



Research Article

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Unearthing History: Underground Cities and Military Heritage in Albania and Europe

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Abstract

Bunkers in Albania are emblematic of the country's tumultuous past. With approximately 170,000 documented bunkers, each varying in spatial typology, geographical position, and structural features, these structures were built to shelter army troops and thwart foreign invasions (Kristo and Jojic, 2020). For nearly half a century, Albania's isolation encapsulated its people within a heavily guarded geography, creating a "living prison" where free movement was restricted, even within the country until the fall of the dictatorial regime. Bunkers were strategically placed both in natural landscapes and urban centers, often forming elaborate ensembles of three or more, and extending to tunnels within hills and mountains. This research aims to explore the potential relationships between these bunkers and foreign visitors or tourists in various contexts of their locations. Different typologies of bunkers can be found at the seaside, in valleys, and on mountains, reflecting strategies based on proximity to borders with Montenegro, Kosovo, Greece, Northern Macedonia, Italy and the Adriatic Sea. These strategic areas hold significant interests and values, the positioning of bunkers as unique examples and opportunities for alternative tourism in Albania. The military heritage and bunkers scattered across Eastern Europe stand as silent witnesses to a complex history shaped by conflicts, ideologies, and geopolitical shifts (Stiller, Dharmo, Aliaj and Kristo, 2019). These structures are remnants of an era defined by intense geopolitical tensions and the ever-present threat of military conflict, particularly during the Cold War. They reflect the diverse strategies and responses of different nations to these challenges, offering unique insights into the historical and cultural fabric of the region.

Keywords: History, underground cities, military heritage, Albania, Europe.

1. Introduction: Broader Eastern European Context of Underground Military Structures

For (Galviz et al., 2016) the so-called “global undergrounds” are places of hope, fear, work, memory and resistance. Regardless of their purpose, underground sheltering has been an ever-since goal in centuries for various civilisations (Reynolds, 2019). The phenomenon of underground military structures is a significant aspect of the Cold War era and beyond, in order to avoid hypothetical Hiroshimas (Monteyne, 2011) by reflecting the diverse military strategies and geopolitical concerns of various countries until the collapse of the Berlin Wall (Figure 2) separating two different “worlds”. While Albania’s extensive bunker-building program under Enver Hoxha was primarily focused on protecting the nation from perceived threats and maintaining a state of isolation, other European countries developed similar structures with different uses and purposes (Kristo and Jojic, 2020). These bunkers and underground facilities not only highlight the defensive strategies of their respective nations but also serve as important cultural and historical landmarks.



Figure 1 Collapse of the statue of dictator Enver Hoxha in Tirana

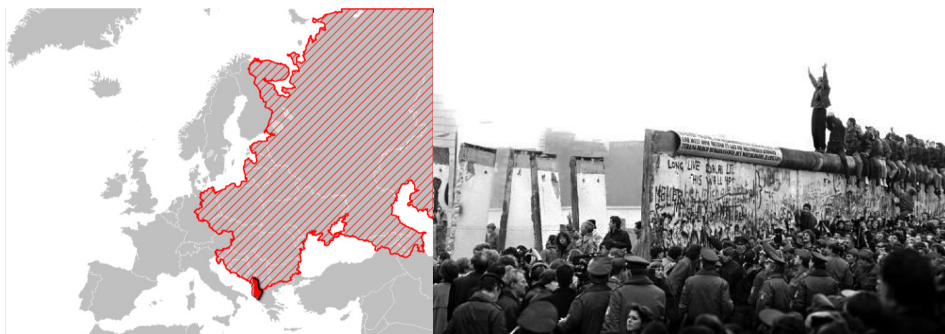


Figure 2 Separation between east and west and the Collapse of the Berlin Wall

1.1 Former Yugoslavia

Former Yugoslavia, with its complex history and geopolitical significance, hosts a range of military bunkers and underground structures from the Yugoslav era. These bunkers, often located in mountainous terrains, were constructed to provide strategic advantages and protection against both external and internal threats (Despot, 2015; Kulić, 2016).

Strategic defence: The bunkers in former Yugoslavia were designed to serve as defensive strongholds in the event of an invasion. The rugged terrain provided natural protection, which was further enhanced by the construction of fortified underground facilities (Filipović, 2019).

Civil defence: Some bunkers were intended to protect civilian populations during times of conflict. These structures included shelters equipped with essential supplies to sustain life during extended periods of siege or bombardment (Pejović & Mitrović, 2017).

Command and Control: Similar to Albania's Bunkart, many of these bunkers housed command and control centers to coordinate military operations and communications (Nikolić & Perović, 2018).

1.2 Switzerland

Switzerland's extensive network of bunkers (Figure 3), known as the Swiss National Redoubt, reflects the country's long-standing policy of neutrality and defence (Virilio, 1993). These bunkers were meticulously planned and integrated into the Swiss landscape to ensure national security and sovereignty (Coenen & De Groote, 2018).

National Redoubt: The Swiss National Redoubt was a comprehensive defence strategy that involved fortifying the mountainous regions of Switzerland. Bunkers were built to serve as bases for guerrilla warfare, making it difficult for invaders to control the country (Coenen & De Groote, 2018).

Civilian Protection: Many Swiss bunkers were designed to protect civilian populations. Public buildings, including schools and hospitals, were equipped with shelters to provide refuge in case of aerial attacks (Coenen & De Groote, 2018).

Military Readiness: The bunkers included facilities for storing weapons and ammunition, as well as living quarters for troops. This ensured that Switzerland could maintain military readiness and sustain prolonged defensive operations (Coenen & De Groote, 2018).

1.3 Comparative Analysis

While Albania's bunkers were largely built under the autocratic vision of Enver Hoxha to enforce isolation and fortify against a wide range of perceived threats, the bunkers in former Yugoslavia, and Switzerland had varied and multifaceted purposes:

Albania: The primary focus was on isolation and self-defence, with an emphasis on

protecting the regime and its ideology. The bunkers were symbols of paranoia and extreme militarization (Bowman, 2013; Carter, 2009).

Former Yugoslavia: The emphasis was on strategic defence and civil protection in a region marked by ethnic conflicts and political instability. Bunkers served both military and civilian purposes (Filipović, 2019; Kulić, 2016).

Switzerland: The bunkers were part of a well-planned national defence strategy aimed at ensuring neutrality and sovereignty. They provided refuge for civilians and readiness for military operations (Coenen & De Groote, 2018). They present unique examples of transforming them for cultural, touristic and educational purposes (Figure 3).

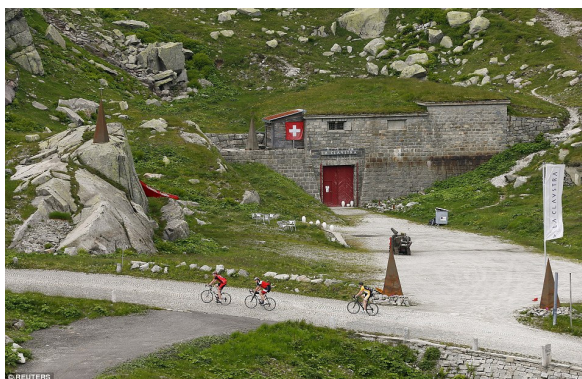


Figure 3 Hotel La Claustra, based in a former Swiss army bunker on the St Gotthard Mountain pass

2. Albania: A Case Study

In Albania, the extensive network of bunkers constructed under Enver Hoxha's regime serves as a prominent example of military heritage. Hoxha's regime, characterized by extreme isolationism and a pervasive sense of imminent threat, led to the construction of approximately 170,000 bunkers across the country (Abrahams, 2015; Bowman, 2013).

The analysis of Albania's extensive network of bunkers reveals their critical role in the nation's defence strategy during the Cold War. Constructed under the regime of Enver Hoxha, these bunkers were a fundamental component of Albania's military planning (Stiller, Dharmo, Aliaj and Kristo, 2019). Hoxha's government, deeply influenced by a sense of perpetual threat from both Western and Eastern blocs, embarked on an ambitious project to fortify the country against potential invasions (Prifti, 1999). The construction of approximately 170,000 bunkers across Albania by its dictator Enver Hoxha (Figure 4) was not merely a defensive measure but also a reflection of the country's broader geopolitical stance and internal policies (Bowman, 2013).



Figure 4 Enver Hoxha's statue in the center of the Pyramid, the museum dedicated to him after his death.

2.1 Protective Shelters

The primary function of these bunkers was to serve as protective shelters for the military and civilians in the event of an attack. The bunkers were designed to withstand various forms of military assault, including aerial bombings and ground invasions (Carter, 2009). They were strategically located to maximize defensive capabilities, covering key points such as borders, coastal areas, and critical infrastructure (Bowman, 2013). The diverse typology of the bunkers—ranging from small, single-person shelters to large underground complexes—illustrates the comprehensive nature of this defence strategy (Milne, 2014). Each type of bunker was tailored to specific needs and environmental conditions, ensuring that every part of the country was fortified against potential threats (Prifti, 1999).

Beyond their practical military use, the bunkers symbolized Albania's intense isolation during the Cold War from West to East (Figure 5) and from South to North (Figure 6). Hoxha's regime pursued a policy of self-reliance and extreme isolationism,

severing ties with both the Soviet Union and China after initial alliances (Abrahams, 2015). This political isolation was mirrored in the physical landscape of the country, with the bunkers standing as tangible manifestations of the regime's paranoia and distrust of external powers (Bowman, 2013). The construction of such a vast network of fortifications was a clear statement of the regime's commitment to maintaining Albania's sovereignty and independence at all costs, even if it meant isolating its population from the rest of the world (Carter, 2009).



Figure 5 Bunkers in the South of Albania



Figure 6 Bunkers in the village of Vermosh, Northern Albania.

2.2 Militarization of Society

The bunkers also epitomize the militarization of Albanian society under Hoxha's rule. The pervasive presence of these structures in everyday life underscored the regime's emphasis on constant vigilance and readiness for war (Abrahams, 2015). Schools, workplaces, and homes were all situated in proximity to bunkers, integrating the military mindset into the daily lives of Albanian citizens (Bowman, 2013). The regime promoted the idea that every citizen had a role to play in the defence of the nation, with bunkers serving as a constant reminder of this duty (Carter, 2009).

The psychological impact of the bunkers on the Albanian population cannot be overstated. These structures fostered a climate of fear and suspicion, reinforcing the regime's narrative of external threats and internal vigilance (Abrahams, 2015). The omnipresence of bunkers (Figure 7) contributed to a sense of living in a "fortress state," where security and defence were paramount (Bowman, 2013). This pervasive atmosphere of militarization and isolation shaped the national psyche, influencing societal attitudes and behaviors long after the fall of Hoxha's regime (Carter, 2009).



Figure 7 Bunkers in the Sharra Cemetery

2.3 Legacy and Preservation

Today, these bunkers stand as historical artefacts, offering insights into the Cold War era and Albania's unique position within it. They serve as educational tools, helping current and future generations understand the complexities of Albania's political and military history (Pettifer & Vickers, 2007). Efforts to preserve and repurpose these bunkers for tourism and cultural heritage reflect a broader recognition of their historical significance (Milne, 2014). By transforming these relics of fear and isolation into sites of learning and remembrance, Albania can reconcile with its past and promote a deeper understanding of its history (Vickers, 2001).

3. Notable Examples of Albanian Bunkers



Figure 8 Kukës Masterplan Model

3.1 Kukes: Strategic Importance of Underground Bunkers

Kukes (Figure 8), situated in the north-eastern region of Albania, holds a significant strategic position due to its proximity to the Kosovo border (Prifti, 1999). This area has historically been a critical juncture, both geographically and politically. The mountainous terrain and border location have made Kukes a focal point during periods of conflict and political instability, particularly during the Balkan conflicts and the Kosovo War in the late 1990s (Abrahams, 2015). The underground bunkers in Kukes are a testament of the strategic importance of this area, serving as fortifications designed to protect against incursions and maintain control over this volatile border region (Bowman, 2013). Its underground facilities can be described as an intent to shelter an entire city as (Ovenden, 2020) defined the similar facilities in Helsinki.

3.1.1 Historical Background

During the Cold War, Albania, under the regime of Enver Hoxha, was acutely aware of its geopolitical vulnerabilities (Carter, 2009). The construction of bunkers in Kukes (Figure 9) was part of a broader national strategy to fortify border areas against potential invasions (Prifti, 1999). These bunkers were built not only to defend against external threats from neighbouring countries but also to exert control over the border and manage internal security (Bowman, 2013). The placement of these bunkers reflects the historical tensions and the need for a robust defensive posture in a region frequently affected by political upheavals and military conflicts (Abrahams, 2015).



Figure 9 Entrance to the Kukës Underground Bunkers

3.1.2 Architectural and Structural Features

The bunkers in Kukes vary in design, size, and complexity, reflecting their multiple intended uses (Milne, 2014). Some are small, single-person structures designed for quick access and immediate defence, while others are larger, multi-room facilities (Figure 10) capable of housing several soldiers and storing weapons and supplies (Bowman, 2013). Many of these bunkers are interconnected by underground tunnels, allowing for secure movement and communication between different defensive positions (Carter, 2009). This network of bunkers and tunnels exemplifies the intricate military planning and engineering efforts undertaken to ensure the area's defence (Prifti, 1999).

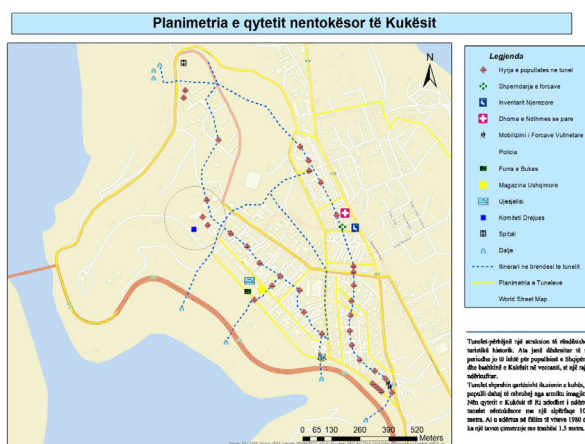


Figure 10 Entrance to the Underground “City” of Kukës

3.1.3 Role During the Kosovo War

Kukes gained international attention during the Kosovo War (1998-1999) when it served as a crucial refuge for ethnic Albanian refugees fleeing the conflict (Abrahams, 2015). The existing bunkers and underground facilities in Kukes were repurposed to provide shelter (Figure 11) and logistical support to the influx of refugees (Pettifer & Vickers, 2007). This period highlighted the practical utility of these structures beyond their original military intent, showcasing their adaptability in times of humanitarian crisis (Bowman, 2013).

3.1.4 Contemporary Significance

Today, the bunkers of Kukes remain as poignant reminders of the region's turbulent past (Vickers, 2001). They are historical artefacts that offer valuable insights into the military strategies and geopolitical realities of the Cold War era (Bowman, 2013). Efforts to document and preserve these structures have been undertaken to recognize their historical significance and potential as cultural heritage sites (Carter, 2009).



Figure 11 Interior spaces of the Underground "City" of Kukës

3.1.5 Tourism and Cultural Heritage

In recent years, there has been growing interest in leveraging Kukes' bunkers for tourism and cultural heritage purposes (Milne, 2014). By transforming these military remnants into educational and tourist attractions, there is potential to promote historical understanding and economic development in the region (Vickers, 2001). Visitors to Kukes can explore these bunkers, gaining insights into the architectural ingenuity and historical context that shaped their construction (Abrahams, 2015).

3.1.6 Preservation Challenges

The preservation of these bunkers presents several challenges, including environmental degradation, lack of funding, and the need for sustainable tourism practices (Bowman, 2013). Ensuring that these structures are maintained and accessible to the public requires coordinated efforts between local authorities, historians, and conservationists (Carter, 2009). By addressing these challenges, Kukes

can preserve its rich military heritage while fostering a deeper appreciation for the historical complexities of the region (Prifti, 1999).

3.2 Tepelene and Skrapar: Military Architecture in Rugged Terrain

3.2.1 Geographical and Strategic Context

Tepelene and Skrapar, located in the southern part of Albania, are regions characterized by their rugged mountainous terrain and remote, inaccessible landscapes (Bowman, 2013). These areas have historically been significant for their strategic military advantages, providing natural defences against potential invasions (Carter, 2009). The harsh and challenging environment of Tepelene and Skrapar (Figure 11) made them ideal locations for the construction of bunkers, which were integral to Albania's Cold War defence strategy (Abrahams, 2015).



Figure 12 House attached to a bunker in the area of Skrapar, listed for sale by a Real Estate Agency.

3.2.2 Historical Background

Under the regime of Enver Hoxha, Albania adopted an extensive bunkerization policy aimed at fortifying the nation against perceived threats from both Eastern and Western blocs (Prifti, 1999). The strategic placement of bunkers in the mountainous regions of Tepelene and Skrapar was a crucial element of this policy (Bowman, 2013). The isolation and natural fortification offered by the terrain were leveraged to enhance the defensive capabilities of these bunkers, ensuring that they could serve as formidable barriers against any military aggression (Carter, 2009).

3.2.3 Architectural and Structural Features

The bunkers in Tepelene and Skrapar exhibit a range of architectural and structural features tailored to the unique challenges posed by the mountainous landscape (Milne, 2014). These features include:

Camouflaged Entrances: Many bunkers were built with camouflaged entrances to blend seamlessly into the natural surroundings, making them difficult to detect from the air or ground (Bowman, 2013).

Interconnected Tunnels: Extensive networks of tunnels connect multiple bunkers, allowing for secure and covert movement of troops and supplies (Carter, 2009). These tunnels also provide strategic points for retreat and regrouping in the event of an attack (Abrahams, 2015).

Reinforced Structures: The bunkers were constructed using reinforced concrete to withstand heavy artillery and aerial bombardments (Milne, 2014). Their robust design ensures their durability and continued structural integrity (Bowman, 2013).

Multi-Level Designs: Some bunkers feature multi-level designs that utilize the natural gradient of the mountains, providing multiple layers of defence and vantage points for monitoring and engagement (Carter, 2009).

3.2.4 *Adaptation to Challenging Environments*

The bunkers in Tepelene and Skrapar exemplify the adaptation of military architecture to challenging environments (Milne, 2014). The designers and builders of these bunkers took full advantage of the rugged terrain, incorporating natural features into their defensive strategies (Abrahams, 2015). For instance, bunkers were often built into the sides of mountains or hills, providing additional protection and concealment (Bowman, 2013). This integration of natural and built elements demonstrates a sophisticated understanding of both military needs and environmental conditions (Carter, 2009).

3.2.5 *Role During the Cold War*

During the Cold War, the bunkers in Tepelene and Skrapar played a critical role in Albania's national defence strategy (Prifti, 1999). They served as key points for monitoring and defending against potential incursions, particularly from neighbouring countries (Abrahams, 2015). The strategic importance of these regions, coupled with the formidable natural defences, made the bunkers in Tepelene and Skrapar essential components of Albania's broader military infrastructure (Bowman, 2013).

3.2.6 *Contemporary Significance*

Today, the bunkers in Tepelene and Skrapar stand as historical monuments, offering insights into the military strategies and architectural practices of the Cold War era (Carter, 2009). They provide valuable opportunities for historical research and education, shedding light on the ways in which Albania sought to protect its sovereignty in a time of global tension and uncertainty (Milne, 2014).

3.2.7 *Tourism and Cultural Heritage*

The potential for transforming these bunkers into tourist attractions has been increasingly recognized (Bowman, 2013). The dramatic landscapes of Tepelene and Skrapar, combined with the historical intrigue of the bunkers, make these regions attractive destinations for cultural and historical tourism (Carter, 2009). By promoting these sites, Albania can not only preserve its military heritage but also stimulate

economic development through tourism (Abrahams, 2015).

3.2.8 Preservation Challenges

Preserving the bunkers in Tepelene and Skrapar involves addressing several challenges, including environmental degradation, accessibility issues, and the need for sustainable tourism practices (Milne, 2014). The remote locations and harsh conditions can make maintenance and conservation efforts difficult (Bowman, 2013). However, with coordinated efforts between local authorities, historians, and conservationists, these challenges can be managed to ensure that the bunkers remain accessible and informative for future generations (Carter, 2009).

The bunkers in Tepelene and Skrapar are remarkable examples of military architecture adapted to the rugged mountainous terrain (Milne, 2014). They highlight the strategic use of natural defences and the ingenuity of Cold War-era military planning (Abrahams, 2015). By preserving and promoting these structures, Albania can honor its past and provide valuable educational and cultural experiences for visitors (Carter, 2009). The bunkers serve as enduring symbols of the nation's resilience and strategic foresight during a turbulent period in history (Bowman, 2013).

3.3 Aviation Base in Gjader: A Testament to Specialized Military Infrastructure

3.3.1 Historical Context and Strategic Importance

The Aviation Base in Gjader (Figure 12), located in the north-western part of Albania, is a significant example of the specialized military infrastructure developed during Enver Hoxha's regime (Prifti, 1999). Constructed during the Cold War, this base was a critical component of Albania's national defence strategy, aimed at bolstering the country's air defence capabilities (Abrahams, 2015). The strategic importance of Gjader lies in its ability to enhance Albania's military readiness and provide a robust defence mechanism against potential aerial threats from neighbouring countries and beyond (Bowman, 2013).



Figure 13 Entrance in the aviation base in Gjader

3.3.2 Design and Construction

The Gjader base was meticulously designed to meet the specific requirements of military aviation operations (Carter, 2009). The construction of this facility involved significant engineering feats, reflecting the sophisticated military planning of the time (Milne, 2014).



Figure 14 Entrance in the aviation base in Gjader Underground Hangars

The base houses extensive underground hangars (Figure 14) that were designed to protect aircraft from aerial bombardments and provide secure storage (Abrahams, 2015). These hangars are connected by a network of tunnels, allowing for the covert movement and maintenance of military aircraft (Bowman, 2013).

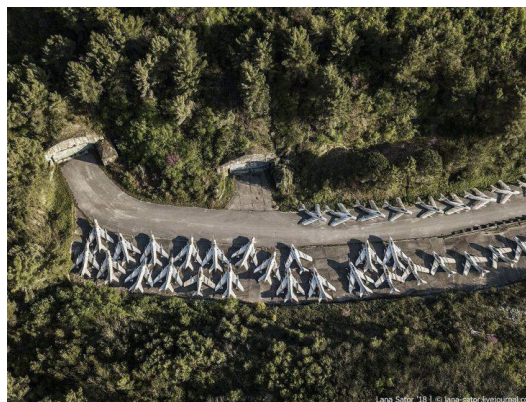
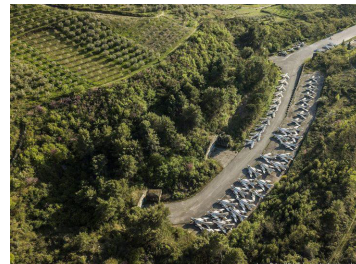


Figure 15 Aircraft placed in the entrance of the tunnels

Runways and Taxiways: The base is equipped with well-constructed runways and taxiways (Figure 15) designed to handle various types of military aircraft (Carter, 2009). The layout of these runways facilitates quick take-offs and landings, ensuring rapid deployment of air defence operations (Milne, 2014).



Figure 16 Aircraft runways and taxiways in the interior

Control Towers and Communication Systems: State-of-the-art control towers and communication systems were installed to coordinate air traffic and manage defence operations efficiently (Prifti, 1999). These facilities were equipped with advanced radar and surveillance technology to detect and respond to potential threats (Abrahams, 2015).

3.3.3 Role in Albania's Air defence

The Gjader Aviation Base played a pivotal role in Albania's air defence strategy (Bowman, 2013). During Hoxha's regime, the base was heavily utilized to train pilots and conduct air defence drills, ensuring that the Albanian Air Force maintained a high level of preparedness (Carter, 2009). The base also served as a deterrent against potential aggressors, showcasing Albania's capability to defend its airspace robustly (Abrahams, 2015).

3.3.4 Adaptation and Modernization

Over the years, the Gjader base has undergone several adaptations and modernizations to keep pace with evolving military technology and strategic needs (Milne, 2014). These updates have included the installation of more advanced radar systems, improvements to the structural integrity of hangars, and upgrades to the communication infrastructure (Bowman, 2013). Such modernization efforts

underscore the ongoing importance of Gjader in Albania's national defence framework (Carter, 2009).

3.3.5 Contemporary Use and Significance

Today, the Gjader Aviation Base remains a crucial asset for Albania's military (Prifti, 1999). It continues to serve as a training ground for new pilots and a key location for maintaining and deploying military aircraft (Abrahams, 2015). The base also plays a significant role in regional defence collaborations and joint exercises with NATO allies, reflecting Albania's strategic position within the broader geopolitical landscape of Southeastern Europe (Bowman, 2013).

3.3.6 Preservation and Tourism Potential

In addition to its military utility, the Gjader base holds potential as a site of historical and educational interest (Carter, 2009). Efforts to document and preserve the base can provide valuable insights into Cold War-era military architecture and Albania's defence strategies (Milne, 2014). There is potential for developing the site as a tourism attraction, offering guided tours that explore the base's underground hangars, control towers, and other facilities (Abrahams, 2015). Such initiatives can help promote historical awareness and contribute to local economic development (Bowman, 2013).

3.3.7 Challenges in Preservation

Preserving the Gjader Aviation Base involves addressing several challenges, including environmental factors, structural maintenance, and ensuring secure access for visitors (Prifti, 1999). Coordinated efforts between military authorities, historians, and conservationists are essential to manage these challenges effectively (Carter, 2009). By prioritizing preservation, Albania can safeguard an important part of its military heritage for future generations (Abrahams, 2015).

The Aviation Base in Gjader stands as a testament to the specialized military infrastructure developed during Enver Hoxha's regime (Prifti, 1999). It highlights the strategic foresight and engineering capabilities that underpinned Albania's air defence during the Cold War (Bowman, 2013). Today, the base continues to play a vital role in Albania's national defence, while also offering opportunities for historical preservation and tourism (Milne, 2014). By recognizing and preserving the significance of the Gjader base, Albania can honor its military history and provide valuable educational experiences for both domestic and international audiences (Abrahams, 2015).

3.4 Submarine Base in Porto Palermo: A Naval Stronghold in Albania's defence Strategy



Figure 17 Porto Palermo Military Base

3.4.1 Geographical and Strategic Context

The Submarine Base in Porto Palermo (Figure 16), located along the picturesque Albanian Riviera, is a prominent example of the naval component of Albania's military strategy during the Cold War (Prifti, 1999). Situated in a secluded bay between the towns of Himara and Saranda, Porto Palermo's strategic location (Figure 17) offered a natural defence advantage, providing shelter and concealment for naval operations (Abrahams, 2015). The base's position along the Ionian Sea was critical for monitoring and protecting Albania's maritime borders, particularly against potential threats from the Adriatic Sea and the wider Mediterranean region (Bowman, 2013).

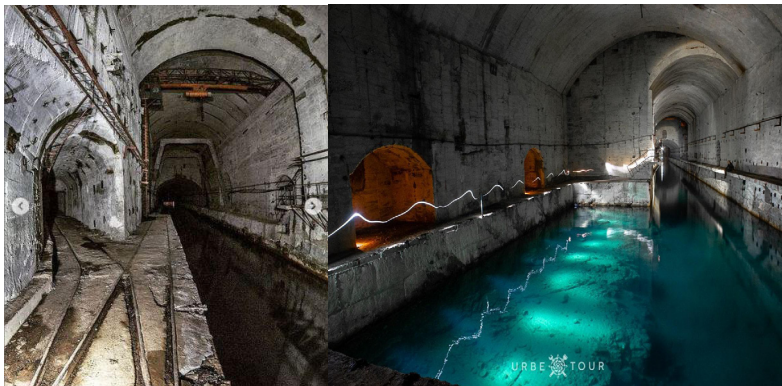


Figure 18 Submarine Base inside the cape

3.4.2 Historical Background and Construction

Under the regime of Enver Hoxha, Albania embarked on a comprehensive military fortification program that included the construction of the submarine base at Porto Palermo (Prifti, 1999). Built during the 1960s and 1970s with substantial assistance

from Soviet engineers, the base was designed to accommodate and service the Albanian Navy's fleet of submarines and other naval vessels (Bowman, 2013). The construction of the base involved significant engineering challenges, including the excavation of extensive underground facilities and the development of secure docking areas (Carter, 2009).

3.4.3 Architectural and Structural Features

The Porto Palermo Submarine Base is notable for its complex and robust architectural design (Milne, 2014). Key features of the base include:

Underground Tunnels and Caverns: The base comprises an extensive network of underground tunnels and caverns, providing secure storage and maintenance facilities for submarines (Abrahams, 2015). These underground structures were designed to be virtually invisible from the air and sea, offering protection against potential aerial and maritime attacks (Bowman, 2013).

Secure Docking Areas: The base includes secure docking areas where submarines could be berthed, serviced, and refuelled (Carter, 2009). These docks were constructed with reinforced concrete to withstand direct hits from bombs and torpedoes (Milne, 2014).

Command and Control Centers: The base is equipped with command-and-control centers featuring advanced communication and surveillance systems for coordinating naval operations (Prifti, 1999). These centers were essential for maintaining operational readiness and responding swiftly to potential threats (Abrahams, 2015).

Barracks and Support Facilities: In addition to the submarine-related infrastructure, the base includes barracks and support facilities for the personnel stationed at Porto Palermo (Bowman, 2013). These facilities provided accommodation, logistical support, and training areas for naval crews (Carter, 2009).

3.4.4 Role in Albania's Naval defence

During the Cold War, the Porto Palermo Submarine Base played a crucial role in Albania's naval defence strategy (Prifti, 1999). It served as the primary facility for the deployment and maintenance of the country's submarine fleet, which was a key element of Albania's maritime defence capabilities (Abrahams, 2015). The base's strategic location allowed for effective patrolling of the Ionian and Adriatic Seas, ensuring that Albania could monitor and protect its maritime borders from potential incursions (Bowman, 2013).

3.5 Comparison with Submarine Bases in Montenegro

3.5.1 Herceg Novi and Boka Bay

Herceg Novi and Boka Bay in Montenegro, like Porto Palermo, were strategic locations for naval bases under the Yugoslavian government (Filipović, 2019). These bases (Figure 18) were part of a broader strategy to fortify the Adriatic coastline and ensure control over the Mediterranean's northern approaches (Kulić, 2016). The Yugoslav

government pursued a comprehensive militarization strategy, constructing extensive naval facilities designed to support a robust maritime defence (Despot, 2015).



Figure 19 Bokay bay submarine base

Strategic Location: Both Herceg Novi and Boka Bay are situated in geographically advantageous (Figure 19) positions along the Adriatic Sea, providing excellent natural harbors and defensive positions (Filipović, 2019). The deep, fjord-like bays offered natural protection and concealment for naval vessels (Despot, 2015).



Figure 20 Bokay bay submarine base interior

Infrastructure: Similar to Porto Palermo, the submarine bases in Montenegro included extensive underground facilities (Kulić, 2016). These bases featured reinforced tunnels, secure docks, and advanced control centers to manage naval operations (Filipović, 2019). The infrastructure was designed to support a significant number of submarines and other naval vessels (Despot, 2015).

Military Strategy: The Yugoslavian government's strategy emphasized the importance of controlling the Adriatic Sea to prevent incursions from NATO forces and to maintain a defensive posture against potential threats (Filipović, 2019). This strategy

was reflected in the scale and sophistication of the submarine bases in Herzeg Novi and Boka Bay (Despot, 2015).

3.5.2 Architectural and Strategic Parallels

Underground Facilities: Both Porto Palermo and the submarine bases in Montenegro utilized extensive underground facilities to protect naval assets from aerial and maritime attacks (Kulić, 2016). These facilities were integral to the defence strategies of both Albania and Yugoslavia, providing secure and concealed locations for submarine maintenance and operations (Filipović, 2019).

Natural Advantages: The use of natural harbors and fjords in both regions highlights the strategic use of geographical features to enhance military defence capabilities (Despot, 2015). These natural advantages provided excellent concealment and protection for naval operations (Filipović, 2019).

Cold War Context: Both Albania and Yugoslavia's submarine bases were products of Cold War tensions, reflecting the broader geopolitical strategies of the era (Kulić, 2016). The construction of these bases was driven by the need to defend against potential invasions and to assert control over key maritime regions (Despot, 2015).

3.5.3 Decline and Modernization

Following the end of the Cold War and the subsequent political changes in both Albania and the former Yugoslavia, the strategic importance of these submarine bases diminished (Kulić, 2016). Economic challenges and shifts in military priorities led to a decline in the use and maintenance of these facilities (Filipović, 2019). However, recent efforts in both countries have focused on modernizing and repurposing these bases for contemporary use, including tourism and cultural heritage preservation (Despot, 2015).

3.5.4 Tourism and Cultural Heritage

The potential for transforming submarine bases like Porto Palermo and those in Montenegro into tourist attractions is significant (Gans, 2020). These sites offer unique insights into Cold War-era naval strategies and military architecture (Nikolić & Perović, 2018). By promoting these bases as historical and educational sites, Albania and Montenegro can enhance cultural tourism and economic development (Filipović, 2019).

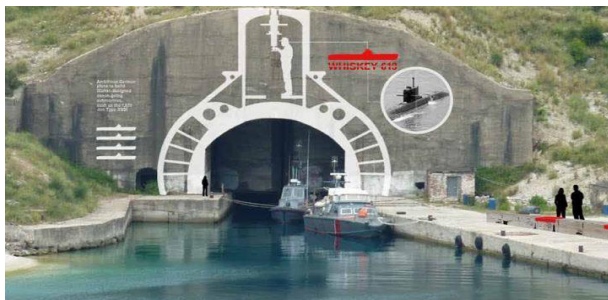


Figure 21 Porto Palermo Submarine Base Regualification Proposal

3.5.5 Preservation Challenges

Preserving these submarine bases involves addressing several challenges, including structural maintenance, environmental conservation, and ensuring safe access for visitors (Despot, 2015). There was an intention to revitalize the Porto Palermo Base with proposals, but there was not yet a materialisation of this initiative (Figure 20). Collaboration between local authorities, historians, and conservationists is essential to manage these challenges effectively (Kulić, 2016). Sustainable tourism practices must be developed to protect the integrity of these sites while making them accessible and informative for visitors (Gans, 2020).

The Submarine Base in Porto Palermo stands as a testament to the naval component of Albania's military strategy during the Cold War (Prifti, 1999), highlighting the strategic foresight and engineering efforts to protect the country's maritime borders (Abrahams, 2015). Comparisons with submarine bases in Herzeg Novi and Boka Bay in Montenegro reveal similar strategic and architectural approaches by the Yugoslavian government to fortify the Adriatic coastline (Despot, 2015). Today, these sites offer significant potential for historical preservation and tourism, providing valuable insights into the military heritage of the region (Filipović, 2019). By preserving and promoting these bases, Albania and Montenegro can honor their naval history and contribute to cultural and educational tourism (Gans, 2020).



Figure 22 Bunkart Entrance

3.6 Bunkart: Transforming a Cold War Bunker into a Historical Museum

3.6.1 Introduction to Bunkart

Bunkart, located near the capital city of Tirana, (Figure 21) is one of the most significant and well-preserved examples of Albania's extensive bunker-building program (Bowman, 2013). Originally constructed during the Cold War under the regime of Enver Hoxha, Bunkart was part of a nationwide effort to create a network of underground refuges and military installations (Figure 22) designed to protect the country from potential invasions (Carter, 2009). In recent years, this large underground bunker has been transformed into a museum, providing visitors with a comprehensive overview of Albania's Cold War history and its extensive bunker-building efforts (Abrahams, 2015).

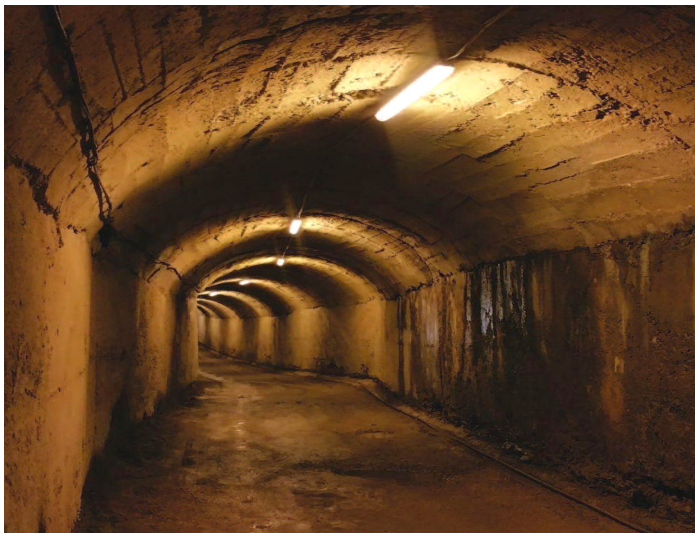


Figure 23 Bunkart Entrance Tunnel

3.6.2 Historical Background and Construction

Built in the early 1970s, Bunkart was designed as a top-secret underground complex intended to serve as a command center and refuge for the country's political and military elite in the event of a nuclear attack or other military emergencies (Prifti, 1999). The bunker's construction reflects the intense paranoia and isolationism of Hoxha's regime, which perceived threats from both Western and Eastern blocs (Carter, 2009). The facility includes:

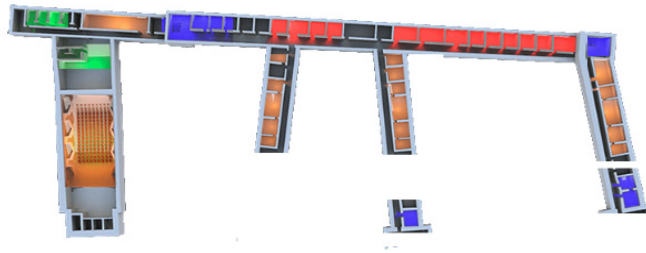


Figure 24 Bunkart Plan Layout

Reinforced Structures: The bunker was constructed with reinforced concrete walls several meters thick, capable of withstanding significant blasts (Bowman, 2013).

Self-Sustaining Facilities: Bunkart was equipped with living quarters, offices, a communication center, a power plant, a water supply system, and air filtration units, (Figure 23) making it self-sustaining for extended periods (Abrahams, 2015).

Command and Control Rooms: The bunker included advanced (for the time) communication and command rooms designed to coordinate national defence operations during a crisis (Prifti, 1999).

3.6.3 Transformation into a Museum

The majority of the Albanian population remained unaware of the existence and extent of Bunkart and other similar underground military structures (Figure 23) until about a decade ago (Bowman, 2013). This secrecy was a result of the highly classified nature of these installations, which were hidden from public knowledge and often located in remote or inconspicuous areas (Carter, 2009).

In the early 2010s, efforts began to transform Bunkart into a museum (Abrahams, 2015). These efforts were part of a broader initiative to open up Albania's Cold War history to the public and promote historical understanding and cultural heritage (Prifti, 1999). The transformation involved extensive renovations and the installation of exhibits that detail the history of the bunker and its role in Albania's defence strategy (Bowman, 2013).

3.6.4 Exhibits and Educational Impact

Today, Bunkart serves as a museum that offers a deep dive into Albania's Cold War era and the bunker-building program (Carter, 2009). The museum's exhibits include:

Historical Artifacts: Original documents, photographs, military equipment, and personal items from the Cold War period (Bowman, 2013).

Multimedia Presentations: Audio-visual displays (Figure 24) that provide historical context and personal stories from the era (Abrahams, 2015).



Figure 25 Plenary Session Room/Theater

Reconstructed Rooms: Visitors can explore reconstructed living quarters (Figure 25), command rooms, and other areas to get a sense of what life in the bunker would have been like (Carter, 2009).



Figure 26 Bunkart Corridors and Interior of Rooms

Educational Programs: The museum offers educational programs and guided tours that enhance understanding of Albania's political history and military strategies (Bowman, 2013).

3.6.5 Public Reception and Cultural Significance

Since its opening, Bunkart has had a profound impact on public awareness and historical consciousness in Albania (Abrahams, 2015). For many Albanians, the museum provided the first opportunity to learn about the extensive network of

bunkers built under Hoxha's regime and the broader historical context of the Cold War (Carter, 2009). This newfound awareness has sparked interest in Albania's military history and the cultural significance of these structures (Bowman, 2013). The museum has also become a popular tourist attraction, drawing visitors from around the world who are interested in Cold War history and military architecture (Abrahams, 2015). This influx of visitors has helped to boost local tourism and provided economic benefits to the region (Carter, 2009).

3.6.6 Preservation Challenges and Future Prospects

While Bunkart has been successfully transformed into a museum, the preservation of such a large and complex structure poses ongoing challenges (Bowman, 2013). These include maintaining the structural integrity of the bunker, managing environmental conditions, and updating exhibits to keep the museum engaging for repeat visitors (Carter, 2009).

Looking forward, there are opportunities to expand the museum's reach and impact (Abrahams, 2015). Potential future developments include:

Digital Archives: Creating online resources and virtual tours to make the museum's exhibits accessible to a global audience (Bowman, 2013).

Collaborative Projects: Partnering with other Cold War museums and historical sites to share knowledge and resources (Carter, 2009).

Community Engagement: Developing programs that engage local communities and schools, fostering a deeper connection to Albania's history (Abrahams, 2015).

Bunkart stands as a powerful testament to Albania's Cold War history and the extensive bunker-building program undertaken during Enver Hoxha's regime (Bowman, 2013). Its transformation into a museum has opened up this hidden chapter of history to the public, providing valuable educational insights and contributing to the country's cultural heritage (Carter, 2009). By preserving and promoting Bunkart, Albania not only honors its past but also creates opportunities for historical understanding and tourism development (Abrahams, 2015).

4. Conclusions

The underground military structures across Eastern Europe, from Albania to former Yugoslavia, illustrate the diverse approaches to national defence during the Cold War and beyond (Abrahams, 2015). These bunkers and facilities reflect the unique historical, geopolitical, and cultural contexts of each country (Bowman, 2013). By studying and preserving these structures, we gain valuable insights into the military strategies of the past and the enduring legacy of the Cold War on European landscapes (Carter, 2009). Today, these bunkers serve not only as reminders of a turbulent era but also as important cultural and historical landmarks that contribute to our understanding of the region's complex history (Milne, 2014).

However, the potential of these underground military structures extends far beyond their historical and educational value (Prifti, 1999). Their revitalization presents

significant opportunities for cultural, economic, and social development in Eastern Europe (Vickers, 2001). By transforming these once-secret and defensive spaces into accessible and engaging public sites, countries can create new avenues for tourism, education, and community engagement (Abrahams, 2015).

4.1 Cultural and Educational Potential

Revitalizing underground military structures as museums or educational centers can significantly enhance public understanding of Cold War history (Carter, 2009). These sites can serve as immersive environments where visitors can learn about the geopolitical tensions, military strategies, and daily lives of people during this era (Bowman, 2013). Exhibits could include original artifacts, multimedia presentations, and reconstructed rooms to provide a comprehensive and engaging historical narrative (Abrahams, 2015). For example, Albania's Bunkart has successfully transformed a large underground bunker into a museum that offers a deep dive into the country's Cold War history, attracting both local and international visitors (Carter, 2009). Moreover, these revitalized spaces can foster academic research and collaboration (Bowman, 2013). Universities and research institutions can use these sites as living laboratories to study military history, architecture, and engineering (Abrahams, 2015). Conferences, seminars, and workshops can be held in these unique settings, promoting interdisciplinary dialogue and knowledge exchange (Carter, 2009).

4.2 Economic Development through Tourism

The transformation of underground military structures into tourist attractions can stimulate local economies (Milne, 2014). Heritage tourism is a growing sector, and visitors are increasingly interested in exploring sites with historical and cultural significance (Bowman, 2013). These bunkers, with their intriguing histories and unique architectural features, can attract a diverse range of tourists, including history enthusiasts, educators, students, and curious travellers (Abrahams, 2015). Tourism development around these sites can create jobs and support local businesses (Carter, 2009). Hotels, restaurants, souvenir shops, and tour operators can benefit from the influx of visitors (Bowman, 2013). Additionally, promoting these sites through international tourism campaigns can put lesser-known regions on the global travel map, encouraging broader economic development (Milne, 2014).

4.3 Community Engagement and Social Impact

Revitalizing these structures also offers significant social benefits (Abrahams, 2015). These projects can foster community pride and identity by preserving local heritage and telling the stories of past generations (Bowman, 2013). Community members can be involved in the restoration and operation of these sites, creating a sense of ownership and responsibility (Carter, 2009). Educational programs tailored to local

schools can ensure that younger generations learn about and appreciate their region's history (Prifti, 1999).

Moreover, these sites can be repurposed for community use beyond tourism (Abrahams, 2015). They can serve as venues for cultural events, exhibitions, and social gatherings, providing valuable space for community activities (Bowman, 2013). For instance, underground spaces can be adapted for use as theaters, art galleries, or performance venues, offering unique atmospheres for cultural expression (Carter, 2009).

4.4 Preservation Challenges and Sustainable Practices

While the potential benefits are significant, the revitalization of underground military structures poses several challenges (Milne, 2014). These include environmental degradation, structural integrity, and the need for sustainable tourism practices (Bowman, 2013). Effective preservation requires coordinated efforts between government bodies, heritage organizations, historians, and local communities (Carter, 2009). Sustainable practices must be implemented to balance visitor access with the protection of these fragile sites (Abrahams, 2015). This includes managing visitor numbers, ensuring responsible maintenance, and mitigating environmental impacts (Bowman, 2013).

Innovative approaches to preservation can also be explored (Milne, 2014). For instance, digital technologies such as virtual reality (VR) and augmented reality (AR) can create immersive experiences for visitors without causing physical wear and tear on the sites (Abrahams, 2015). Online platforms can offer virtual tours and educational resources, making the history accessible to a global audience while preserving the physical integrity of the structures (Carter, 2009).

The revitalization of underground military structures across Eastern Europe holds immense potential (Prifti, 1999). By transforming these historical bunkers into vibrant cultural and educational hubs, countries can preserve their heritage, stimulate economic growth, and strengthen community ties (Abrahams, 2015). These efforts require thoughtful planning, sustainable practices, and active collaboration among various stakeholders (Bowman, 2013). As we move forward, embracing the opportunities presented by these unique sites can turn relics of a contentious past into beacons of learning, tourism, and community engagement, ensuring that their stories continue to resonate for generations to come (Carter, 2009).

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