Rank: 66 of 191	Human Development Index, 2021 (UNDP) Statistical Table
Global Health Security Index (GHS)	GHS Index Score: 52.6 Rank: 40 of 195	GHS Full Report, 2021 GHS Excel Model

2. RISK COMPONENTS: HAZARD – EXPOSURE – VULNERABILITY

Hazard		Risk Level	Data Highlights	Sources
Cluster	Specific			
Meteorological and Hydrological				
Flood	Fluvial MH0007	High	Potentially damaging and life-threatening river floods are expected to occur at least once in the next 10 years. The present hazard level may increase in the future due to the effects of climate change. As of 2010, assuming standards of protection up to a 1 in 25-year event, the population annually affected by riverine flooding in	Think Hazard WB Climate Change

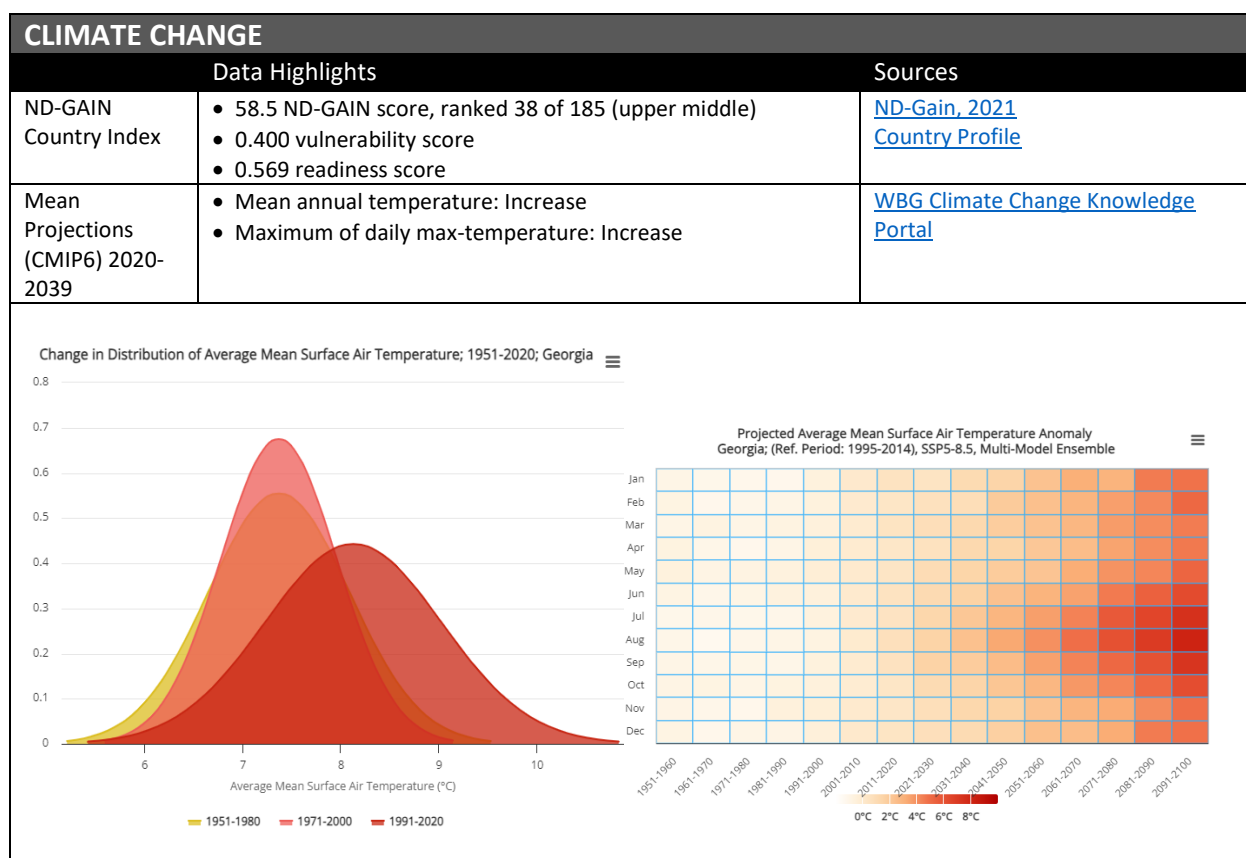
			Georgia is estimated at 15,000 and the expected annual damages at \$73 million. Socio-economic development and climate change are both expected to increase these figures. River flooding is also likely to increase sediment and affect dam management.	Knowledge Portal
Flood	Urban Flood	High	Urban flood hazard is classified as high based on modeled flood information currently available. This means that potentially damaging and life-threatening urban floods are expected to occur at least once in the next 10 years.	Think Hazard
Temperature-Related	Heatwave MH0047	High	Extreme heat hazard is classified as high based on modeled heat information currently available. This means that prolonged exposure to extreme heat, resulting in heat stress, is expected to occur at least once in the next five years. Since the 1960s, Georgia has experienced increased temperatures of 0.3°C in western areas and 0.4–0.5°C in eastern areas. A marked increase in hot days has been observed, particularly in the lowlands, and in Tbilisi the number of days per year when the heat index reached dangerous levels increased by 14 in the period 1986–2010, relative to its 1961–1985 baseline.	Think Hazard WB Climate Change Knowledge Portal
Precipitation-Related	Water Scarcity	Low	Water scarcity is classified as low according to the information that is currently available. This means that there is a 1% chance drought will occur in the coming 10 years.	Think Hazard
Terrestrial	Landslide MH0051	High	Landslide susceptibility is classified as high. This area has rainfall patterns, terrain slope, geology, soil, land cover and (potentially) earthquakes that make localized landslides a frequent hazard phenomenon.	Think Hazard
Geohazard				
Seismic	Earthquake	High	Earthquake hazard is classified as high according to the information that is currently available. This means that there is more than a 20% chance of potentially damaging earthquake shaking in your project area in the next 50 years. The Global Earthquake Model (GEM) Global Seismic Hazard Map (version 2018.1) depicts the geographic distribution of the Peak Ground Acceleration (PGA) with a 10% probability of being exceeded in 50 years, computed for reference rock conditions (shear wave velocity, VS30, of 760-800 m/s).	Think Hazard OpenQuake Map Viewer
Volcanic	Lava Flows GH0009	High	Volcanic hazard is classified as high according to the information that is currently available. This area is located at less than 50 km from a volcano for which a potentially damaging eruption has been recorded in the past 2,000 years and that future damaging eruptions are possible.	Think Hazard
Environmental				
Environmental Degradation	Wildfires EN0013	High	Wildfire hazard is classified as high according to the information that is currently available to this tool. This means that there is greater than a 50% chance of encountering weather that could support a significant wildfire that is likely to result in both life and property loss in any given year. Note that damage can not only occur due to direct flame and radiation exposure but may also include ember storm and low-level surface fire. In extreme fire weather events, strong winds and winds born debris may weaken the integrity of infrastructure. Modeled projections of future climate identify a likely increase in the frequency of fire weather occurrence in this region, including an increase in temperature and greater variance in rainfall. In areas already affected by wildfire hazard, the fire season is likely to increase in duration, and include a greater number of days with weather that could support fire spread because of longer periods without rain during fire seasons. Climate projections indicate that there could also be an increase in the severity of fire.	Think Hazard

Deforestation	Primary Forest Loss	--	From 2001 to 2022, Georgia lost 11.1 kha of tree cover, equivalent to a 0.35% decrease in tree cover since 2000. In Georgia from 2001 to 2022, 0.89% of tree cover loss occurred in areas where the dominant drivers of loss resulted in deforestation.	Global Forest Watch
Biological				
Infectious Diseases	COVID-19 (SARS-CoV-2)	--	In Georgia, from January 2020 to January 2024, there have been ,1855,289 confirmed cases of COVID-19 with 17,132 deaths, reported to WHO. As of 26 November 2023, a total of 2.74m vaccine doses have been administered.	WHO

EXPOSURE				
Data Highlights			Source	
Population + Communities	- Population: 3,980,000 (2021) - Pop. density (per km2): 53.3 (2021) - Population growth rate (average annual %): - 0.2% (2021) - Urban population (% of total population): 59% (2021) - Urban population growth rate (average annual %): - 0.7% (2015) - Life expectancy at birth (females/males, years): 77.9 / 69.1 (2021) - Population age distribution (0-14/60+ years old, %): 20.3% / 21.9% (2021) - International migrant stock (total/% of total pop.): 79.4 / 2.0% (2021) - Refugees and others of concern to UNHCR: 291 (2021)			UN data
Basic services, institutions, infrastructure	Population living in slums (% of urban population): 7% (2020)			World Bank Data
Natural Resources	- Surface area (km2): 69,700 km2 - Threatened species (number): 124 (2021) - Forested area (% of land area): 40.6% (2021) - Important sites for terrestrial biodiversity protected (%): 40.3% (2021)			UN data
Economy + livelihoods	- GDP (2021) - GDP (billion current US\$): 17,743 - growth rate (annual %, const. 2015 prices): 5.1% - per capita (current US\$): 4,439.3 - Economy (2021): - Agriculture (% of Gross Value Added): 7.2% - Industry (% of GVA): 23% - Services and other activity (% of GVA): 69.8% - Health (2021) - Current expenditure (% of GDP): 7% (2019)			UN data WHO

VULNERABILITY				
Data Highlights			Sources	
Communities + groups	Prevalence of disability: 3% Employment: Employment-to-Population Ratio: 57%, Unemployment rate: 11.3%			IDFI, 2015 WB/ILO, 2023 IDMC, 2022

	• Internally Displaced People (IDPs): 308,000 • Gender Inequality: GII value: 0.280 • Literacy (15 years and older): Adult Literacy: 100%, Female Literacy Rate: 100%, Male Literacy Rate: 100%	UNDP, 2021 WB, 2017
Robustness of basic services + institutions + infrastructure	• Corruption Perceptions Index: Score: 53/100, Rank: 49 of 180 • Access to electricity (% of population): 100.0% • Individuals using the Internet (% of population): 79% • Water, sanitation and hygiene (WASH) ○ 69% of population has access to safely managed drinking water ○ 24% of population has access to at safely managed sanitation services	Transparency International, 2022 World Bank, 2021 UN Water, 2022



3. CCA STANDARD ANALYSIS SECTIONS

CCA SECTION	RISK FOCUS	Possible RiX Datasets
Economic Transformation Analysis	<u>Structure of economy</u> • Agriculture is the major contributor to GDP followed by industries and services. • Top exports copper ores and concentrates, ferro-silico-manganese, wine, automobiles and mineral waters and aerated waters.	WBG Climate Change Knowledge Portal WB WITS

	• Top products imported include petroleum oils, copper ores and concentrates, automobiles, other medicaments of mixed or unmixed products and natural gas in gaseous state. <u>Key socio-economic sectors and risks affected by climate change and disasters</u> • Georgia has a high degree of risk to physical hazard such as earthquakes, droughts, and floods. • The most vulnerable sectors are agriculture, water, tourism, and forestry. • Climate change is expected to impact food production via direct and indirect effects on crop growth processes. • Georgia's domestic electricity generation is heavily reliant on hydropower, which accounted for 78% of electricity generated in the country in 2015. River flows are expected to fall in the future during the summer months, which would reduce potential power generation during the months of peak demand. • An increased frequency of severe storms along the coastal zones are likely to further washout beaches and flood banks along the seashore. An increased risk of flash floods and mudflows in coastal zone, as a result of abundance of rainfall in summer, is especially dangerous for tourism sites located in mountain zone or settled along the riverbanks.	WB Country Overview Georgia WB Climate Risk Country Profile
Social development & exclusion analysis	• Georgia has been growing faster than other upper middle-income countries, and GNI per capita increased from \$3,048 in 2010 to \$5,073 in 2022 (constant 2015 USD). The poverty rate (measured by the national poverty line) was more than halved over the same period. • Two projects were approved on March 24, 2023: the first in a programmatic Development Policy Operation (DPO) series focused on Green, Resilient, and Inclusive Development (\$50 million); and the Georgia Resilient Agriculture, Irrigation, and Land Project (\$75 million). These two projects indicate a more pronounced focus on supporting Georgia's efforts to address the country's climate-related development challenges. • Due to the war between Russia and Ukraine a faster reduction in money inflows, a decline in tourism inflows, further monetary tightening in advanced economies, or an increase in global commodity prices, could hinder growth, put pressure on the currency, and increase debt levels and financing needs. • The data show that violence against women (VAW) and domestic violence (DV) remain a prevalent problem in Georgia. • Adoption of the Law on the Rights of Persons with Disabilities in 2020 was a positive step towards protecting and ensuring the rights of PWDs and their well-being and inclusion into public life. Georgia also established inclusive education and provided social assistance and healthcare programmes for those in need.	WB Country Overview Georgia UN Women UNDP
Environment and climate change	<u>Climate Risk Projections</u> • Temperature changes in Georgia are projected to increase significantly by the end of the 21st century under all four emissions pathways. These increases are expected to be greater than the global averages projected by the IPCC. • Projections do indicate that western and northern areas of the country, especially areas along the Black Sea, are likely to experience a slight increase in days with rainfall greater than 20 mm, while eastern and southern areas are likely to experience a reduction in these days.	WB Climate Risk Country Profile The World Bank

	• Climate change will further exacerbate environmental degradation, particularly in Georgia’s coastal zones. • Georgia is at risk of hydrometeorological hazards and natural disasters. Frequent natural disasters include landslides, floods, flash-flooding, mudflows, droughts, avalanches, heavy winds and storms. These risks are in part due to the country’s complex mountainous relief but are expected to be exacerbated and heightened through expected climate changes. The projected impacts from climate change make Georgia increasingly vulnerable to heavy precipitation, landslides, earthquakes, and floods. • Climate change is also expected to increase risks and severity of natural disasters in Georgia. In recent years, the number of natural disasters has increased nearly three times and, in many cases, have been considered as catastrophic, causing fatalities and leading to significant economic losses. • The Government of Georgia unveiled its first-ever Long-Term Low Emission Development Strategy (Lt-LEDS) 2050, which was officially adopted on 24 April 2023. The Lt-LEDS sets the stage for Georgia’s carbon-neutral future and will be instrumental in updating the national Climate Action Plan 2023-2025, outlining a clear roadmap towards sustainable, low-emission growth.	WBG Climate Change Knowledge Portal UNDP Georgia
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Governance and Political Analysis	The Ministry of Environmental Protection and Natural Resources of Georgia is responsible for climate change, environmental protection and sustainable use of natural resources. The Service for Climate Change within the Ministry is responsible for the assessment of impacts and risks of climate change and coordinates the preparation of adaptation strategies and action plans and their implementation. The role of departmental ministries (Energy, Agriculture, Labor, Health and Social Affairs) is key for the assessment of various sectors' vulnerability to climate change for the process of preparation of adaptation measures. Georgia's national strategies and plans: • Georgia's Third National Communication to the UN Framework Convention on Climate Change. • National Climate Vulnerability Assessment produced with EU assistance, provides recommendations to civil society and decision makers on possible approaches to take toward climate change adaptation. • Strategy for Agriculture Development for 2015-2020. The development of a disaster risk information system is underway, aiming to provide critical information about existing threats and risks to various government agencies and the population. At this stage, the system is in testing mode. Its implementation will be carried out together with the Emergency Management Service. Based on hazard maps and the socio-economic vulnerability assessment, the most vulnerable communities to the hazards are being identified and relevant measures are being developed and implemented. The programme will identify the 100 most vulnerable communities. At this stage, 15 vulnerable communities have already been identified in the Supsa, Natanebi, and Kintrishi river basins, where developing risk management plans and implementing priority measures are planned, including purchase and installation of sirens, implementation of non-structural bio-engineering measures, such as afforestation and riverbed cleaning. In 2020, Georgia updated its National Determined Contribution (NDC) with an increased ambition compared to the INDC 2015. According to the updated NDC, Georgia unconditionally commits to reduce its GHG emissions by 35% below the reference year of 1990. In addition to an updated NDC, Georgia has developed a 2030 Climate Change Strategy and 2021-2023 Action Plan (CSAP). CSAP serves as an underlying strategy and short-term action plan for implementing the updated NDC. In addition, Georgia is finalizing its Long-term Low Emission Development Strategy, currently undergoing consultations within the Government of Georgia. In 2021 Georgia developed documents on climate mainstreaming in the energy, agriculture and health sectors.	WB Country Overview Georgia USAID Climate Risk Profile UNDP EU4Climate Programme
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4. SDG-BASED RISK AREAS

SDG Risk Area	Risk Factors	Source + Comments
Displacement and migration 16/17	- Internally displaced persons, new displacement associated with disasters (number of cases): 430 - International migrant stock (000/% of total pop.): 79.4/2.0	UN data World Bank data
Economic Stability 8/17	- GDP per capita (current US\$): 6,675.0 in 2022 - Inflation, consumer prices (annual %): 11.9 in 2022 - Country growth indicator: 15.72 in 2020 - Ease of Doing Business Rank: 7 - Trading Across Borders Rank: 45	World Bank data WB WITS
Environment and climate 12/13/14/15/17	Environmental Performance Index: Score 39.10 (Rank 103) Deforestation: In 2010, Georgia had 2.99 Mha of tree cover, extending over 43% of its land area. In 2022, it lost 291 ha of tree cover. Biodiversity: Between 2000 and 2013, the average Human Footprint score of Georgia increased. Water Ecosystem: 44% is the degree of implementation of integrated water resources management (SDG indicator 6.5.1, 2020) - Percentage of domestic wastewater safely treated: 49% (2022) - Annual Water stress: 5% of renewable water resources withdrawn	Environmental Performance Global Forest Watch map UN Water UN Biodiversity
Gender equality 1/2/4/5/6	- GII: Rank 66 out of 191 (very high human development), 0.280 GII (2021) - Total literacy rate (%) 15 years and older: 100 (2022) - Male literacy rate (%) 15 years and older: 100 - Female literacy rate (%) 15 years and older: 100	GII
Infrastructure social services 4/5/7/9/11/17	- Access to electricity (% of population): 100.0 in 2021 - Individuals using the Internet (per 100 inhabitants): 79 in 2022	World Bank data
Public health 3/17	- Global Health Security Index: 52.6 GHSI (2021), Rank 40 out of 195 - See Part 1- Basic Risk Data > Hazards > Biological	Full report Data set
Risk areas not covered by UNDRR: - Democratic space 16/17 - Internal security 16/17 - Justice and rule of law 16/17 - Political Stability 16/17 - Reg & global influences 16/17 - Social cohesion 1/5/10/17 - Food Security, agriculture & land 2/17		