Environmental Considerations

Landforms and Surface Structures: Georgia lies at the collision point of both the Eurasian and Arabian landmasses. Thus, a major earthquake ranks as Tbilisi’s largest threat. To negate the impact of the Caucasus Mountains, all humanitarian aid will arrive in Georgia via the Black Sea port of Batumi. All aid reaching Batumi will be airlifted from a nearby airport to the area of operations.

Bisecting the city into two east and west sections is the Mtkvari River. Spanning the length of the river are a series of foot and car bridges that link the two sections. The Mtkvari River serves as the major source of fresh water for the city. Bisecting the city into two east and west sections is the Mtkvari River. Spanning the length of the river are a series of foot and car bridges that link the two sections. The Mtkvari River serves as the major source of fresh water for the city.

Hydrology: The Zhinvali Reservoir serves as the major source of fresh water for the city. Bisecting the city into two east and west sections is the Mtkvari River. Spanning the length of the river are a series of foot and car bridges that link the two sections. The Mtkvari River serves as the major source of fresh water for the city.

A geographic analysis of the operational environment in Tbilisi, Georgia

Top Three Hazards:

1. Earthquake: A magnitude seven or higher earthquake in and around the Tbilisi area within the next ten years serves as the foremost natural threat. An earthquake of this magnitude can destroy bridges, buildings, rail lines, roads, and dams within the area of operations.

2. Flooding: A magnitude seven earthquake can create fissures in the Zhinvali dam and evolve into a cascading hazard creating major flooding throughout the area. Oil pipelines to the south of the capital could be ruptured and produce both an energy crisis and environmental hazard in the study area.

3. Russian Invasion: As a result of a major earthquake, Georgia’s unstable political infrastructure and national security will be at risk. Since the nation will focus its attention on humanitarian relief and recovery, the threat of Russian incursion heightens. Given Tbilisi’s history of protests and riots against the government, peace-keeping operations must mirror any humanitarian operations to minimize the threat of violence in the city.

Mineral Resources: Georgia possesses some of the globe’s richest deposits of manganese. The Baku-Tbilisi-Ceyhan Pipeline (BTC) and South Caucasus Pipeline (SCP) are located in the south. These pipelines provide fuel for energy consumption. A geographic analysis of the operational environment in Tbilisi, Georgia

Cultural Considerations

Population: Tbilisi serves as the urban center of the country and comprises the largest concentration of people in Georgia at 1,114,000 million inhabitants: approximately 30% of the country. The city’s population density stands at approximately 1,500 people per sq/km. Most of Tbilisi’s population resides in the city center, along the Mtkvari River, numbering 3,300 people per sq/km. Russia may take advantage of the predicament and incite mass protests and riots against an already unpopular Georgian national government. Settled in the Tbilisi area and disrupt efforts.

Cultural Groups: 87% of Georgia’s population is ethnically Georgian, with the remaining 13% of the population consisting of Armenians, Azerbaijanis, and Russians. The Russian Federation’s attempts to reassert dominance over the country has empowered Abkhazian and Ossetian ethnic groups. As a result of the 2008 Russo-Georgian Wars, the autonomous states of Abkhazia and South Ossetia were created. Although neither a presence within the study area, the two semi-autonomous states may harbor Russian military forces and agents who intended to infiltrate the Tbilisi area and disrupt efforts.

Settlement Patterns/Land Usage: Since an earthquake may even incapacitate a meaningful component of Tbilisi’s medical infrastructure, medical operations may have to rely on mobile hospitals as the primary care centers. A 2011 study reviewed Georgian building codes and determined that they were outdated and found that the policy lacked codes for fire protection or Mechanical, Electrical, and Plumbing (MEP). The analysis also concluded that Georgia lacked knowledge relating to building design, materials, and construction which contributed to lower quality unsustainable buildings.

Conflict and Instability in Georgia 2018-2021

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