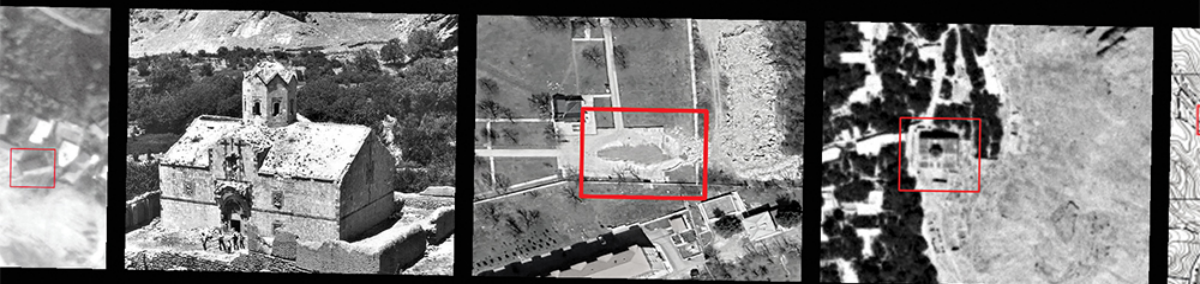


HERITAGE FORENSICS

CULTURE ON THE FRONT LINES OF THE
ARMENIA-AZERBAIJAN CONFLICT



LORI KHATCHADOURIAN, ADAM T. SMITH,
IAN LINDSAY, AND HUSIK GHULYAN

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Abbreviations

AAAS	American Academy for the Advancement of Science
ArSSR	Armenian Soviet Socialist Republic
AzSSR	Azerbaijan Soviet Socialist Republic
CERD	Convention on the Elimination of All Forms of Racial Discrimination
CHW	Caucasus Heritage Watch
CNES	Centre National d'Études Spatiales (National Centre for Space Studies)
ECHR	European Court of Human Rights
ICC	International Criminal Court
ICJ	International Court of Justice
ICOMOS	International Council on Monuments and Sites
ICTY	International Criminal Tribunal for the former Yugoslavia
ISIL	Islamic State of Iraq and the Levant
MW	Monument Watch
NKAO	Nagorno-Karabakh Autonomous Oblast
NKR	Nagorno-Karabakh Republic
OSCE	Organization for Security and Cooperation in Europe
RAA	Research on Armenian Architecture
SSP	Satellite Sentinel Project
TCCH	Technical Committee on Cultural Heritage
TRNC	Turkish Republic of Northern Cyprus
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNOSAT	United Nations Satellite Centre
USGS	United States Geological Survey
USSR	Union of Soviet Socialist Republics

HERITAGE FORENSICS

Introduction

*Adam T. Smith, Lori Khatchadourian,
Ian Lindsay, and Husik Ghulyan*

Cultural heritage burst onto the post–World War II physical and intellectual landscape as a program of resurrection. The shattered remains of countless monuments, buildings, and streetscapes were given new life—rebuilt, redefined, and reanimated as new bodies for catalyzing civic identification, national formation, and global peacebuilding.¹ Where war and development threatened to eradicate the accumulated record of prior generations, heritage offered a new, often resplendent, garb for select, curated remains of the past. From the rubble of European cities to the inundated flanks of the Nile, sites recuperated as heritage were feted as the infrastructure of a new global order of peace and security.

The heritage complex spawned during the twentieth century now haunts the twenty-first, troubling public policy, international law, humanitarianism, and academic research.² Obligations to remember the past rub up against calls to forget; claims built on ruins are countered by efforts to erase inconvenient facts on the ground. Throughout the last two decades, cultural heritage has more often been the center of global attention because of attempts to destroy it rather than to save it. Pushed to the front lines of conflicts around the globe, attacks on cultural sites have emerged as an alarming symptom of a new politics of heritage abuse that threatens to devastate the tangible record of the human past and extend the oppression of marginalized groups by writing them, and their sites of memory, out of history.³ In response, scholars, human rights activists, and civil society organizations have drawn on an array of new technologies and techniques that, taken together, point to the emergence of a new field of engaged research that

works to document abuses of cultural remains, deter cultural erasure, and assist efforts to hold perpetrators accountable.

The international legal frameworks that seek to limit the impact of conflict on cultural heritage have traditionally focused on regulating how wars are waged. Cultural property protections were first introduced to international legal instruments governing the conduct of war during the Hague Conferences of 1899 and 1907, following an initial appearance in the Lieber Code that governed the wartime conduct of the Union Army during the US Civil War. But despite halting steps toward defining attacks on cultural property as violations of the laws of war after World War I, it was only after the devastation of World War II that humanitarian standards for the conduct of armed conflict (most notably the Geneva conventions of 1949) were extended to include attacks on cultural property.⁴ The 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict, along with its two protocols, sought to protect cultural heritage from the threat of damage or destruction in the course of active hostilities.⁵ Subsequent international legal instruments similarly enrolled heritage protections within wider restrictions on the conduct of war. In what would become an influential provision, article 3(d) of the 1993 Statute of the International Criminal Tribunal for the former Yugoslavia (ICTY) criminalized “seizure of, destruction or willful damage done to institutions dedicated to religion, charity and education, the arts and sciences, historic monuments and works of art and science” as “violations of the laws or customs of war.”⁶ Most recently, the International Criminal Court (ICC) has claimed jurisdiction “over crimes against or affecting cultural heritage” from an interpretation of the Rome Statute’s war crimes article (8).⁷

Overall, the enrollment of cultural heritage into legal instruments governing the conduct of war has resulted in a steady broadening of state obligations to protection during armed conflicts.⁸ But it has also resulted in an implicit partitioning of geopolitical temporality into times of war and times of peace. This foundational dichotomy has been disrupted by the emergence of conflicts marked by a state of non-war: unresolved “frozen” conflicts suspended between belligerence and peace that leave cultural heritage sites vulnerable to harm amid the ever-present threat of renewed hostilities.⁹

Although a handful of contemporary frozen conflicts trace their origins to decolonization movements (e.g., India/Pakistan) and the shifting geopolitical order of the twentieth century (e.g., North Korea/South Korea, China/Taiwan, Cyprus/Turkey), it was the dissolution of the Union of Soviet Socialist Republics (USSR) in 1991 that ushered in an era of frozen conflicts. In the wake of the Soviet collapse, hostilities broke out between the newly formed Republic of Georgia and largely unrecognized separatist authorities in Abkhazia and South Ossetia, just as they did between Moldova and the Russian-backed breakaway

region of Transnistria. Azerbaijan and Armenia sustained a lengthy, bloody conflict over the self-proclaimed breakaway Republic of Nagorno-Karabakh (NKR), the central focus of this volume (figure 0.1). Frozen conflicts resist the partitioning of geopolitical temporality into times of strife and times of peace that lies at the heart of international heritage protections centered on the conduct of war. Moreover, frozen conflicts often involve *de facto* political entities (e.g., separatist regimes) whose statehood is not widely recognized, and who are therefore not eligible to become parties to instruments regulating the conduct of war or heritage protection. In such circumstances, cultural property languishes in a state of existential insecurity and international legal limbo.

Through the end of World War II, international conflicts typically concluded with formal peace treaties that restored normal relations between belligerent nations and formalized new sovereign territorial formations. During the first quarter of the twentieth century, no fewer than twenty international treaties were signed that marked the cessation of military conflict and the restoration of peaceful relations.¹⁰ Impacts to cultural heritage in the course of early-twentieth-century conflicts were thus largely confined to the period of active military engagement—a problem that the 1954 Hague Convention was designed to address. But since 1950 the use of treaties to end hostilities has declined.¹¹ During the first quarter of the twenty-first century, only six treaties have provided resolutions to active hostilities.¹² A much larger number of global conflicts have lingered without formal resolution, remaining unresolved for years or even decades.¹³

In frozen conflicts, violence is always at risk of erupting as progress on resolution stalls, locking in place an unstable status quo governed by uncertain legal regimes, unrecognized political actors, and untested heritage protections. Indeed the metaphor of the frozen conflict is itself deceptive, wrongly implying that unresolved conflicts are ossified and static. Rather, when conflict on the military front recedes, hatred and competition are often redirected into other forms of violence, including assaults on heritage that constitute a cultural front for ongoing aggression. Consequently, the use of the term “frozen” to describe intractable conflicts in the Caucasus and elsewhere has recently come under pointed critique.¹⁴ Prior to the resurgence of armed aggression in Nagorno-Karabakh between 2020 and 2023, Svante Cornell had already noted with respect to this paradigmatic post-Soviet frozen conflict that “the concept of frozenness falsely connotes a lack of dynamism, as if the politics of the conflict are frozen in time and space.”¹⁵ Likewise, Laurence Broers has argued that understanding durable rivalries as “frozen conflicts” creates a “false image of stasis” when facts on the ground point to the “dynamism of strategic rivalry.”¹⁶ Hence, while conflicts may drag on unresolved, they in no way remain fixed in place. The modern infrastructure of international law is largely unprepared for attacks on cultural heritage under conditions of

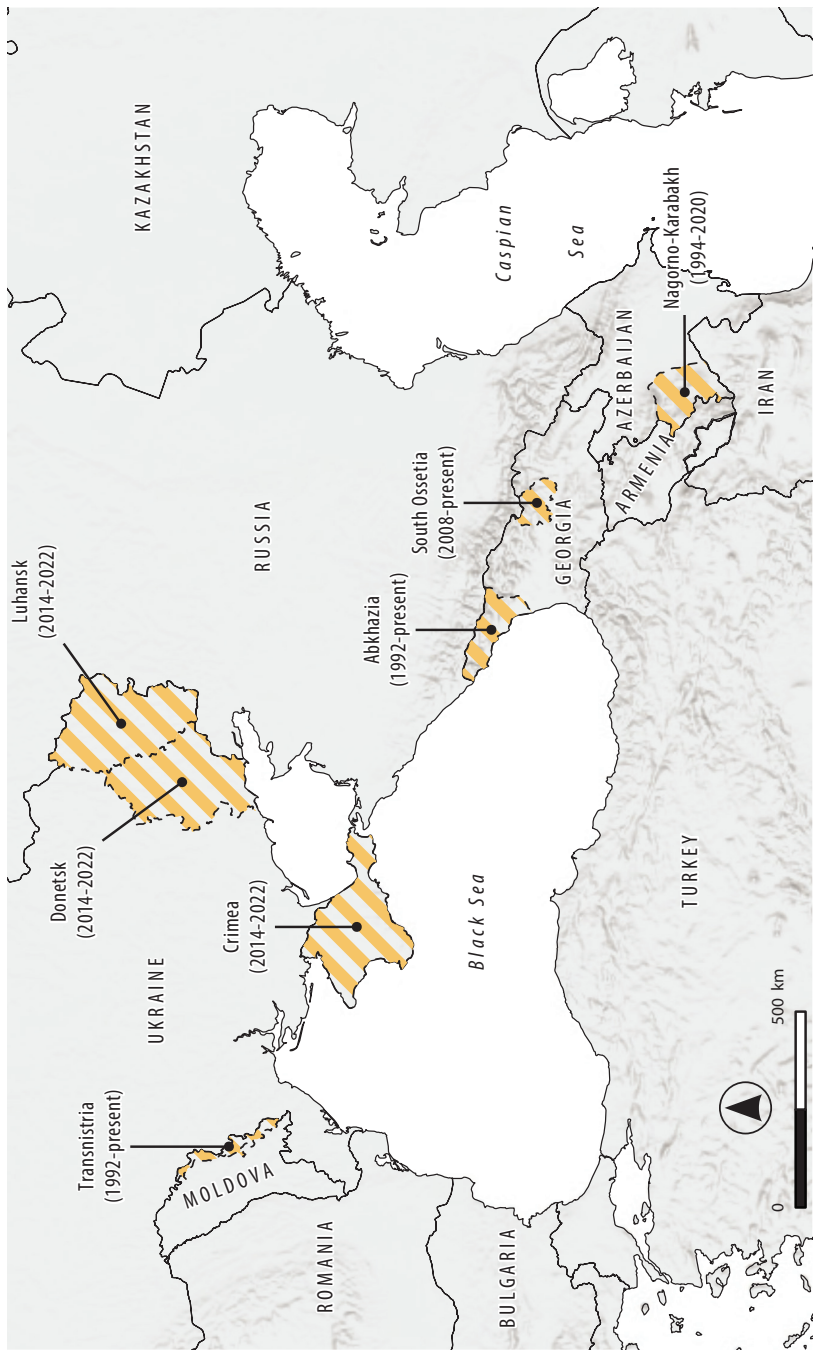


FIGURE 0.1. Map of post-Soviet “frozen” conflicts (yellow stripes). Created by Ian Lindsay after Klosek et al. (2021). Map data from Esri, Natural Earth.

unresolved conflict, where damage or destruction can occur not (or not only) during the heat of war, but during the interstitial periods of tenuous ceasefires.

The protracted conflict between Armenia and Azerbaijan serves as a case study in an approach to studying endangered cultural heritage that we refer to as “heritage forensics.” We define heritage forensics as the application of technological and humanistic methods to assemble evidence concerning abuses of cultural remains that can be used in a court of law and by publics seeking truth, reconciliation, and justice. As the limits of international heritage protection instruments have come to the fore in the evolution of this conflict (and others), the need for independent, forensic responses that can bring attention to cultural heritage crimes has become alarmingly clear. Satellite imagery plays a critical role in heritage forensics as it is particularly well suited to investigating cultural heritage abuses in regions that are difficult or impossible to access. Moreover, Earth observation satellites facilitate the independent verification of heritage crimes outside of the governmental bodies that may be complicit in their instigation and enactment. As a tool of heritage forensics, satellite imagery thus forms a critical technology of visualization and assessment as well as an aesthetically recognizable form of evidence suitable for both public and legal fora when deployed in unresolved conflicts that place heritage on the front lines. Satellite witnessing as a means of making truth claims is, at the same time, epistemologically and ethically complex, requiring careful contextualization and interpretation.

To deploy the techniques of heritage forensics in historical examinations of violence is to examine how cultural sites moved to the center of armed conflicts. As such, historical heritage forensics provides a critical predicate for studies of contemporary heritage abuses by detailing how historic places come to be constituted as a cultural front. In theoretical terms, historical heritage forensics interrogates the formation of a cultural front alongside military and legal forums for aggression. Methodologically, historical studies often push the limits of forensic investigation due to the limited availability of key datasets. For example, satellite imagery is often unavailable for some conflicts or atrocities given the recency of widely available space-based Earth imagery. Indeed, many post-Soviet conflicts fall into a “donut hole” in available satellite imagery. The 1990s were too early for the revolution in commercial satellite imagery that began during the first decade of the twenty-first century, but also too late for the US government’s Cold War imagery, whose declassified archives extend no later than the mid-1980s.¹⁷ Perhaps most importantly, historical heritage forensics emphasizes the emergence of the cultural front in ongoing conflicts over time as one element in the dynamics of armed aggression. The Nagorno-Karabakh Wars provide a particularly compelling case for understanding the movement of cultural heritage onto the frontlines of a prolonged rivalry.¹⁸



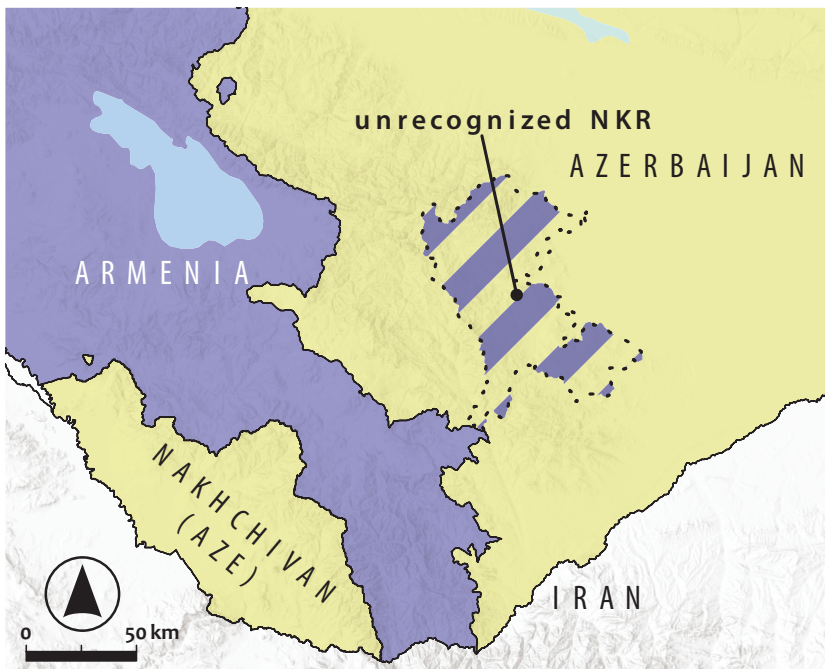
FIGURES 0.2A AND 0.2B. Time series maps of the Nagorno-Karabakh conflict, 1923–2020. Above (a) The NKAO within the AzSSR. Below (b) The territory of the NKR after the First Nagorno-Karabakh War (1992–1994). Created by Ian Lindsay. Map data from Esri, Natural Earth.

The Nagorno-Karabakh Conflict

Between 1988 and 1994, amid the unraveling and collapse of the Soviet Union, conflict broke out between Armenians and Azerbaijanis over the Armenian-majority Nagorno-Karabakh Autonomous Oblast (NKAO) of Soviet Azerbaijan (figure 0.2A).¹⁹ In February 1988, the parliament of the NKAO voted to unite the enclave with the neighboring Armenian Soviet Socialist Republic (ArSSR), and in a referendum that month, the majority Armenian population of the NKAO voted in favor of independence from Azerbaijan. Pogroms of Armenians in the Azerbaijani cities of Sumgait (February 1988), Kirovabad (Ganja) (November 1988), and Baku (January 1990), and of Azerbaijanis in Gugark (March 1988), sparked a cascade of violence, leading to full-scale war in which the Armenians of Nagorno-Karabakh were supported militarily by the newly independent Republic of Armenia.

Fighting ravaged the region from 1992 to 1994, costing roughly thirty thousand lives. Waves of ethnic cleansing ensued. Although figures are disputed, an estimated 1.2 million people were displaced between 1988 and 1994, the majority of whom were Azerbaijanis, as Armenian forces took control of the NKAO and seven surrounding regions of Azerbaijan (figure 0.2B).²⁰ In 1994, a ceasefire brought an end to active hostilities, leaving Armenian authorities in possession of the enclave and calcifying the territorial dispute into what many observers classified as a frozen conflict. But this was largely an illusion. Between the 1994 ceasefire and the renewal of active fighting along the line of contact in 2016, the armistice was regularly violated. What seemed from the outside to be a frozen conflict was rather a sublimation of hostilities into new forms of violence—some at the line of contact, others far from the front.

In September 2020, the conflict came un-frozen as Azerbaijan launched an assault on the disputed region that resulted in a forty-four-day war. Faced with mounting losses on the battlefield, Armenia agreed to a Russia-brokered ceasefire, which granted Azerbaijan sovereign jurisdiction over the seven territories that had been under the de facto control of the Armenian separatist government since the First Nagorno-Karabakh War along with portions of the former NKAO itself, the region whose status lay at the heart of the conflict (figure 0.2C). Despite a flurry of diplomatic efforts over subsequent years, the 2020 ceasefire did not lead to peace. Incursions of the Azerbaijani army beyond the disputed region of Nagorno-Karabakh and into the internationally recognized territory of the Republic of Armenia in September 2022 resulted in fatalities and accusations of torture, extrajudicial killings, and war crimes.²¹ In December 2022, Azerbaijan imposed a blockade on Nagorno-Karabakh that severed the region from the outside world and cut off supplies of food, medicine, and other essentials.



FIGURES 0.2C AND 0.2D. Time series maps of the Nagorno-Karabakh conflict, 2020 to the present. *Above (c)* Reduced boundaries of NKR following the Second Nagorno-Karabakh War (2020). *Below (d)* Dissolution of NKR following Azerbaijan’s military offensive in September 2023. Created by Ian Lindsay. Map data from Esri, Natural Earth.

Nine months later, on September 19, 2023, Azerbaijan launched a swift military offensive that resulted in the capitulation of the self-proclaimed state. A mass exodus ensued, as virtually the entire population of the former NKR, numbering over one hundred thousand Armenians, fled to neighboring Armenia to escape a repressive state notorious for fostering ethnic hatred and for failing to prosecute human rights abuses against Armenians (figure 0.2D). As of this writing, peace between Armenia and Azerbaijan remains elusive despite active negotiations.²²

Cultural heritage and visions of history have played a central role in the wider struggle for statehood in NKR. As Slavomír Horák and Tomáš Hoch have observed, cultural heritage constitutes one of the conflict's "schematic narrative templates"—a generalized pattern for state-controlled histories that mediates and reproduces homogenizing collective memories.²³ Opposing narrative templates in Armenia and Azerbaijan have prevented both sides from recognizing and stewarding the other's cultural monuments. In the vicissitudes of the conflict, this narrative template has conferred tremendous historiographic and material power upon the winning side vis-à-vis the interpretation and physical treatment of historic sites.²⁴ For this reason, the transfer of Nagorno-Karabakh to Azerbaijan has raised considerable alarm in the archaeology and cultural heritage communities, as observers fear the continuation of earlier policies of Armenian heritage destruction in Azerbaijan under the logic of the entrenched narrative template (see chapter 1). At the same time, following the 2020 transfer of territory, Azerbaijani government ministries and aligned media outlets began a campaign to denounce abuses of Azerbaijani heritage during the thirty years of *de facto* Armenian administration (see chapter 2). Exclusionary historiography and "a deep-rooted mutual sense of distrust" are the unifying features of heritage politics in the conflict between Armenia and Azerbaijan.²⁵ In recent years, the rhetoric of cultural heritage has taken on the character of what Kathryn Lafrenz Samuels calls "heritage as persuasion,"²⁶ as claims and counterclaims concerning abuses have worked to mobilize the conflicting parties into polarizing public accusations, often with little supporting evidence.

Place naming is fiercely disputed in the Nagorno-Karabakh conflict, "an active and contestable process of claiming and constructing the landscape around certain ideological visions about the past."²⁷ Battles over toponyms have become extensions of battles over history, identity, and land, in a part of the world where place-renaming policies and map-making have been inseparable from nationalism and nation-building.²⁸ Acknowledging these sensitivities, we see the multiplicity of place names in the region as a result of its multicultural past, and our decisions over usage strive neither to tacitly assert historical claims and political ambitions, nor to deny the belonging of both Armenians and Azerbaijanis to these troubled lands. As a general rule, when referring to the present, we use the

place names given by the government in whose internationally-recognized sovereign territory a given place is currently located, while references to the past adopt the appropriate toponym of the time period. Thus, in describing events that took place after 1991, we use the Azerbaijani spelling, “Nakhchivan,” while adopting the Soviet-era, Russian spelling, “Nakhichevan,” when referring to that era.²⁹ An exception is made for the conflict region, which we refer to by the Soviet-era term “Nagorno-Karabakh” when discussing the Soviet and post-Soviet periods (until 2023).³⁰ We use this term rather than the historic Armenian toponym “Artsakh,” which the unrecognized republic adopted in 2017, and instead of the Azerbaijani toponym “Karabakh,” in recognition of the region’s unresolved status prior to its complete takeover by Azerbaijan in 2023. When referring to the region following the events of 2023, we use the Azerbaijani toponym, “Karabakh.” In the case of villages and towns, we favor Soviet-era toponyms or current official names, but often provide multiple toponyms in both the Azerbaijani and Armenian languages, in defiance of the toponymic work of cultural erasure. There are no perfect solutions in the politics of place names, but we come to this challenge in a spirit of inclusion and recognition of the global, albeit imperfect, order of national sovereignty.

Caucasus Heritage Watch

Caucasus Heritage Watch (CHW) was founded in late 2020 following the November ceasefire agreement that ended the forty-four-day Second Nagorno-Karabakh War to address the lack of nonpartisan, evidence-based documentation of past and present abuses of cultural heritage. The cultural front in the Armenia-Azerbaijan conflict includes hundreds of irreplaceable monuments and everyday places valued by both Armenians and Azerbaijanis, including magnificent medieval churches and monasteries, historic mausoleums, cemeteries strewn with engraved cross stones, and mosques with soaring minarets. Exiled from Nagorno-Karabakh, Armenians were severed from a dense web of cultural remains including sacred places, cemeteries, and sites of religious observance, just as Azerbaijanis had been following the First Nagorno-Karabakh War. The unprecedented scale of this jurisdictional transfer of a heritage landscape has accentuated existing concerns amongst scholars, heritage professionals, journalists, and activists over the treatment of cultural heritage by all parties since a fragile ceasefire froze the conflict in 1994.

Collectively, we have brought to this effort decades of experience in the archaeology and political geography of the South Caucasus, with particular research investments in Armenia. We recognize that these long-standing commitments

may lead unavoidably to presumptions of bias on the part of some readers in favor of some putatively unified “Armenian” position that shaped our research design and our interpretations. The findings presented in these pages touch some of the most sensitive nerves in the strife between Armenians and Azerbaijanis. As in so many conflict zones, here too, cultural heritage carries an immense symbolic burden, not only in regard to clashing historical claims but also the mutual refusals to collectively recognize the legitimate grievances and losses suffered by the “Other.” Efforts that push against these powerful partisan tides are few. But CHW is a stridently nonpartisan research group. We take no official position on the territorial dispute between Azerbaijan and Armenia. This is not because we eschew activist scholarship that takes a stand, but because no two of us hold the same views on how culpability should be distributed in the pursuit of a just solution. That said, we recognize that all scholarship is complexly situated in the politics of the present, and we work strenuously to approach our investigations impartially. Affectively, our work is shaped by sentiments of empathy, recognizing that unseen in every satellite image of a ruined landscape are countless stories of personal and collective losses. We repudiate the hate that undergirds so much of the discourse on this conflict. Guided by these shared core values, all levels of our research practice—from the design of the investigations to the interpretation of a cluster of pixels on a given satellite image—insist uncompromisingly on achieving consensus as a further check on the unintended bias of one or more researchers. Finally, we strive for the utmost transparency, explaining every decision and judgement in painstaking detail. It is our hope that readers who open this book with a presumption of bias read the work closely, charitably, and in its entirety.

Our approach to heritage forensics uses satellite-based Earth observation to monitor and document cultural heritage caught in the crosshairs of the Nagorno-Karabakh conflict. CHW’s primary mission is to monitor heritage at risk of deliberate damage or destruction as a result of the transfer of territories to Azerbaijani jurisdiction, an archaeological practice that operates in the time between active war and a future peace.³¹ We conduct satellite-based monitoring of heritage sites in the transferred territories multiple times each year, and thus far have documented fourteen cases of heritage destruction, fourteen cases of damage, and thirty-seven threats since the conclusion of the 2020 war, as detailed in our regular reports (see chapter 4).³² These reports are intended to inform public policy and to encourage accountability in the public sphere and in courts of law. But the logical foundation for our monitoring mission is the treatment of heritage during the decades when the conflict calcified into a state of non-war, from the end of the First Nagorno-Karabakh War in 1994 to the eruption of the second in 2020. Those decades “between the wars” produced both insightful reporting

and polemical accusations of heritage sites destroyed or damaged but little rigorous empirical material for understanding the extent of impacts or, importantly, the role of state authorities in assaults on cultural sites. With the two concurrent forensic examinations detailed in chapters 1 and 2 of this volume, CHW undertook to provide the missing historical evidence as to how heritage had moved to the conflict's cultural front.³³ Both historical investigations detailed here are inquiries into the fate of cultural sites during the twenty-six years (1994–2020) when the military and legal fronts in the dispute between Armenia and Azerbaijan were widely regarded (rightly or not) as frozen.

The Legal Context

Soon after gaining independence from the Soviet Union, the countries of the South Caucasus pursued legal and institutional frameworks for the protection of cultural property. As new actors on the international stage, both Azerbaijan and Armenia became states parties to the 1954 Hague Convention and its First Protocol in 1993, and to the Second Protocol in 2001 and 2006, respectively.³⁴ Both countries also ratified the 1970 UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property and the 1972 UNESCO Convention Concerning the Protection of World Cultural and Natural Heritage. Only Armenia has ratified the 1998 Rome Statute of the ICC, finalizing accession in October 2023. As an unrecognized state, NKR could not become a signatory to any international convention.

Domestically as successor states to the Soviet Union, Armenia and Azerbaijan inherited legal infrastructure for the protection of cultural property, including professionalized institutions for preservation, excavation, and conservation, as well as extensive site inventories that provided the foundation for the heritage lists of the post-independence period. The 1990s witnessed a flurry of cultural property legislation in the region. Both Azerbaijan and Armenia passed laws on the protection of historical and cultural monuments in 1998, and NKR followed suit, passing its own heritage legislation the following year. Laws governing the export and import of cultural heritage passed in NKR and Azerbaijan in 1998, and in Armenia in 2004. In the 2000s, other laws concerning culture and intangible cultural heritage came into force, first in Armenia, and soon thereafter, in a similar iteration, in NKR. Moreover, both Azerbaijan's Criminal Code of 1999 and Armenia's Penal Code of 2003 affirm that attacks on cultural heritage are punishable offenses.³⁵

Despite these international and domestic commitments and protections, legal frameworks have proven inadequate to the task of protecting the cultural heri-

tage of the adversary. Most egregiously, Azerbaijani cultural property laws as well as the state's obligations to multinational treaties and international custom failed to protect Armenian heritage in Nakhchivan from total destruction between 1997 and 2010, or to hold perpetrators accountable. The failure of Azerbaijan's various heritage protection laws and treaty obligations was not simply a case of an authoritarian executive bending law to its own goals or asserting sovereign prerogative; it was more broadly a failure of the entire apparatus of heritage preservation, which has for decades forwarded a polemical account of Azerbaijani history that denies the very existence of Armenians, and therefore Armenian cultural monuments, in Nakhchivan (see chapter 1).

In the case of Azerbaijani cultural heritage in Nagorno-Karabakh, the monument inventories of NKR did include a number of mosques, madrasas, mausoleums, and Azerbaijani cemeteries, even if the inventory was woefully incomplete and suppressed the monuments' association with Azerbaijani ethnic identity. But here the problems were not only a matter of intentional inventory omissions and ethnic dissociations but also the legal voids with respect to abandoned property in a compromised, *de facto* juridical system, as well as a lack of political will to safeguard Azerbaijani heritage sites from large-scale looting and destruction. In short, legal standards fell far short in both contexts, and ethnic animosities that had crystallized into societally accepted and entrenched narrative templates entirely precluded bottom-up initiatives by civil society actors to protect the cultural heritage of the Other (see chapter 2).

Both Armenia and Azerbaijan have taken recourse to international laws and institutions, a diplomatic front pursued alongside the military and cultural fronts. In the years between the wars, both parties sought international action via appeals to the UN. But once the ceasefire was signed in 1994 and bombs stopped falling, there was little interest on the part of the global community in enforcing treaty obligations or holding parties to account for abuses of cultural heritage. When Azerbaijan invoked the articles of the Hague Convention in its appeals to the UN secretary-general regarding purported damage to Azerbaijani cultural heritage in the unrecognized NKR, no steps were taken to investigate; when news spread across global media of Azerbaijan's state-sponsored bulldozing of a vast medieval Armenian cemetery outside the town of Julfa in southern Nakhchivan, the UN did not study, document, complain, or publicly remind Azerbaijan of its responsibility.³⁶ And in that latter failure lay the most complete episode of cultural erasure documented to date: the silent erasure of the entire Armenian heritagescape of Nakhchivan.

Following Armenia's defeat in the 2020 war, the conflict entered a new phase as the vanquished pursued a tactical shift in the field of contestation from warfare to lawfare. As of this writing, the outcome of these legal proceedings remains

uncertain. In a novel case brought before the International Court of Justice (ICJ) in 2021, *Armenia v. Azerbaijan*, Armenia has invoked the 1966 Convention on the Elimination of All Forms of Racial Discrimination (CERD), a legal instrument never before used to arbitrate disputes concerning cultural heritage. As the primary international convention concerning cultural heritage in armed conflict, the 1954 Hague Convention would seem the obvious legal mechanism to which the parties could appeal; but that landmark convention offers no process for the arbitration of inter-state disputes, instead stipulating that states parties should “work within the framework of their ordinary criminal jurisdiction” (Article 28). The use of the CERD could thus potentially open a new pathway in the landscape of accountability for heritage abuses (see discussion in chapter 4).

Heritage Forensics

Heritage forensics describes an approach to cultural remains that integrates archaeology, law, cultural aerospace, and politics. Where heritage is constituted by the corpus of materials and practices from the past that are curated in the present, forensics refers to investigations that document disruptions of that legacy by state and non-state actors (see chapter 3). Heritage forensics arises in the context of the wider recent turn to “heritage justice.”³⁷

The theoretical concepts and analytical techniques of heritage forensics owe a considerable debt to recent approaches to counter-forensics that have worked to invert the investigatory gaze, allowing researchers and civil society organizations to commandeer the production of evidence using technologies that often originated in state organized military projects in order to document violence committed, or obscured, by the apparatus of government (see chapter 4).³⁸ If the Foucauldian critique of panoptic surveillance provided a clear account of late modern governmentality, the emerging techniques give researchers in heritage forensics the opportunity to turn surveillance systems back onto state actors.³⁹

As it turns out, the proliferation of these imaging technologies arrived at a critical turning point in the enlistment of heritage in civil and international conflict. International observers ranging from heritage policymakers to military strategists have recognized an escalation in the weaponization of cultural heritage. Twenty-first century conflicts in Syria, Iraq, Sudan, Mali, Yemen, Afghanistan, Ukraine, and, most recently, Israel/Palestine illustrate the various means by which state and non-state actors instrumentalize cultural heritage to inflict harm on adversaries, subvert the connection between communities and their past, and disrupt a sense of historical belonging and ontological security.⁴⁰ As material repositories of history, cultural belonging, and memory, heritage sites

are particularly vulnerable to projects of ethnic cleansing and cultural erasure, actions that demand a counter-forensic response.⁴¹

Scholars of heritage in conflict have come to emphasize the importance of pursuing accountability for heritage destruction in asserting fundamental human rights of groups in conflict, promoting post-conflict reconciliation, and deterring further acts of intentional destruction.⁴² Forensic investigations of heritage must thus focus simultaneously on the past, the present, and the future: documenting abuses, assigning culpability, and setting the stage for reconciliation. Such research is as deeply engaged with the contemporary politics of heritage and the conflicts that surround contests over history as it is with the material remains that become targets.

Located at the intersection of archaeological recuperation, global tourism economics, and national memory, the heritage-industrial complex occupies fraught terrain between universalizing cultural appropriation and nationalist triumphalism, colonial dispossession and indigenous thrivance.⁴³ Forensic examinations of heritage at risk tread the same troubled terrain. In taking heritage as a social fact of community identification, heritage forensics risks reifying tangible heritage as the inheritance of putatively primordial, homogenous, ethno-national groups. Likewise, in relying upon the resources of state heritage regimes, from monument inventories to the archaeological and architectural discourses and practices that undergird them, the procedures of heritage forensics can be seen as validating the social constructs of heritage (be they emancipatory or exclusionary) and its fossilization in built forms. While cultural heritage is a social formation—a core element in any “imagined community”⁴⁴—it has come to exert real social, political, and economic force, strengthening collective identification and social memory, connecting people with the past, creating senses of place, and materializing “constantly evolving values, beliefs, knowledge and tradition.”⁴⁵ Abuses of tangible cultural heritage—especially those committed by powerful, often authoritarian regimes—deprive societies of the material manifestations of cultural practice, even as they can ironically amplify its social power. In working to prevent such abuses, heritage forensics is inescapably caught in the double bind between cultural reification and erasure. It is out of this productive tension that heritage forensics generates its analytic force and ethical commitments.

Heritage forensics opens opportunities for archaeologists and other heritage studies practitioners to intervene in heritage conflicts, especially in contexts of both state and non-state violence, war, genocide, terrorism, and totalitarianism. Therefore, heritage forensics is by definition a form of public-facing, post-disciplinary research; results from sites of investigations are constituted in public fora from courtrooms to diplomatic arenas to news outlets to social media. Heritage forensics is thus fully part of what Eyal Weizman has termed “the forensic turn”

in the alliance between researchers in the human sciences and human rights advocates.⁴⁶

Heritage forensics poses the question as to whether twenty-first-century technologies can help to deter erasure and protect the human right to culture.⁴⁷ Does the proliferation of satellite imaging platforms offer the possibility to not just document damage to heritage sites retrospectively but significantly reduce the threat of their destruction? The major heritage protection conventions of the late twentieth century rely on the cooperation of signatory states parties in their implementation and presume the promulgation of national laws for safeguarding cultural sites from domestic threats, such as development and looting. But during the first decades of the twenty-first century, cultural heritage has moved to the front lines of battles between repressive governments and minority communities. And as a result, cultural erasure has emerged as a distressing new weapon of state actors that seek to suppress group claims to civil and human rights by eradicating their distinctive material histories. From Afghanistan to Syria, Iraq to China, Yemen to Azerbaijan, Cyprus to Gaza, cultural erasure now looms as the most pressing threat to human heritage.

Although attacks on cultural heritage are broadly deplored, there has been little experimental work on how to prevent it. Despite advances in our ability to document, reconstruct, and recreate damaged sites, this work comes too late. We need tools that can help deter cultural genocide and erasure, blunt its impact on tangible heritage, and bring the safeguarding of sites into processes of reconciliation. CHW asks whether space-based imaging technologies can: (a) reduce state-sponsored aggression against tangible cultural heritage through sustained, systematic, nonpartisan, publicly visible surveillance; (b) create documentation that can provide a forensic resource for holding parties accountable; and (c) engage stakeholders, from minorities who are the targets of erasure to majority populations who might be allies in preservation.

Forensic Histories

This volume applies the techniques of heritage forensics first to historical investigations of heritage abuses between the First and Second Nagorno-Karabakh Wars (1994–2020) and second to the contemporary state of cultural sites following Azerbaijan's military defeat of the unrecognized NKR. In chapter 1, we examine the fate of Armenian cultural heritage after the First Nagorno-Karabakh War in Azerbaijan's Nakhchivan Autonomous Republic, an exclave situated between Armenia, Iran, and Turkey that is geographically separate from Nagorno-Karabakh but inseparable from its cultural politics. Throughout this book, we use

the term “Armenian cultural heritage” to refer to the medieval and modern cultural materials of Armenian-speaking Christian peoples, without assuming a monolithic cultural identity or timeless historical continuity over the centuries. We recognize that such a national construal of heritage is neither natural nor unproblematic.⁴⁸

For this investigation, we used Soviet topographic maps created between 1930 and 1990, together with declassified Cold War–era American satellite imagery and modern commercial satellite imagery to locate and assess the status of churches and cemeteries of historical, architectural, and ecclesiastical significance that were still extant in the late Soviet period. Our findings reveal, for the first time, conclusive forensic evidence that silent and systematic cultural erasure has been a feature of Azerbaijan’s domestic ethnic politics. Virtually the entire inventory of Armenian medieval and early modern monuments in Nakhchivan was not just razed, but scrubbed from the landscape in a state-sponsored program of destruction. In the wider context of the ethno-territorial conflict between Armenia and Azerbaijan, the destruction in Nakhchivan advanced Azerbaijan’s “conflict goals” of denying Armenian claims to belonging on its sovereign territory and eliminating the historic traces of multiethnic coexistence.⁴⁹ A state silently, slowly, and comprehensively perpetrated wholesale cultural erasure.

Chapter 1 documents what is, to our knowledge, the most systematic case of cultural erasure ever recorded. As our comparative analysis shows, although the number of vanquished churches, monasteries, and cemeteries pales in comparison to, for example, the synagogues targeted by Nazi Germany in World War II, or the estimated number of Uyghur sites that have already vanished in Xinjiang, China, its totality is breathtaking as is the silence and denial that surrounds it.⁵⁰ The complete eradication of Armenian heritage sites in Nakhchivan, and the impunity with which it was accomplished, clearly illustrates why the global community should be seriously concerned about the fate of Armenian heritage transferred to Azerbaijani administration since 2020.

Chapter 2 documents the treatment of Azerbaijani cultural heritage in the territories administered by the NKR between the First and Second Nagorno-Karabakh Wars (1994–2020). For the purposes of this book, we use the term “Azerbaijani cultural heritage” to refer to the medieval and modern monuments of the Turkic-speaking Muslim peoples who would come to be known in the late nineteenth century as “Azerbaijani Turks,” once again without assuming socio-cultural homogeneity or unchanging continuities with present-day Azerbaijanis, and once again recognizing that the dominant, national construal of heritage hinders the growth of more inclusive formulations.

In this investigation, we first provide a detailed assessment of impacts, including the evidence for heritage mining, neglect, intentional destruction, and the

renovation, restoration, and economic appropriation of Azerbaijani heritage sites after the displacement of Azerbaijani communities from Nagorno-Karabakh in the early 1990s. The fate of Azerbaijani cultural heritage varied widely and changed over time, reflecting the complexities of the disputed region's shifting political, geopolitical, and economic realities. The analysis indicates that Armenian authorities of NKR failed to prevent both widespread looting and several instances of targeted destruction. The attacks on Azerbaijani cultural heritage reflect profound disregard of Azerbaijani history, religion, and belonging in Karabakh as well as contempt for the Azerbaijani communities for whom such sacred sites were meaningful. But the research also shows that there was no state-sponsored program to systematically erase Azerbaijani cultural heritage in the troubled lands that Armenians controlled from 1994 to 2020. Although there is a journalistic habit of searching for moral equivalency in the conflict, in the arena of cultural heritage the evidence does not support such a simplification but instead demands careful, nuanced readings of complex evidence.

In chapter 2 we also examine how the fate of Azerbaijani heritage in Nagorno-Karabakh between 1994 and 2020 compares to other cases of large scale population displacement in the context of the 1948 Arab-Israeli War (or the Nakba) and the 1974 Turkish invasion of Cyprus. This comparison offers instructive analogies and contrasts that can advance our understanding of how war and displacement affect cultural heritage.

Taken together, these two forensic investigations deepen comparative analysis of the diverse ways in which cultural heritage becomes caught in the protracted hostilities of unresolved armed conflicts, and introduce new methods in the detection and documentation of abuses. Using the tools of heritage forensics, both studies provide the parties to the conflict, as well as outside observers, with independently verifiable facts that can be used to assist dispute resolution, hold perpetrators of crimes accountable, and contribute in the long term to truth and reconciliation. By recognizing both Armenian and Azerbaijani interests in heritage, CHW has sought to undermine the zero-sum logics of a bitter, racially infused conflict that has been sustained over three decades by the inability of the sides to recognize the durable belonging of the Other to this troubled place. The role of heritage forensics is to document heritage, witness abuses, and work to deter the extension of ethnic cleansing into the erasure of irreplaceable cultural landscapes. Although pathways toward peace remain elusive as of this writing, heritage forensics provides the empirical resources to eventually center cultural heritage in the work of peace-building through truth-telling, reparation, reconciliation, and preservation.⁵¹

Chapter 3 provides a detailed discussion of the techniques and methods of heritage forensics. We describe our multimodal methodology for assessing and

communicating diachronic site conditions through an assemblage of data spanning archival Soviet topographic maps, declassified Cold War reconnaissance imagery, modern satellite imagery, scholarly works in the region's cultural monuments, and of-the-moment social media content. While some of our methods have taken shape in response to the unique circumstances and data sources surrounding the Nagorno-Karabakh conflict, chapter 3 offers a model that researchers can adapt to other contexts where heritage forensics could advance wider efforts at accountability.

The first three chapters of this book may be read in forward or reverse sequence. Readers who come to this work with an investment in the methods of heritage forensics may wish to begin with chapter 3 before turning to the case studies in the preceding two chapters. Conversely, reading sequentially from the beginning will privilege the findings and interpretations over the methods, and may be preferable for readers whose primary investments are in the Armenian-Azerbaijani conflict and the region's cultural heritage. That said, none of the chapters is truly self-contained; the methods and case studies can only be fully apprehended and appreciated in a recursive relation with one another.

Finally, in chapter 4, we detail the deployment of heritage forensics to monitor cultural heritage at risk *before* it has been damaged or destroyed. Following the capitulation of NKR in 2023 and the forced expulsion of the region's entire Armenian population, Armenian cultural heritage sites in Karabakh have come under severe threat of physical destruction and cultural appropriation. CHW conducts regular satellite-based monitoring of over six hundred endangered churches, monasteries, cemeteries, shrines, and bridges of the medieval and early modern eras. It is in the context of this monitoring work that we address the ethical issues surrounding the use of satellite technology in heritage research and moral principles underlying satellite surveillance, once the sole prerogative of the military-industrial state, as a form of counter-forensics. What does it mean to turn the surveillance gaze back on the state apparatus that gave rise to it? What kind of testimony does the satellite image give in forensic work? Can heritage forensics not only document cultural destruction but help to deter abuses? We consider the challenges and possibilities of using counter-forensics to shape state activities and policies and thus de-escalate the cultural front of this particular ethno-territorial conflict in the Caucasus.

SILENT ERASURE

*Lori Khatchadourian, Adam T. Smith,
Husik Ghulyan, and Ian Lindsay*

As an intensely social formation, cultural heritage typically resides not in the realm of silence and secrecy but amid the clamor of the public sphere. To define a cultural site as heritage is to render it public, make it legible, and articulate it with a more or less well-constituted community. Whether emergent in national or international inventories, or already firmly ensconced in a technocratic apparatus of management and preservation, or coming undone under forces of ideology, capitalism, or war, throughout its lifecycle immovable cultural heritage is always conjured and conducted in public. It is the very exposed, open quality of cultural heritage that renders it vulnerable to contestation and abuse by state and non-state actors under conditions of civic strife, war, and genocide. At the same time, the inherently public condition of heritage is also what affords it some protection, at least in principle, under national laws and multilateral conventions. When judgments concerning the tangible remains of the human past are shrouded in silence and secrecy, enacted outside of the public sphere, heritage as such becomes ontologically unstable, a thing present but negatable, visible but unseen and unacknowledged, beyond the reach of law, media, and memory.¹

The clandestine erasure of the entire Armenian heritagescape of the Nakhchivan Autonomous Republic of Azerbaijan between 1997 and 2010 provides a stark counterpoint to the highly visible and publicized episodes of twenty-first-century cultural destruction elsewhere in southwest Asia (figure 1.1). Elements of secrecy surround not only the culminating policy of physical destruction during the post-Soviet years, but a decades-long effort by Azerbaijan's Soviet-era

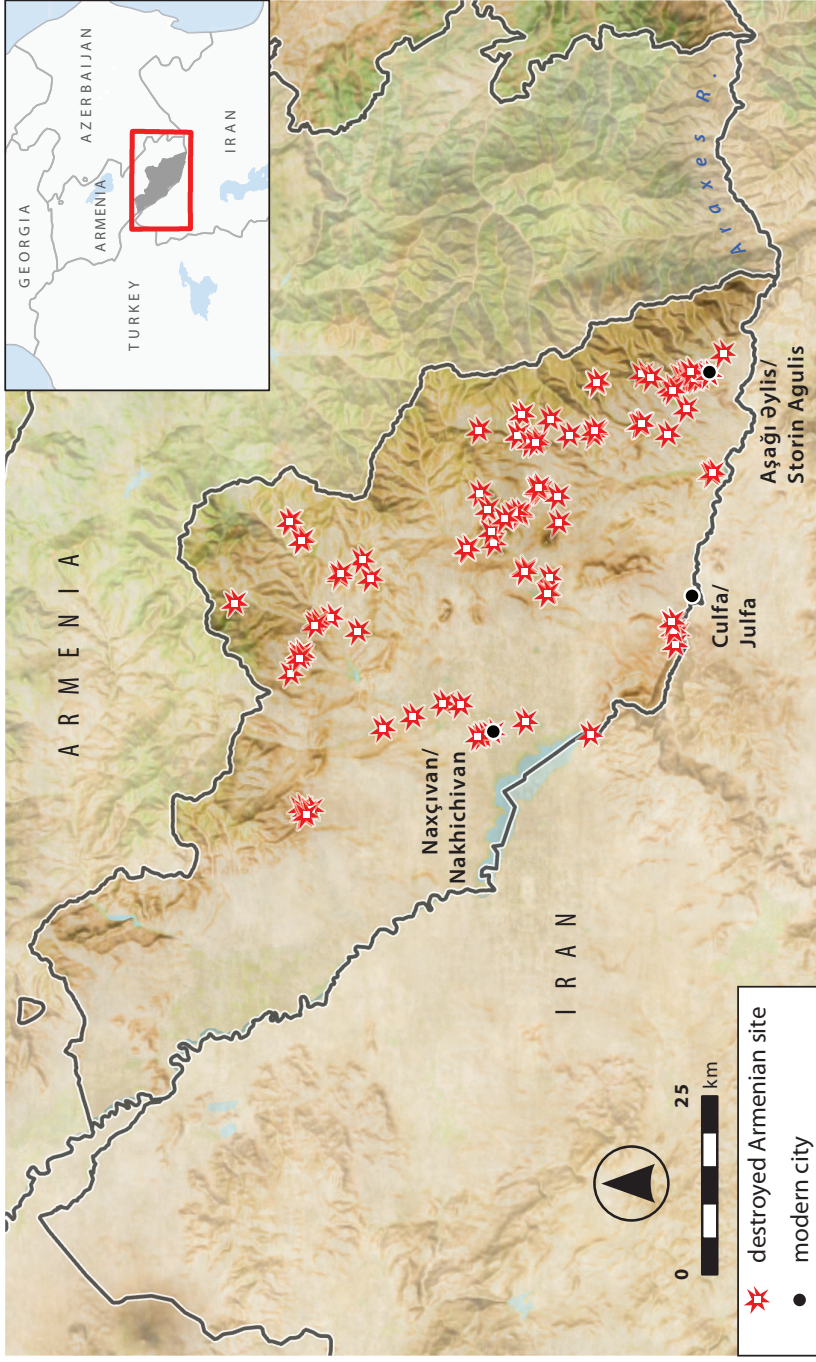


FIGURE 1.1. Map of Armenian cultural heritage sites of the Nakhchivan Autonomous Republic of Azerbaijan destroyed between 1997 and 2010. Created by Ian Lindsay. Map data from Esri, Natural Earth.

heritage practitioners to conceal the existence of Armenian cultural heritage in Azerbaijan through bureaucratic obfuscation.

This chapter explores the historiographic, legal, and political contexts in which the operation of cultural demolition unfolded and addresses the totality, precision, and symbolic violence of this systematic project of “silent erasure.” Though a little-known case in the global context of heritage destruction, the erasure of Armenian cultural heritage from Nakhchivan exhibits both commonalities with other episodes as well as unique features as a state-sponsored venture. Azerbaijan’s program of silent erasure has largely fallen through the cracks of conventions and other legal instruments pertinent to the protection of cultural heritage. It thus raises questions concerning the role of forensic investigations when the prospects of legal accountability or repair appear dim.

Silent Erasure in Context

The program of cultural erasure in Nakhchivan was implemented during an era of uneasy calm following a 1994 ceasefire that ended the First Nagorno-Karabakh War between Armenia and Azerbaijan. The roots of the Nagorno-Karabakh conflict reach deep into the region’s history of rivalry and coexistence.² But its most proximal causes lie in the violence that erupted in the waning days of the USSR. Across the Caucasus, from Chechnya and Abkhazia to South Ossetia and Nagorno-Karabakh, aspirations to independence clashed with revanchist invocations of territorial sovereignty amid the chaos of complete political, economic, and cultural collapse. Moscow faltered, the international community was unprepared, and so in each case the belligerents turned to force. The First Nagorno-Karabakh War resulted in up to thirty thousand fatalities and over a million refugees until an impermanent ceasefire paused active hostilities and stabilized military lines of contact even as it opened a new cultural front.³

In Nakhchivan, just seventy-five kilometers from the territorial contest centered in Nagorno-Karabakh, the material vestiges of Armenian medieval and early modern cultural life still stood in the form of churches and monasteries in various states of preservation, historic cemeteries, and other tangible, immovable cultural forms. The long history of Armenians in Nakhichevan is well documented in the region’s archival, architectural, and archaeological records. Their numbers diminished over the course of the twentieth century, particularly in the years following World War I and the establishment of Nakhichevan as “an autonomous territory under the patronage of Azerbaijan” under the terms of the Turkish-Soviet Treaty of Moscow and the Treaty of Kars in 1921.⁴ In 1916, Armenians made up roughly 40 percent of the population.⁵ Massacres in 1919

claimed some ten thousand Armenian lives.⁶ By 1926, two years after the founding of the Nakhichevan Autonomous Republic, the Armenian population had precipitously dropped to between 11 and 15 percent, or at most 15,600 people.⁷ Discrimination against minority groups in Azerbaijan intensified under Mir Jafar Bagirov, the First Secretary of Azerbaijan's Communist Party from 1933 to 1953, when "Armenians were discriminated against in housing, in access to schools, universities and positions of high social standing; their various cultural institutions were closed and they saw their professional careers hampered."⁸ These discriminatory practices emanating from Baku also reverberated in the Nakhichevan exclave.⁹ By 1979, Armenians made up only 1.4 percent of Nakhichevan's population (3,400 people).¹⁰ By the late 1980s, as tensions grew between Armenians and Azerbaijanis over the status of Nagorno-Karabakh, the Armenian population of Nakhichevan had dropped to under 1 percent, or fewer than two thousand people. By 1999, this figure had diminished to zero.

The Armenian population of Soviet Nakhichevan left behind a medieval and early modern cultural landscape of profound ecclesiastical, artistic, architectural, and communal value. Most of the monuments that survived into the twentieth century dated to the seventeenth to nineteenth centuries, when "vast campaigns" of reconstruction were carried out across the province in the aftermath of earlier waves of destruction.¹¹ Arab occupation, followed by Turkic and Mongol invasions in the Middle Ages, and the deportations of Shah Abbas in the early seventeenth century had greatly diminished the assemblage of medieval Armenian architecture in the region. But textual sources, including colophons and lapidary inscriptions on structures erected during and after a building boom in the seventeenth century, attest to a rich medieval ecclesiastical landscape.¹² The region's Christian religious architecture reflected the full range of Armenian architectural forms, including domed and un-domed churches in their various arrangements and compositions (such as cruciform, radiating, longitudinal, and the particularly widespread single- and triple-naved, un-domed form).¹³

Nakhichevan's twentieth-century heritagescape included familiar features of Armenian architecture. For example, early modern architects revived the striking umbrella dome, "one of the remarkable creations of medieval Armenian architecture," on view at the St. Stepanos church of Agulis/Aylis (N.009), an economic and cultural hub of the seventeenth and eighteenth centuries (figure 1.2).¹⁴ As at other seventeenth-century Armenian churches, several buildings in the region harnessed the chromatic diversity of building materials (predominantly volcanic tuff, but also limestone, felsite, granite, and schist) to create bicolor contrast in alternating bands or checkered patterns, also visible at St. Stepanos (above), the St. Tovma Monastery of Agulis/Aylis (N.010), and elsewhere (figure 1.3).¹⁵ In addition to numerous buildings with lapidary inscriptions bearing historical



FIGURE 1.2. Photograph of St. Stepanos Church of Agulis (N.009). © Argam Ayvazyan Archive, used with permission.



FIGURE 1.3. Photograph of St. Tovma Monastery of Agulis (N.010). © Argam Ayvazyan Archive, used with permission.

information concerning the buildings' sponsors, craftsmen, and founding dates, Nakhichevan boasted several examples of post-medieval figurative sculpture, for instance at the distinctive St. Astvatsatsin Monastery of Tsgghna (N.100), in present-day Channab, whose sculpted iconography integrated Armenian, West European, and Islamic forms.¹⁶ Many of the destroyed monuments of Nakhchivan were important examples of seventeenth century ecclesiastical architecture that blended Byzantine, Armenian, and Islamic styles with vernacular configurations.

In addition to following established conventions, Nakhichevan's early modern architects also contributed in novel ways to the wider Armenian architectural tradition. Compared to other regions replete with Armenian ecclesiastical architecture, buildings in Nakhichevan made more extensive use of brick, particularly for domes and polygonal and cylindrical drums, which elevated the domes and illuminated the interiors. Examples include the St. Kristapor Church in Agulis/Aylis (N.016) and St. Gevorg Church in Nakhchivan City (N.335).¹⁷ In addition, Nakhichevan's architects introduced a new, perhaps expedient, arrangement that was "almost antinomic with tradition" in Armenia (though practiced in Byzantium): the "domed basilica," on view at the seventeenth-century churches of St. Hovhannes-Mkrtich (N.029), St. Nshan (N.043), and St. Yerrordutyun in Agulis/Aylis (N.44), the St. Gregory church of Kyolk in today's Kulus (N.431), the St. Hovhannes church of Chahuk, in present-day Jahri (N.396), and the St. Astvatsatsin church of Tanakert, current Anaqut (N.082).¹⁸

Amid this architectural landscape were iconic engraved memorial stones, or *khachkars*, steles featuring a central cross surrounded by diverse symbols and motifs. Inscribed on the UNESCO list of Intangible Cultural Heritage in 2010, *khachkars* have held profound cultural and religious significance in the Armenian tradition since the early Middle Ages.¹⁹ Once erected, blessed, and anointed, these ornamentally carved cross-stones acquire the holy power of relics, mediating relations between the secular and the divine. Before the campaign of silent erasure, Nakhchivan was home to the world's largest and most well-known field of *khachkars* at the cemetery of Jugha, which boasted some ten thousand cross-stones as of the seventeenth century (figure 1.4).²⁰ Beyond Jugha, *khachkars* dating from the ninth to seventeenth centuries in all their stylistic diversity could be found across Nakhichevan, near churches or monasteries, embedded within their walls, in cemeteries, and on mountain slopes and peaks.²¹

The religious significance of this ecclesiastical landscape waned under the pressures of Soviet anti-religious policies. The most severe campaigns of the Stalin era took place as Armenians were emigrating from Nakhichevan in large numbers. After 1944, the Armenian Apostolic Church regained some of its institutional rights in return for loyalty to Soviet leadership, resulting in the reopening of some churches and seminaries in the ArSSR. But by that time, the Armenian



FIGURE 1.4. Photographs of the Old Jugha Cemetery with khachkars (N.307). © Argam Ayvazyan Archive, used with permission.

population in Nakhichevan had already diminished.²² In short, during the twentieth century, the twin forces of Soviet socialist and Azerbaijani nationalist ideologies worked in parallel to repress both the religious and heritage values attached to the Armenian cultural landscape of Nakhichevan. To the extent that this landscape has come to the renewed attention of global Armenian communities precisely in connection with its destruction, the *khachkars*, churches, and cemeteries of Nakhchivan have come to hold considerable cultural value, symbolizing the existential Armenian narrative of deep historicity and recurrent trauma, of erasure and survival.

An investigation by Caucasus Heritage Watch (CHW) examined the fate of these historic cemeteries, churches, and monasteries that Armenians left behind in Nakhchivan, a landscape suffused with symbols of Armenian “national tradition” as it had come to be mobilized over the eighteenth to twentieth centuries.²³ A distinctive feature of cultural heritage destruction in Nakhchivan is that it occurred not in advance of the total displacement of a minority population, as was the case, for instance, during the Bosnian wars, but after the minority group had already vacated the region, a culminating phase of cultural disappearance more akin to the losses of cultural heritage in eastern Turkey following the Armenian Genocide. When the program of silent erasure documented in this study unfolded, no Armenians remained in Nakhchivan to witness the destruction of their ancestral cemeteries and places of worship.

Open Secrets

The “secret” plays a paramount role in investigative research into state violence, no less so when such violence is directed against the built environment.²⁴ Two “open secrets” surround the erasure of the Armenian cultural landscape in Nakhchivan. One involves attempts to conceal the physical demolition, undertaken in the years after the First Nagorno-Karabakh War. The other “open secret” precedes the campaign of physical erasure, in the form of a Soviet-era project of bureaucratic obfuscation that worked to conceal the very existence of Armenian churches, monasteries, and cemeteries, denying them the status of heritage and foreclosing the possibility of debate, dissension, and protection under law. The demolition of Nakhchivan’s Armenian heritage presents an example of what Lynn Meskell, writing in another context, has discussed as the “structural and slow violence” of delayed heritage destruction enacted through bureaucratic, legal, and infrastructural means.²⁵

Silent Erasure

In 1997, Azerbaijan launched a covert program of cultural destruction in cities, towns, and villages across Nakhchivan, which we detail below based on evidence compiled from satellite imagery, maps, and other data sources. This campaign is inseparable from the conflict between Armenia and Azerbaijan over the disputed enclave of Nagorno-Karabakh, and thus represents a paradigmatic example of what Mehiyar Kathem has dubbed heritage predation—“the process of exploiting cultural resources as a way of conducting politics.”²⁶ Although the precise causal chain remains obscure, the timing of the plan to eliminate all traces of historic Armenian existence in Nakhchivan aligns with a period of intensive peace negotiations between Armenia and Azerbaijan.

The project to eradicate the traces of Armenian cultural life in this exclave of Azerbaijan was an open secret from the start, perceptible to Azerbaijani citizens who would have witnessed firsthand the disappearance of churches, monasteries, and cemeteries from their villages and towns. As Matthew Fuller and Eyal Weizman note, states keep open secrets through techniques that “create a gap between the perception of reality and the reality that is acknowledged and allowed to be spoken about.”²⁷ Typically, this gap is maintained by the force of political terror, which precludes public critique of what is plainly palpable. In Nakhchivan, the gap between what could be perceived and what would be discussed was maintained not only by the repressive, authoritarian politics of the autonomous region’s erstwhile dictator, Vasif Talibov,²⁸ but also by an enduring,

state-sanctioned policy of Armenophobia that may have bred indifference to—or even support for—a quiet program of erasure.²⁹ And indeed, as Fuller and Weizman contend, “the public, generally speaking, supports secret activity” and does not contest it.³⁰ In one rare exception, an Azerbaijani historian in Nakhchivan told a journalist that the destruction of the Jugha cemetery, where school groups once visited, was an affront not only to Armenians but to Azerbaijanis, who regarded it as “part of their history, too.”³¹ The source asked to remain unnamed.

In 1998, eyewitnesses on the Iranian side of the border with Nakhchivan observed the destruction of the medieval Armenian cemetery of Old Jugha [Az. Julfa] (N.307).³² According to a report from the International Council on Monuments and Sites (ICOMOS) written a few years later, the witnesses described the cemetery’s “tombstones being excavated by a crane and loaded onto railroad wagons on the cemetery grounds across the river Araxes. The ripped-up ground was then made even again by bulldozers. This destruction lasted for three weeks and about 800 *khachkars* were taken away.”³³ The secret had leaked. Additional eyewitness video testimony from across the Iranian border emerged in 2005, which captured Azerbaijani soldiers in the act of demolishing Jugha’s remaining cross-stones with sledgehammers.³⁴ Even before such evidence began to circulate widely, Azerbaijani novelist and parliamentarian Akram Aylisli had voiced criticism of the policy of erasure, leaving a paper trail that, years later, would support the work of further revealing the operation. An outspoken critic of the regime, Aylisli penned a letter to then-President Heydar Aliyev on June 10, 1997, stating: “recently it became known to me that in my native village of Aylis [Arm. Agulis] large-scale work is underway [by the military] for the eradication of Armenian churches and cemeteries. . . .” Aylisli urged Aliyev to undertake “urgent measures” to end “this evil vandalism” in this town.³⁵ Simon Maghakyan and Sarah Pickman exposed Aylisli’s letter to global audiences in a 2019 report published in *Hyperallergic*, providing rare testimony to the campaign of erasure from within Azerbaijan.³⁶

In their theory of the secret in investigative research, Fuller and Weizman note that when secrets leak, one government response is to ban the public from perceiving reality firsthand.³⁷ And indeed, Azerbaijan’s initial response to increased global awareness of the destruction of the Jugha cemetery was to restrict public access. In 2005, a Scottish traveler named Steven Sim traveled to Nakhchivan to investigate the condition of Armenian monuments. Police detained him, questioned him at length, and deleted photographs from his camera before expelling him from the country.³⁸ According to the ICOMOS report, by early 2006 Nakhchivan authorities had “stationed a firing range on the Jugha Cemetery and turned the site into a ‘military zone’ so that they could ban foreign missions and observers from entering it.”³⁹ That same year, in August, Azerbaijan barred a

delegation from the European Parliament seeking to evaluate the condition of the Jugha cemetery.⁴⁰ In 2011, the US ambassador to Azerbaijan, Matthew Bryza, was likewise denied access to that same site.⁴¹

But secrets leave material traces, because “every secret operation exists in the world and has to intersect with the world around it.”⁴² These traces can be sensed by the methods of heritage forensics (see chapter 3). An initial effort to sense the traces of “silent erasure” in Nakhchivan emerged in 2010, when the American Association for the Advancement of Science (AAAS) used satellite imagery to confirm the loss of the Jugha cemetery, analysis that CHW later affirmed (figure 1.5).⁴³ Nine years later, Maghakyan and Pickman inferred a pattern of total cultural erasure in Nakhchivan.⁴⁴ Maghakyan expanded the forensic gaze beyond Jugha in a 2021 *Art Newspaper* investigation into destroyed churches and monasteries in Aylisli’s natal village of Aylis.⁴⁵ CHW provided satellite imagery supporting Maghakyan’s investigation that showed the destruction of seven historic monuments in the neighboring settlements of Aylis and Upper Aylis, including the Monastery of St. Tovma, a site first mentioned in written sources at the beginning of the fourteenth century (figure 1.6).⁴⁶

In the face of mounting evidence of destruction, the Azerbaijani government has adopted the tactics of negation, denying the destruction while drowning the

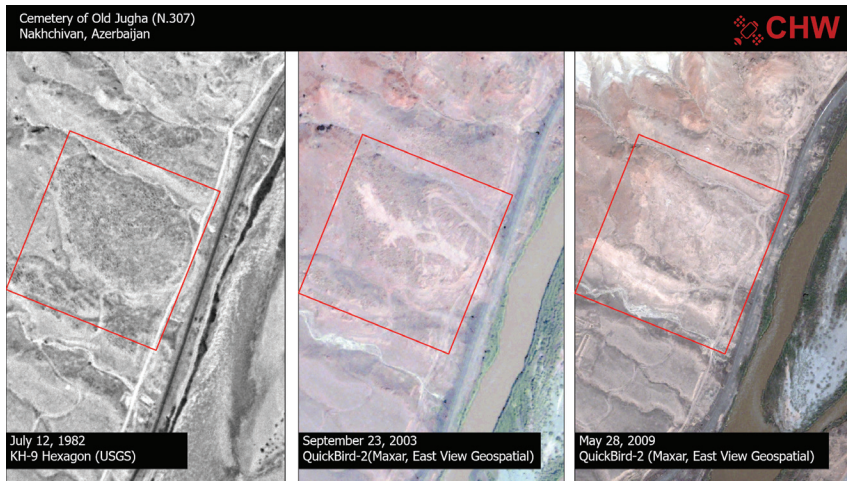


FIGURE 1.5. Erasure of the Old Cemetery of Jugha/Julfa (N.307). US reconnaissance imagery from 1982 (*left*) shows the extant cemetery as a stippled surface of tombstones (image source: USGS). QuickBird-2 imagery from 2003 (*middle*) shows bulldozer scars cutting through the cemetery (image source: Maxar, East View Geospatial). Subsequent QuickBird-2 imagery from 2009 (*right*) shows the former cemetery destroyed (image source: Maxar, East View Geospatial). © Caucasus Heritage Watch 2025.

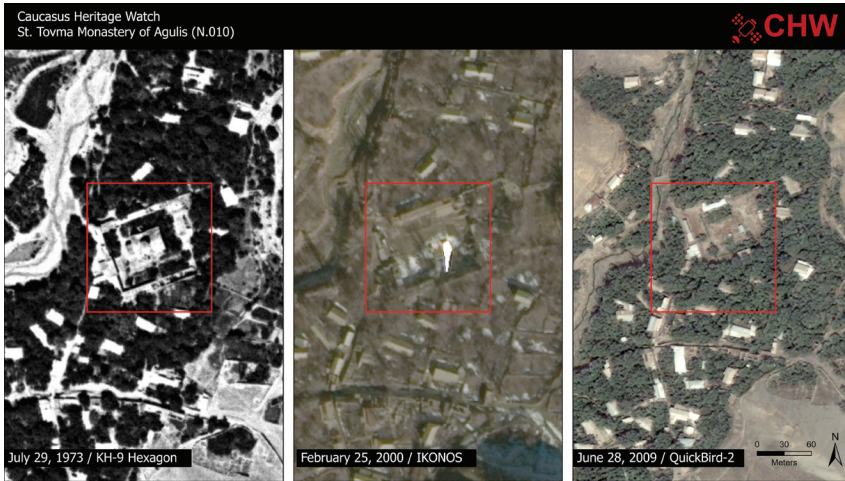


FIGURE 1.6. Erasure of St. Tovma Monastery of Agulis/Aylis (N.010). US reconnaissance imagery from 1973 (*left*) shows the intact monastery (image source: USGS). An IKONOS image from 2000 (*middle*) shows that the central domed basilica had already been destroyed, while several of the surrounding monastic buildings remain (image source: Maxar, East View Geospatial). 2009 QuickBird-2 image (*right*) shows empty lot where the monastery once stood (image source: Maxar, East View Geospatial). © Caucasus Heritage Watch 2025.

story in counter-allegations of cultural destruction perpetrated by Armenians and demonstrably false claims of Nakhchivan's purportedly monoethnic history.⁴⁷ For instance, in 2006, after the release of video footage documenting the destruction of the Jugha cemetery, Azerbaijan's president, Ilham Aliyev, gave a public address, in which he stated: "As you know, some Armenian circles, the Armenian lobby, and some influenced [*sic*] politicians, have recently raised clamor against alleged destruction of Armenian tombstones in Nakhchivan. This is absolutely false and slanderous information. . . . All of the historical monuments located in Azerbaijan have been safeguarded. We have patience and tolerance in Azerbaijan."⁴⁸ That same year, the Embassy of the Republic of Azerbaijan in Georgia released a statement saying, "Armenian cemeteries or other Armenian religious and nonreligious monuments never existed on the territory of Julfa region and Nakhichevan AR [Autonomous Republic] of the Azerbaijan Republic."⁴⁹ The tactics of denial and fabrication have been enduring. Fifteen years later, when invited to respond to Maghakyan's 2021 investigation in *Art Newspaper*, the Azerbaijani ambassador to the UK wrote: "First and foremost, we need to make it clear that there is no such thing as 'Armenian heritage' in the Nakhchivan Autonomous Republic simply because Armenians never lived there."⁵⁰ Such fabrication is a feature of heri-

tage predation, marked by “concerted and deliberate society-oriented forgetting, and politically orchestrated historical revisionism.”⁵¹ Secrecy and denial entrap Azerbaijani politicians and diplomats into a manifestly false historical narrative that is objectively refuted not only with available satellite imagery and elementary historiography, but with Azerbaijan’s own archive of Soviet-era topographic maps (see chapter 3). As Fuller and Weizman note, “negation aims to create a miasma of inconclusiveness to sap the capacity to work toward facts.”⁵²

As of 2021, the traces of Azerbaijan’s wider program of “silent erasure” had yet to be sensed beyond Old Jugha and Aylis. Through a year-long investigation, CHW documented the open secret in a detailed 433-page report.⁵³ Using a large corpus of declassified American satellite imagery, Soviet maps, and scholarly sources, we revealed the traces of a systematic program of cultural erasure that eliminated 98 percent of the Armenian religious and cultural sites still surviving in Nakhchivan during the late Soviet years.

Omission and Obfuscation

The open secret of cultural destruction in Nakhchivan has deep historic roots and rests on earlier layers of heritage politics. Based on our analysis of official heritage inventories, it appears that for decades authorities in Soviet Azerbaijan systematically repressed the region’s medieval and early modern Armenian monasteries, churches, chapels, cemeteries, and other cultural remains as threats to Azerbaijani historical polemics and territorial claims. The bureaucratic operation required to keep this particular open secret entailed, in the first instance, the omission of most Armenian cultural monuments from official inventories of the region’s cultural resources, thereby diminishing their protection under Azerbaijani law. An analysis of this bureaucratic exclusion, which worked to efface Armenian cultural practice in Nakhichevan (and the material proof of Armenian-Azerbaijani coexistence), provides important historical, political, and legal context for the later policy of total erasure.

In the Azerbaijan Soviet Socialist Republic’s (AzSSR) 1968 heritage inventory, only five churches and monasteries are listed in Nakhichevan, a small fraction of the roughly seventy such monuments that were still standing in the late Soviet years.⁵⁴ This figure saw a modest increase to eight in the 1988 list and then twelve in the 2001 inventory.⁵⁵ Although Azerbaijan’s campaign of erasure had already commenced when the 2001 list was ratified, our satellite investigation shows that at least twenty-three, and possibly as many as forty-six, Armenian churches and monasteries were still standing in Nakhchivan after 2001. Omission from the official heritage registry denied medieval and early modern sites of Armenian religious practice the official status of heritage. Notably, the 2001

inventory, which remains in force, still includes twelve churches and monasteries even though they have all been destroyed.

The deliberate exclusion of Armenian heritage sites from Nakhichevan's heritage inventories contrasts markedly with the cultural lists assembled by the authorities of the AzSSR in the NKAO, bringing the strategy of omission in the former region into starker relief. A precise statistical comparison over time is not possible due to limitations of access to the inventories. But the available evidence demonstrates that in the NKAO, over time, heritage bureaucrats more readily accommodated Christian monuments in site registries than they did in Nakhichevan. While the 1968 inventory included only eleven monuments listed as "temple" or "church" in the NKAO, that figure rose to seventy-two in the 1988 list, affirming a Christian heritage landscape for the region.⁵⁶ Comparison with the current list, compiled in 2001, is difficult due to changes to the district names and boundaries.⁵⁷ But suffice it to note that Azerbaijan's post-Soviet heritage inventory for the wider Karabakh region (the unrecognized NKR and surrounding territories) contains no fewer than 135 Christian monuments.

One reason for this striking increase may have been a shift in the official state historiography concerning Azerbaijani ethnogenesis.⁵⁸ During the late 1930s, historians of the AzSSR, driven by Soviet nationalities policies that encouraged union republics to discover the primordial roots of their titular nationalities, traced Azerbaijani ethnogenesis to a number of ancient groups residing in the territory of modern Azerbaijan and northwestern Iran, such as the Medes, Caspians, Caucasian Albanians, and Udis. Departing from earlier accounts that linked the Azerbaijanis to the Oghuz Turk migrations of the ninth century and the rise of the Seljuk Empire in the eleventh century (thus positioning them as relative latecomers to the region), the new story of ethnogenesis "denounced the ancestral connection to the Oghuz Turks" and held that the Azerbaijani ethnic body amalgamated from disparate ancient predecessors.⁵⁹ In the new Soviet historiography, this ethnos was later Turkified with the arrival of Turkophone populations, a mere linguistic shift within an otherwise ancient substrate population.⁶⁰ Beginning in the 1960s, however, Soviet-Azerbaijani historian Ziya Bunyatov, building on the earlier work of orientalist Zelig Jamposkii, advanced a different origin story that moved the Caucasian Albanians to the very center of Azerbaijani ethnogenesis, further downplaying Turkic influence in the formation of the nation. As attested in ancient Greco-Roman texts, the Caucasian Albanians converted to Christianity in the fourth century CE, and the polity persisted as a Christian kingdom ruling eastern Caucasia until its decline under caliphal rule over the eighth and ninth centuries.⁶¹ For decades, this obscure ancient people, in spite of—or more likely because of—its limited attestation in

medieval sources, has occupied the very center of what Sebouh Aslanian and Artyom Tonoyan have called the “paper wars” between Armenian and Azerbaijani historians.⁶²

By 1988, when the NKAO’s 1988 monument list was compiled, the theory claiming Azerbaijani descent from Caucasian Albanians had become official historical doctrine—a position Azerbaijan maintains today despite its widespread rejection by international scholars.⁶³ In grounding ethnogenesis in Christian Caucasian Albania, Azerbaijan’s “national mythopoesis” created an historically deeper story of local autochthony, more comparable to the well-documented long histories of neighboring Georgians and Armenians.⁶⁴ It also allowed Azerbaijani authorities to appropriate hundreds of Armenian churches and monasteries in Azerbaijan to this fictive natal culture. The narrative had the distinct advantage of permitting the entry of Christian monuments, now the authorized patrimony of the Azerbaijani nation, onto the state inventory without recognizing them as Armenian.

While earlier heritage lists for Azerbaijan only had recourse to omission as a strategy for addressing the large Armenian heritagescape, the 1988 heritage list for the AzSSR introduced the bureaucratic obfuscation of reality through a combination of appropriation and semantic confusion. Armenian monuments appear in the inventory for the NKAO in considerable numbers, but they remained cloaked under appellations that obscured and concealed their identification as such. The monuments were variously named “temples,” “churches,” “monasteries,” “Albanian temples,” or “Albanian churches,” with “Albanian” appearing as the only ethnic modifier.⁶⁵ It is not clear whether the terminological variation on the lists reflects mere bureaucratic inconsistency in the labeling of churches that, according to official ideology, could be nothing other than Caucasian Albanian, or a meaningful representation of some perceived historical or art historical difference among the structures.⁶⁶ The former seems more likely in the context of Soviet Azerbaijani historiography. Indeed, some list-makers appear to have approached the task of registering Christian monuments with a degree of uncertainty, which they may have reconciled through ambiguity.⁶⁷ In itself, the use of the generic term “temple” (Az. *məbəd*) in 1968 to describe medieval and early modern churches had already worked semantically to distance the structures from Armenian ecclesiastical architecture, since Armenians do not refer to their churches as temples. But the 1988 list accomplished that goal more directly by naming seventeen of the seventy-two monuments of the NKAO as “Albanian temples.” These changes in the 1988 list have reverberated in the subsequent heritage lists of the Republic of Azerbaijan, including the 2001 list, which remains current today. Whatever the reasons for the terminological variation, it is clear

that even as the numbers of churches on Azerbaijan's heritage list increased, the semantic denial of their Armenian affiliation was absolute, a bureaucratic process of politically motivated historical negation that effaced centuries of Armenian cultural life.⁶⁸

The dramatic increase in the listing of Christian heritage in the NKAO between 1968, 1988, and 2001 contrasts sharply with heritage administration in Nakhichevan. While shifts in naming conventions took place there as well (two "Albanian temples" appear on the 1988 and 2001 lists),⁶⁹ the theory of Caucasian Albanian origins was evidently not sufficiently elastic to extend as far west as Nakhichevan, a region far from the putative Albanian homeland, leaving omission as the preferred option for obscuring the region's multicultural, multiconfessional past.

In sum, inventory exclusion, appropriation, and obfuscation worked in concert to obscure the open secret that residents of Nakhichevan inhabited a formerly multicultural landscape where Armenians had dwelled, worshipped, and buried their dead for centuries, alongside Turkic-speaking Muslim neighbors, before the Armenian exodus from the region during the twentieth century. Azerbaijan's heritage practitioners resorted to heritage predation to rewrite the past. If in Nagorno-Karabakh the primary predatory strategy was to deny the existence of Armenian monuments through semantic ambiguity (e.g. "temple") and appropriation (e.g. "Albanian temple"), in Nakhichevan the main concern was to entirely deny them the status of heritage. The intentionality of the administrative omission is borne out by the precision and totality of the later campaign of physical erasure (detailed below); despite exclusion from state heritage inventories, Azerbaijani authorities in Nakhchivan knew precisely where the Armenian churches, monasteries, and cemeteries were located, and were able to mobilize that knowledge, once a tool for bureaucratic banishment, into a powerful weapon of cultural erasure.

Assessing Destruction

We began our investigation with a corpus of 159 medieval and early modern monasteries, churches, chapels, and cemeteries drawn from the inventory of historian Argam Ayvazyan, of which 127 could be geolocated (see chapter 3) (figure 1.7A). Using high-resolution satellite imagery, we were able to assess the condition of 110 of these 127 sites. CHW found that 108 of the 110 geolocated sites (98 percent) were erased (figure 1.7B). Figure 1.7C-F provides a breakdown of our findings for each type of site (cemetery, chapel, church, or monastery).

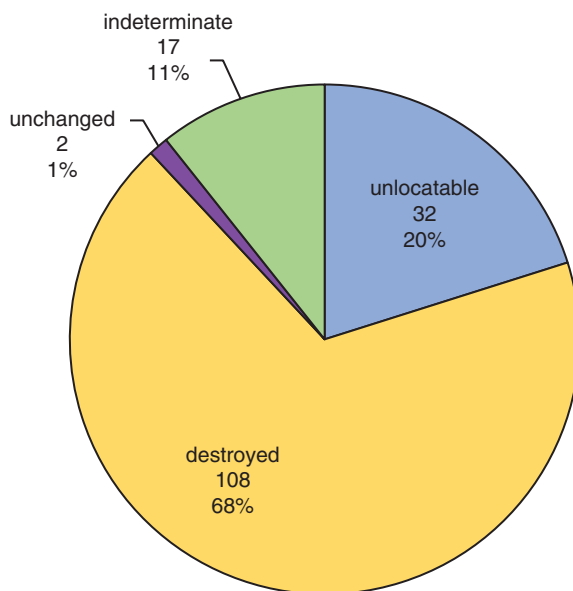


FIGURE 1.7A. Summary status of CHW's inventory of Armenian heritage sites in Nakhchivan. © Caucasus Heritage Watch 2025.

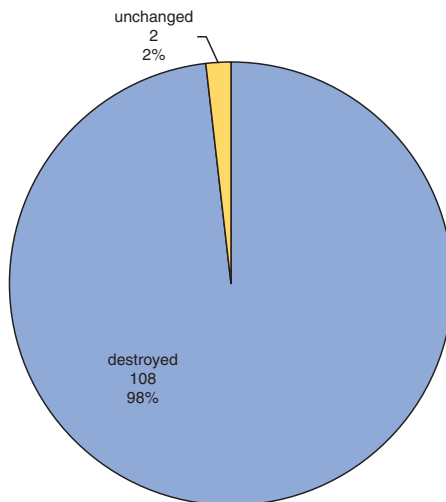


FIGURE 1.7B. Status of the 110 destroyed and unchanged Armenian heritage sites in Nakhchivan that CHW assessed. © Caucasus Heritage Watch 2025.

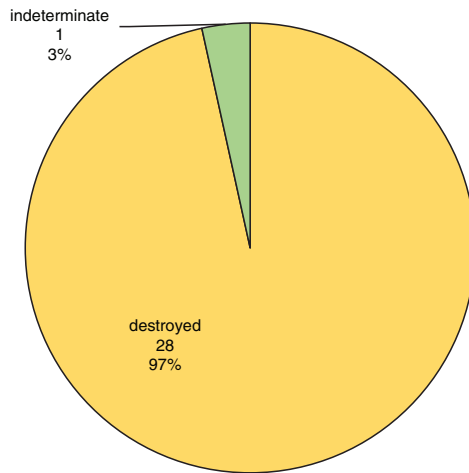


FIGURE 1.7C. Summary assessment of Armenian monastery sites in Nakhchivan. © Caucasus Heritage Watch 2025.

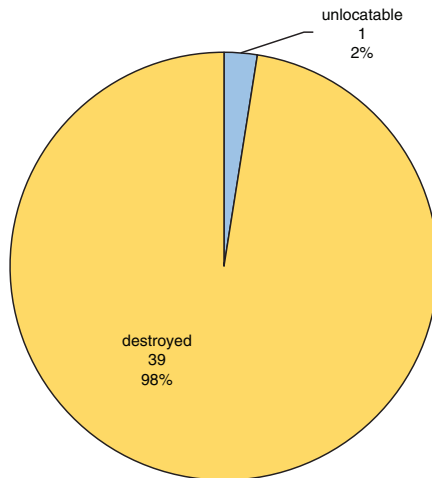


FIGURE 1.7D. Summary assessment of Armenian church sites in Nakhchivan. © Caucasus Heritage Watch 2025.

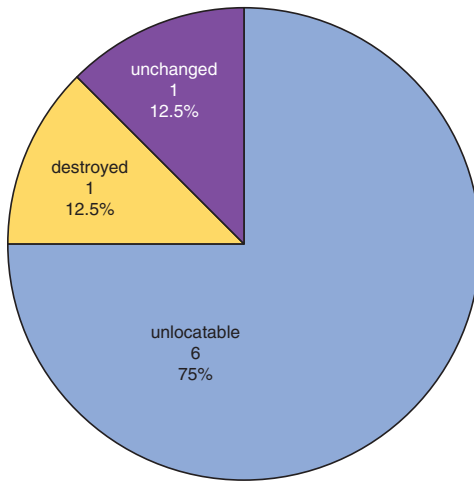


FIGURE 1.7E. Summary assessment of Armenian chapel sites in Nakhchivan.
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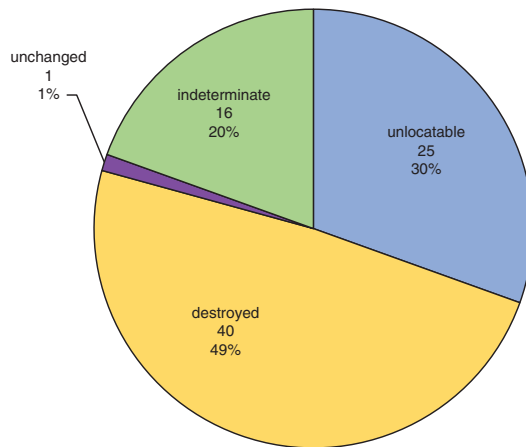


FIGURE 1.7F. Summary assessment of historic Armenian cemetery sites in Nakhchivan. © Caucasus Heritage Watch 2025.

Timing of the Destruction

As we have seen, Armenian heritage in Nakhchivan had already been excluded and reduced during the Soviet era through slow, bureaucratic violence. But it was not the target of a systematic program of total cultural erasure until demolitions began in 1997, six years after Azerbaijan gained its independence from the Soviet Union. CHW’s satellite analysis indicates that Azerbaijan’s organized program of heritage destruction began two to three years prior to our earliest satellite imagery from 2000, putting the start date sometime in 1997. This accords closely with evidence from the telegram sent by Aylisli to Aliyev in June 1997 decriing the destruction of Armenian monuments in his hometown of Aylis (discussed above).⁷⁰ And it aligns with the first eyewitness account of the destruction of the Jugha cemetery in 1998, detailed previously.

Using satellite data, we defined date ranges for the destruction of all 108 erased sites. In twenty-three cases, the date range for destruction is established by modern satellite imagery that provides both “before” and “after” views of the site. As the bar graph in figure 1.8 shows, the date ranges are often quite wide, stretching across five years or more (orange bars) due to the paucity of satellite coverage.⁷¹ In an additional fifty-nine cases, although we lack twenty-first-century satellite

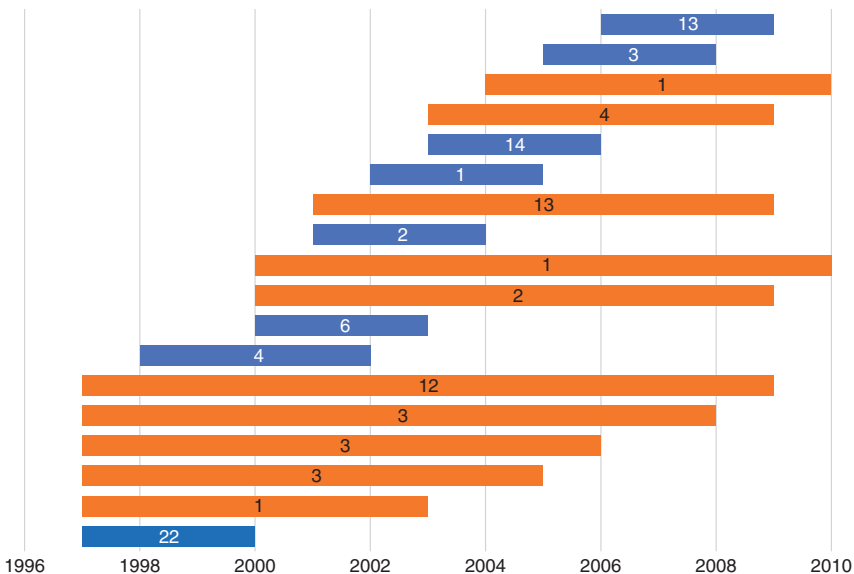


FIGURE 1.8. Chronology of the erasure of Armenian cultural heritage in Nakhchivan, Azerbaijan based on available satellite imagery. Blue bars represent short, three-to-five-year spans and orange bars represent five-or-more-year spans. Created by Adam T. Smith. © Caucasus Heritage Watch 2025.

imagery for the “before” view, we are able to estimate the date of destruction based on taphonomic details in satellite imagery that testify to the recency of destruction (such as debris piles, scoured earth, the absence of recolonizing vegetation, etc.). Thus, where remnants of destruction remain clearly visible in the “after” image, we interpret the destruction event as “recent.” By “recent,” we mean within two to three years of the date of image capture, after which indications of destruction activity are likely to have been ameliorated either by the systematic removal of debris piles or by the action of erosion and revegetation. Finally, in twenty-six cases, modern satellite imagery shows only the destroyed site (the “after” image), with no visible remains of the destruction process itself that would allow us to provide a more refined date range for demolition.

Our satellite data resolves the destruction of sixty-five sites into several, relatively tight, three- to four-year spans (blue bars in figure 1.8). From 1997 to 2000, no fewer than twenty-two heritage sites were destroyed. From 1998 to 2003, between four and thirteen additional sites were erased, while from 2003 to 2006 at least fourteen sites were wiped out. Between 2005 and 2009 no fewer than sixteen sites disappeared. Two churches (N.175 and N.112) have destruction date ranges that include 2010. Although we suspect that these sites were most likely demolished before 2009, we lack the data to say so definitively. By 2010 at the latest, the erasure of Armenian cultural heritage in Nakhchivan was complete. Taken together, the evidence indicates that all 108 Armenian heritage sites were destroyed in, at most, a fourteen-year period from 1997 to 2010. The specific mechanisms for the implementation of this policy of erasure remain uncertain. But there are a number of key features that point directly to the culpability of the Azerbaijani state.

Total Destruction

The most distinctive feature of the destruction in Nakhchivan was its totality, by which we mean both the completeness of the project as a whole (leaving virtually no site intact), as well as the fastidiousness of the obliteration of each individual monument (leaving scarcely any trace). With regard to the former, virtually the entire inventory of Armenian heritage was targeted, demolished, and expunged with ruthless efficiency. We documented two remote sites, already in advanced stages of ruination, that appear to have eluded the bulldozer and may remain in the same condition they were during the late Soviet years (assessed as “unchanged”).⁷² But otherwise, all evidence of the region’s historical Armenian community has been excised from the landscape. Indeed, the program was pursued with such bureaucratic rigor that in several instances demolition crews were deployed into already abandoned and remote mountain villages to surgically take out the ruins

of an Armenian church. The village of Mijin Ankuzik (Az. Anzur) was already in ruins in 1973. Only a winding dirt road and two buildings for animal husbandry testify to activity in the twilight of the Soviet Empire. By 2009, the roads were fading from disuse and the collective farm a long-neglected ruin, but a satellite image from November 11 of that year shows that the remains of the village's Armenian church (N.223), last renovated in the seventeenth century, had been recently erased, completing the ruination of the village (figure 1.9).⁷³

Likewise, the much larger village of Nerkin Ankuzik (Az. Ashghykand) was also a crowd of ruins by 1973, and the foundation of the eleventh- or twelfth-century Armenian church was still extant in 2001 (figure 1.10).⁷⁴ Most of the crumbling buildings still remain today, except for a single ruin that has been erased: the church (N.227). Such attention to excising even the most obscure vestiges of Armenian inhabitation, a phenomenon that attests to the zealous way in which the policy was implemented, indicates that erasure was not a spontaneous or distributed project: only organs of the state would have known the sites as Armenian and been able to project destruction into the remote mountains.

Totality also describes the destruction objective at individual sites. Churches and cemeteries were not merely vandalized or damaged and then left to ruin, but completely obliterated from the landscape. Sites like the Mesrop Mashtots Monastery of Mesropavan (Az. Nasirvas; N.124), which had stood since before the fif-



FIGURE 1.9. Erasure of the Church of Mijin Ankuzik (Az. Anzur; N.223). 1973 US reconnaissance imagery (*left*) shows surviving remains of the ruined church (image source: USGS). QuickBird-2 imagery from 2009 (*right*) shows the site scrubbed of any remains or debris (image source: Maxar/East View Geospatial). © Caucasus Heritage Watch 2025.



FIGURE 1.10. Erasure of the Church of Nerkin Ankuzik (Az. Ashaghykand; N.227). 2001 IKONOS imagery (*left*) shows surviving remains of the ruined church (image source: Maxar, East View Geospatial). QuickBird-2 imagery from 2009 (*right*) shows the site now empty (image source: Maxar/East View Geospatial). © Caucasus Heritage Watch 2025.

teenth century when it was first renovated, were not just knocked over; they were razed and the empty site scoured (figure 1.11).⁷⁵ The seventh-century Karmir Monastery of Astapat (N.328) has been completely denuded (figure 1.12), every block of this complex hauled away after centuries of preservation (the monastery was restored seven times between the thirteenth and nineteenth centuries) (figure 1.13).⁷⁶ By 2010, virtually all physical traces of Armenians in Nakhchivan were effectively gone. The totality of erasure was integral to the state's strategy.

Reuse and Resignification

In most cases, the land on which Armenian monuments once stood remained vacant plots well into our current decade, but in five instances, mosques or other official buildings were erected directly atop the foundations of an erased Armenian site, a form of symbolic violence to follow on the physical violence of demolition. For example, in 2014 a mosque was erected on the vacant plot where the St. Tovma Monastery of Agulis (Az. Aylis) once stood (N.010, figures 1.3, 1.6). St. Tovma was an important religious center of medieval and early modern Armenia, first mentioned in a colophon of 1375, boasting interior frescoes painted by a prominent seventeenth-century Armenian poet-painter, Naghash Hovnatan.⁷⁷ Likewise, perched on a hill in the former village of Berdak (Az. Dirnis), the St. Hovhannes

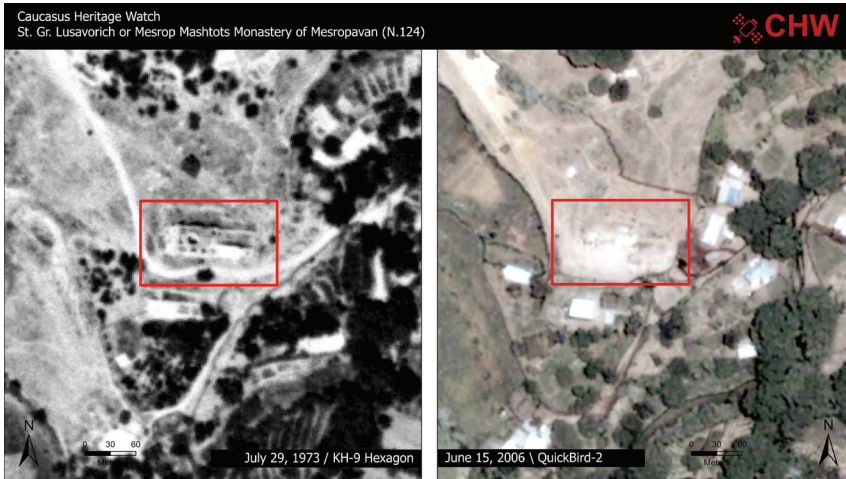


FIGURE 1.11. Erasure of the Mesrop Mashtots Monastery of Mesropavan (Az. Nasirvaz; N.124). 1973 US reconnaissance imagery (*left*) shows surviving remains of the monastery (image source: USGS). QuickBird-2 imagery from 2006 (*right*) shows the site denuded (image source: Maxar/East View Geospatial). © Caucasus Heritage Watch 2025.



FIGURE 1.12. Erasure of the Karmir Monastery of Astapat (Az. Nehram; N.328). 1973 US reconnaissance imagery (*left*) shows surviving remains of the monastery (image source: USGS). QuickBird-2 imagery from 2003 (*right*) shows the site now empty (image source: Maxar/East View Geospatial). © Caucasus Heritage Watch 2025.



FIGURE 1.13. Photograph of the Karmir Monastery of Astapat (N.328).
© Argam Ayvazyan Archive, used with permission.

church (N.085), with *khachkars* dated to 1625 embedded in its ruined walls, was destroyed by 2000 (figure 1.14).⁷⁸ In its place, the Allahshukur Mosque was inaugurated in December 2019, built in honor of the Sheikh ul-Islam and Grand Mufti of the Caucasus, Allahshukur Pashazadeh.⁷⁹

But nowhere is the bombast of replacement more cynically visible than at the former New Armenian cemetery of Nakhchivan City (N.337). The cemetery, set atop a tall hill, once included over one thousand tombstones dating from the eighteenth to the twentieth century.⁸⁰ Soviet cartographers marked the site on topographic maps from the 1940s to 1990, and an American reconnaissance satellite captured an image of it in 1973 (figure 1.15 left). By February 3, 2000, the cemetery had been erased (figure 1.15 middle). A truck, visible in an early IKONOS image, sits atop terrain newly bulldozed and graded. Construction at the site began soon thereafter, and in 2014, a monument opened atop the scattered bones of the erased Armenians. The Museum of the National Flag is reached by a grand stairway that rises across terraces of orderly, geometric landscaping (figure 1.15 right). The museum exhibits the paraphernalia of the state—historic flags, coins, and maps—while atop the square waves an enormous, two-hundred-square-meter



FIGURE 1.14. Erasure of St. Hovhannes Church of Berdak (Az. Dirnis; N.085). 1973 US reconnaissance imagery (*left*) shows surviving remains of the ruined church (image source: USGS). IKONOS imagery from 2000 (*middle*) shows the denuded site (image source: Maxar/East View Geospatial). Subsequent WorldView-2 imagery from 2021 (*right*) shows the mosque that now occupies the former church site (image source: Maxar/East View Geospatial). © Caucasus Heritage Watch 2025.



FIGURE 1.15. Erasure of the New Armenian cemetery of Nakhchivan City (N.337). 1973 US reconnaissance imagery (*left*) shows the site of the cemetery as a surface stippled by gravestones (image source: USGS). IKONOS imagery from 2000 (*middle*) shows the graded site with a truck still parked atop the former cemetery (image source: Maxar/East View Geospatial). Subsequent WorldView-2 imagery from 2021 (*right*) shows the State Flag Square and Museum that now occupies the former cemetery site (image source: Maxar/East View Geospatial). © Caucasus Heritage Watch 2025.

flag of Azerbaijan. It is a blaring monument to the nation-state that seems to declare itself loudly in order to drown out the ghosts of the past.⁸¹

Armenian Heritage in Azerbaijani Law

In 1998, as the program of erasure was already underway in Nakhchivan, Azerbaijan passed two relevant laws pertaining to the protection of cultural property: the Law on the Protection of Historical and Cultural Monuments and the Law on Culture, which, taken together, offer an encompassing understanding of cultural property. A key provision of the Law on Culture, Article 35, contains loopholes. In the version of this law that was in force as the campaign of silent erasure unfolded (it has since been revised), Article 35 lays out the different degrees of protection afforded to cultural resources, from the prevention of destruction, to conservation, restoration, and finally “a special degree” of protection. The first of these four degrees prohibits the dismantling or alteration of cultural resources “until their historical significance and value are determined.”⁸² This would appear to offer a preliminary level of protection regardless of a heritage site’s registration status. But Article 35, like many national property laws, does provide a legal framework for the destruction of cultural resources. It stipulates that demolition or alteration is prohibited “without the agreement of relevant executive authorities,” implicitly allowing for the demolition of cultural properties that state authorities deem lacking in historical significance or value. Moreover, the article specifies that a “special degree of protection applies to objects of national cultural property included in the State List of the national cultural property of the Republic of Azerbaijan,” thereby strongly delimiting the obligation to protect only to those sites included on the national inventory.⁸³ In sum, not only are non-listed cultural properties deprived of “special” protection, but they can be approved for destruction or alteration if executive authorities determine that they are not sufficiently valuable to merit state protection. It is not known whether authorities in Nakhchivan secured the executive approval required by Article 35 for the demolition of Armenian sites in the region, including the twelve Armenian sites listed on the 2001 official state monuments inventory.

Although unlisted Armenian heritage sites had minimal legal protection, even listing and “Albanification” did not protect them from demolition. The two Armenian churches included on the 2001 list as “Albanian temples”—one in Kyolk (Az. Kulus; N.431) and another in Nors (Az. Nursu; N.446)—were both destroyed by 2009, and so too was the medieval cemetery of Jugha, which, though not included on the monument lists, was spuriously claimed by some Azerbaijani historians as deriving from Caucasian Albanian antecedents.⁸⁴ Nevertheless, the unlisted

status of Nakhchivan's Armenian heritage sites undoubtedly eased Azerbaijan's policy of total erasure. Likewise, it was this strategy of bureaucratic banishment that necessitated the complex methods of site identification and geolocation that CHW had to adopt to establish the historical presence of churches, monasteries, and cemeteries that no longer existed (see chapter 3).

Global Significance

Projects of deliberate heritage destruction enacted with the goal of erasing the collective memories, histories, and cultural practices of target groups have taken different forms. Such programs commonly unfold in the maelstrom of armed conflict, most infamously exemplified by the Bosnian War of 1992 to 1995, the Syrian Civil War of 2011 to 2024, and the armed rebellion of Islamic groups in Mali in 2012, each of which profoundly shaped scholarly and legal understandings of intentional heritage abuse.⁸⁵ But the purposeful targeting of cultural sites associated with unwanted minorities or marginalized groups has also developed outside of active hostilities. In some cases, heritage destruction was a harbinger of conflict, as seen in the riotous destruction of Jewish properties during the November Pogroms (more commonly known by the Nazi euphemism, *Kristallnacht*), in 1938.⁸⁶ In other cases, heritage destruction follows the expulsion of a people, as in the slow dispossession, damage, and demolition of thousands of Armenian cultural properties in Turkey in the decades following the Armenian Genocide, the dispossession and demolition of Palestinian villages after 1948, and the destruction, damage, and reuse of Greek Cypriot monuments in northern Cyprus after 1974.⁸⁷ Currently, China's "systematic and intentional campaign to rewrite the cultural heritage of the Xinjiang Uyghur Autonomous Region" through the destruction of a staggering number of mosques and cemeteries stands as the most expansive program of cultural erasure yet documented.⁸⁸

Apart from the presence or absence of armed conflict, projects of cultural erasure also differ in their intended visibility to both domestic and global audiences. The mediated spectacles of destruction enacted by non-state actors such as the Islamic State of Iraq and the Levant (ISIL) in Syria contrasts sharply with the off-camera procedures of the state—from Turkey and Cyprus to Israel, China, India and beyond—to redesignate, repurpose, or rebuild unwanted properties with bulldozers, deeds, and "development" plans.⁸⁹ But the state does not always shy from spectacle. The terror of *Kristallnacht* was meant to be visible as a highly effective means to force Germany's Jewish community into exile and intimidate those who remained. Media organizations across the world reacted in horror to news of the pogrom, and foreign diplomats reacted with shock.⁹⁰

Finally, cases of targeted heritage destruction differ in their relation to atrocities that go by other names, from war crimes, to crimes against humanity, to genocide. It is typically these associations that bring some cases of cultural heritage destruction (but not others) to wider audiences. Cultural destruction played a central role in Raphael Lemkin's formulation of the concept of genocide, and his thinking on the cultural "technique" of genocide was profoundly influenced by both the Holocaust and the Armenian Genocide.⁹¹ While the two cases differ, in both contexts cultural destruction was inseparable from the gravest of crimes against human life. The ICTY included attacks on cultural property in a number of their prosecutions, including those against *Strugar*, *Tadić*, *Blaškić*, and *Kordić*, among others.⁹² Although the destruction of cultural heritage at the ICTY was always considered in the context of other offenses involving physical harm, it featured prominently in the *Strugar* case, which concerned criminal responsibility for the attacks on the Old Town of Dubrovnik.⁹³ In the case against Radislav Krstić, the tribunal noted that the destruction of cultural or religious institutions could be considered as an element to prove the *intent* to commit the crime of genocide.⁹⁴ The destruction of Bosniak heritage became the new "paradigm of intentional cultural property destruction."⁹⁵ In this and many of the other cases of heritage destruction noted above, acts of cultural erasure precede, accompany, or follow on genocidal policies carried out through physical, biological, and other extreme "techniques" of erasing cultures (e.g., China's "reeducation" camps in Xinjiang).⁹⁶ The noteworthy 2016 decision of the ICC to convict Ahmed al-Faqi al-Mahdi of war crimes for his destruction of nine mausoleums and a mosque in Timbuktu stands as a new precedent for the prosecution of cultural heritage destruction on its own.⁹⁷

While the silent erasure of Armenian cultural heritage in Nakhchivan follows certain global patterns, it departs from other cases of heritage destruction that both preceded and followed it. Azerbaijan's campaign took place not amid the turmoil of war but during an uneasy ceasefire between Armenia and Azerbaijan, in a region at some distance from the primary zone of conflict in Nagorno-Karabakh. In this it resembles other cases of "uneventful" heritage destruction carried out under conditions of non-war (a term we use instead of "frozen conflict," as noted in the introduction) where both war and peace fall short. If the destruction of Uyghur cultural sites in Xinjiang provides an example in which cultural heritage abuse unfolds alongside other repressive measures against unwanted minorities, more commonly heritage destruction under conditions of non-war occurs after such groups have evacuated their homelands, typically under direct, coercive conditions, as was the case in Turkey, Palestine, and Cyprus. Nakhchivan follows this latter pattern, having been largely depopulated of its Armenian population in an initial wave of out-migration between 1916 and 1926 and further declining to

zero over the course of the Soviet period. In all such instances of destruction after departure, cultural erasure aims not to further assimilate an existing minority but to negate or render mute claims to territory, history, and belonging that can only be made from a position of displacement and diaspora. This is repression at a remove.

If, in its aims, the case of Nakhchivan resembles other instances of heritage destruction under conditions of non-war, it differs from all other contexts in two very important respects: totality and secrecy. The most striking finding of our research is the sheer completeness of the destruction. The absolute number of Armenian monuments destroyed in Nakhchivan falls well short of the vast inventory of synagogues destroyed during the Holocaust, the numerous mosques demolished during the Yugoslav Wars, the staggering number of Uyghur heritage sites currently under attack in western China, or the archaeological and religious sites destroyed and looted by ISIL.⁹⁸ But amongst this rogues' gallery of heritage atrocities, Azerbaijan alone achieved the absolute obliteration of virtually *all* traces of the enemy Other's cultural and religious monuments—a dubious distinction among state and non-state perpetrators of intentional heritage destruction alike. In other cases of heritage abuse under conditions of non-war, whether in Turkey, Israel, or Cyprus, dominant groups engage with the cultural heritage of the displaced Other in a variety of ways, including vandalism, damage, appropriation, spoliation, reuse, and benign neglect, as well as outright destruction.⁹⁹ The singular focus on destruction in Nakhchivan points to profound “heritage anxieties” in Azerbaijan, by which we mean the stress on a national government caused by fear that unwanted heritage could be mobilized as a resource to threaten territorial sovereignty and legitimate historical narratives that contravened state polemics.

In addition to its totality, the singularity of the case also rests on the government of Azerbaijan's extreme concern to conceal destruction. Previously we discussed how the government maintained the open secret of heritage erasure by restricting access to sites like Old Jugha and by negationist tactics that obscure Nakhchivan's multicultural past.¹⁰⁰ Azerbaijan's approach thus differs entirely from the mediatic spectacle that ISIL performed precisely in order for its destructive acts to be seen. Moreover, Azerbaijan's approach also differs from other contexts that had no need for spectacle, such as in Turkey, where decades of quotidian reuse, vandalism, damage, appropriation, and destruction of Armenian cultural sites has played out in the open, visible to tourists, researchers, and descendants of survivors alike. A state impaired by “heritage anxiety” must take extra measures to conceal the banal operation to rewrite its past. It is worth emphasizing that the clandestine program took place before the era of social media, and that the authoritarian climate in Nakhchivan would have prevented concerned

eyewitnesses from speaking out. Until the release of CHW's investigation in September 2022, Azerbaijan was quite successful in concealing the magnitude and totality of the program of silent erasure from global audiences.¹⁰¹ Decades on, it has also remained impervious to accountability in any legal or institutional setting, both domestically and internationally.

Accountability Deferred

The totality of destruction in Nakhchivan clearly indicates a systematic, coordinated state-sponsored campaign to eradicate all traces of Armenian communal and religious presence, and thus Armenians themselves, from the history of the region. The case further complicates already thorny debates regarding “cultural genocide,” a legal concept that was fundamental to Lemkin's formulation of the crime of genocide, but one that ultimately fell out of the final version of the United Nations Genocide Convention for reasons that have been detailed elsewhere.¹⁰² Lemkin understood cultural genocide not as a *type* of genocide, but one of several genocidal *techniques*, alongside physical, biological, and other methods of eradication, not all of which had to be operational for a crime to constitute genocide. In the case of Nakhchivan, it is not the absence of mass killing that complicates a case for genocide; rather, it is the fact that cultural destruction took place years after the target group had relocated to the Armenian Soviet Socialist Republic (ArSSR). The destruction sought not to eradicate a living minority population, but rather to erase historical evidence of Armenian presence and thereby negate their past and future belonging on the land.

At present, there appear to be no viable mechanisms for pursuing accountability for the systematic destruction of cultural heritage in Nakhchivan. As Federico Lenzerini notes, “no multilateral binding instrument specifically devoted to the intentional destruction of cultural heritage exists at the international level.”¹⁰³ Given that the events detailed here occurred in connection with the armed conflict between Armenia and Azerbaijan, the 1954 Hague Convention and its protocols would seem a relevant international legal instrument at first sight. But this important multilateral treaty for safeguarding cultural heritage in traditional armed conflicts between nation-states was not designed to respond to intentional heritage destruction under conditions of non-war, where hostilities extend over decades and, as in the case at hand, manifest geographically beyond the primary arena of conflict. The 2003 UNESCO Declaration Concerning the Intentional Destruction of Cultural Heritage, which emerged out of the outrage caused by the bombing of the Bamiyan Buddhas in Afghanistan, includes provisions for intentional destruction perpetrated by a state within its own territory under peacetime

conditions.¹⁰⁴ It would thus also seem pertinent to the destruction that took place silently in Nakhchivan between 1997 and 2010. But the declaration is weak and nonbinding.¹⁰⁵ Moreover, in its final form, the article pertaining to state responsibility (Article 6) privileges sites of international importance that have been endorsed by states, establishing a high threshold that can exclude the heritage of minority groups whose protection was considered in the declaration's drafting phase but ultimately not included.¹⁰⁶ Nevertheless, it was with reference to both the 1954 Hague Convention and the 2003 UNESCO Declaration on Intentional Destruction that the European Parliament in 2006 passed the "Resolution on Cultural Heritage in Azerbaijan," which strongly condemned "the destruction of the Djulfa cemetery as well as the destruction of all sites of historical importance that has taken place on Armenian or Azerbaijani territory."¹⁰⁷ While such a resolution can imply state responsibility, it provides neither justice nor reparation for the injury caused. As Alessandro Chechi and Francesco Romani note, in general, "State responsibility in the field of cultural heritage represents a *terra incognita* in the mapping of international law, an avenue seldom pursued by States and little studied by scholarship."¹⁰⁸

Individual criminal prosecution for the silent erasure in Nakhchivan is also unlikely, despite the precedent of case law. With respect to the Nagorno-Karabakh Wars, there is no international tribunal akin to the ICTY, which allowed for the prosecution of cultural heritage crimes and resulted in numerous judgments (e.g. *Strugar*, *Blaškić*, *Kordić & Čerkez*, *Jokić*).¹⁰⁹ With respect to individual criminal responsibility, Article 7 of the 2003 UNESCO Declaration does establish universal jurisdiction over the intentional destruction of heritage in peacetime, but once again limits such jurisdiction to "cultural heritage of great importance to humanity."¹¹⁰ In June of 2021, the ICC issued a Policy on Cultural Heritage that asserted broad jurisdiction over crimes against cultural heritage.¹¹¹ This novel policy followed on the successful 2016 prosecution of Ahmad Al-Faqi Al-Mahdi for attacks on nine mausoleums and a mosque at the World Heritage site of Timbuktu. Al-Mahdi was sentenced to nine years in prison for destroying Mali's cultural heritage, setting important precedent. But Azerbaijan is not a state party to the Rome Statute. The ICC is only competent to hear a case if the country where at least some element of the offense was committed is a party to the statute, or if a non-party state accepts ICC jurisdiction (under article 12.3). Also, the Rome Statute is non-retroactive. Should Azerbaijan become a state party in the future, a case could only be brought before the court if either of the exceptions to the statute's non-retroactivity obtains. A further complication is that the ICC only has jurisdiction over offenses committed after July 1, 2002, when the statute entered into force. By that point, the policy of silent erasure was already well underway. In short, international criminal prosecution for one of the most egregious episodes

of intentional cultural destruction in recent history is unlikely if not impossible. Nor is national prosecution of the crimes in Azerbaijan (as expected by the Second Protocol to the 1954 Hague Convention) a likely scenario.¹¹² Azerbaijan's sustained dissemination of anti-Armenian propaganda across civil society, academic institutions, and its own state organs renders accountability to domestic law unimaginable at present.

The ICJ has recently become more active in the area of cultural heritage protection. In Provisional Measures indicated in 2021 in a case brought by Armenia against Azerbaijan under the terms of the CERD, the ICJ required that Azerbaijan “take all necessary measures to prevent and punish acts of vandalism and desecration affecting Armenian cultural heritage, including but not limited to churches and other places of worship, monuments, landmarks, cemeteries and artefacts.” CHW’s monitoring reports on the cultural heritage of the Nagorno-Karabakh region were admitted into evidence in this case. Our satellite investigation into the destruction in Nakhchivan has direct bearing upon the continuing arguments in *Armenia v. Azerbaijan* (although the future of the case is tenuous as of this writing—see chapter 4). The investigation establishes clear evidence of Azerbaijan’s systematic, state-sponsored program of cultural erasure and therefore the legitimacy of concerns that the program carried out in Nakhchivan could be brought to bear on Armenian heritage sites now under Azerbaijan’s jurisdiction in Karabakh. But even if the findings concerning “silent erasure” in Nakhchivan were to be included as evidence of the threats to Armenian monuments in Nagorno-Karabakh, an ICJ ruling calling for the protection of cultural heritage sites in this arena would not constitute accountability for the near total erasure that took place between 1997 and 2010. That said, the covert, state-sponsored program of cultural erasure that we have documented reaffirms the importance of an immediate and resolute international response if the medieval and early modern Armenian monuments of Karabakh are to be spared the same fate as their counterparts in Nakhchivan. The policy of total erasure, were it to be extended to Karabakh, risks a worsening of inter-ethnic mistrust and violence, making regional peace even more elusive.

Although dispensing justice does not fall within UNESCO’s mandate, its inaction in response to the events described here pushes accountability further out of reach. Despite the government of Armenia’s appeals to the organization in 1998, 2002, and 2005 concerning the destruction taking place in Nakhchivan, the agency remained largely silent.¹¹³ UNESCO has generally been either unable or unwilling to call out crimes against heritage conducted by certain members, particularly when the targets are not World Heritage sites. Nevertheless, the results of our investigation provide a clear evidentiary basis for UNESCO to undertake a fact-finding mission to Nakhchivan to confirm CHW’s assessments and observe

sites that could not be evaluated through satellite imagery. Such a mission would be an important step toward addressing recent critiques of UNESCO as beholden to “caviar diplomacy,”¹¹⁴ failing to acknowledge and condemn Azerbaijan’s role in heritage destruction,¹¹⁵ honoring members of the ruling regime,¹¹⁶ and allowing the World Heritage Committee to hold its annual meeting in Baku in 2019.¹¹⁷ Despite representing one of the gravest violations of cultural heritage ever committed by a UNESCO member state, the response of the world’s heritage watchdog was neither protest nor penalty but rather the bestowal of a series of honors on the culpable regime following a 2013 donation of US\$5 million.¹¹⁸

While international law and multinational agencies represent important arenas for addressing cultural heritage violence, they are hardly sufficient. In his critique of international fora ostensibly designed to dispense justice, Weizman captures precisely the problem of accountability in the case of Nakhchivan: “jurisdiction does not always exist, and often there are no obvious forums to address.”¹¹⁹ We have already seen the limits of international response at the ICC, ICJ, and UNESCO. And while sovereign jurisdiction is clear in Nakhchivan, domestic laws, like their international counterparts, are “only as good as the political processes of which they are a part.”¹²⁰ The authoritarian and Armenophobic politics of Azerbaijan preclude accountability through that country’s domestic legal process, just as they preclude other available mitigation and reconciliation approaches.¹²¹ In this void of accountability and mitigation, Armenians and others who regard the destruction in Nakhchivan as an affront to humanity are left with no obvious forum to address, to say nothing of the prospect for reparations.¹²² The creation of hundreds of replica Jughha *khachkars* in Armenia and their installation among Armenian communities around the world has served as a bottom-up, commemorative response in the face of such institutional inaction.¹²³ But accountability has been deferred indefinitely, until new pathways open via international law, or political action produces the kind of change in Azerbaijani politics and society that makes possible an honest reckoning with the injustices perpetrated by the country’s leaders against Armenian culture and the human past at the turn of the millennium in Nakhchivan. Until then, the tools of heritage forensics can be used to challenge Azerbaijan’s open secrets and foster the conditions in which “different kinds of imaginaries can open up.”¹²⁴

HERITAGE MINING

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The economic analysis of heritage destruction in war zones centers overwhelmingly on the extraction of value through the looting and illicit trafficking of antiquities.¹ From Iraq to Syria, Afghanistan to Yemen, wartime antiquities markets have become the focus of intense scholarly, governmental, and legal interventions in recent decades due to the magnitude of the trade, the threats that it poses to the dominant Western impulse to preserve the past, and the ways in which this global economy implicates and exposes universities, museums, and other art institutions in the global North.² But the economics of heritage abuse is more extensive than it appears in prevailing discourses and diagnostics of heritage looting. To recognize the full scope of wartime heritage economies requires looking beyond the extraction of antiquities and their circulation within elite prestige economies to other commodity flows that render value from heritage in war zones. Such flows can include the extraction, or “mining,” of building materials and other fungible goods from immovable heritage assets as well as the economic appropriation of heritage properties.

Beginning in 2022, CHW opened a forensic investigation into the treatment of Azerbaijani cultural heritage in the unrecognized NKR between the First and Second Nagorno-Karabakh Wars (1994–2020).³ Misinformation and propaganda permeate the discourse on cultural heritage in this highly fraught arena, and there had never been a systematic, non-governmental study of how Azerbaijani and Islamic sites fared during the decades of Armenian control. Prior to the Second Nagorno-Karabakh War, an initiative called the Nagorno-Karabakh Documentation Project, jointly organized by Azerbaijani and Italian heritage

advocacy groups, attempted to document the condition of all cultural heritage in NKR in preparation for reconstruction under future Azerbaijani sovereignty.⁴ But the project broke down when Azerbaijani authorities first politicized and then declined to help finance the initiative, despite the project's recognition of the government's prerogative as "virtual" steward.⁵

CHW undertook its investigation in order to establish an empirically verifiable record of what did and did not happen to Azerbaijani cultural heritage sites between the two Nagorno-Karabakh wars. In our analysis, we use the term "Azerbaijani cultural heritage" to refer to the cultural landscapes of the Muslim Turkophone peoples inhabiting the territory of modern-day Azerbaijan since the end of the tenth century, recognizing the complexities of Azerbaijani ethnogenesis and its shifting historiography from the late nineteenth century through the period of Soviet national formation.⁶ Our investigation used high-resolution satellite imagery and other visual sources to reveal the economic entanglements of heritage in this war zone. The shadow economy discovered value not through the plunder of artifacts, but through the pillaging of fungible materials like metal, which could be extracted from cultural heritage sites (particularly mosques) and reused or sold on the scrap metal market. We refer to this practice as "heritage mining," a post-Soviet, utilitarian iteration of the age-old claim to the spoils of war.⁷ Another economic practice entailed the reuse of mosques as agricultural infrastructure for the subsistence economy. Both activities inflicted profound and in many cases irreversible damage and symbolic abuse to places of Azerbaijani religious and cultural life, made possible by ethnic contempt and disregard for the history and belonging of the Azerbaijani people in Karabakh.

Heritage mining and economic appropriation were not the only harms inflicted upon mosques, mausoleums, and Azerbaijani cemeteries after Armenian forces gained control of the former NKAO and the surrounding seven territories. Nor, indeed, were all cultural heritage sites adversely impacted, with a great many remaining largely unscathed. As we show, the treatment of Azerbaijani cultural heritage varied widely and changed over time, reflecting the complexities of the disputed region's shifting political, geopolitical, and economic realities. In general terms, over time the postwar opportunistic practices of heritage mining, made possible by a failure of NKR military and civilian authorities to protect the monuments from harm, gave way to several instances of intentional destruction with no apparent economic motivation as well as the economic appropriation of properties for agrarian purposes. But mining is the defining feature of heritage abuse against Azerbaijani cultural heritage between the First (1992–1994) and Second (2020) Nagorno-Karabakh Wars, and one that introduces an important new dimension to our understanding of illicit heritage economics in conflict zones.

Between the Wars: Heritage Mining in Context

Two wars, three decades of sustained violence, profound loss, forced displacement, and resulting abandonment have shaped the heritagescape of Nagorno-Karabakh. The First Nagorno-Karabakh War was an ethnic territorial conflict that arose out of the collapse of the USSR (see introduction).⁸ Full-scale war ravaged the region from 1992 to 1994, with fatalities estimated at thirty thousand. From the beginning of the tensions in the late 1980s until the end of active hostilities, over one million people were forcibly displaced, including roughly 360,000 Armenians who fled regions of the AzSSR outside Nagorno-Karabakh and the roughly 205,000 Azerbaijanis who fled the ArSSR.⁹ Of immediate importance to this investigation are the estimated 520,000 to 550,000 Azerbaijanis displaced from cities, towns, and villages in and around Nagorno-Karabakh between 1991 and 1994.¹⁰ It is this forced exodus and the self-proclaimed NKR's attendant takeover of the abandoned landscapes that left numerous historic mosques, mausoleums, and cemeteries vulnerable to potential harm. Amid the tragic human toll of the conflict, cultural heritage, the region's repository of memory, history, and meaning, has also suffered.

A Russian-brokered ceasefire in 1994 ended the First Nagorno-Karabakh War, but a lasting peace between Armenia and Azerbaijan was elusive. The long-simmering conflict proved to be stubbornly resistant to all forms of international mediation. In the decade following the 1994 ceasefire, multilateral peace talks mediated by the Organization for Security and Cooperation in Europe's (OSCE) Minsk Group (co-chaired by Russia, the United States, and France) failed to develop and enforce a comprehensive agreement. For nearly three decades, the NKR administered a territory that roughly included the former NKAO of Soviet Azerbaijan as well as all or part of seven surrounding districts: Aghdam, Fuzuli, Jabrayil, Zangilan, Qubadli, Lachin, and Kalbajar (figure 2.1).

The eruption of a Second Nagorno-Karabakh War in 2020 again concluded with a Russia-brokered ceasefire, and served to underscore the failures of the belligerent parties and the international community to find a basis for a stable peace. The 2020 ceasefire agreement resulted in the transfer of almost three-quarters of the territory in and around Nagorno-Karabakh that Armenian forces had held for the previous twenty-six years. Following a prolonged blockade that caused a major humanitarian crisis for the Armenian population of NKR (numbering over one hundred thousand), a final military assault by Azerbaijani forces in September 2023 resulted in the capitulation of the de facto state, the forced displacement of its Armenian inhabitants, and the incorporation of all territories under Azerbaijani sovereignty.

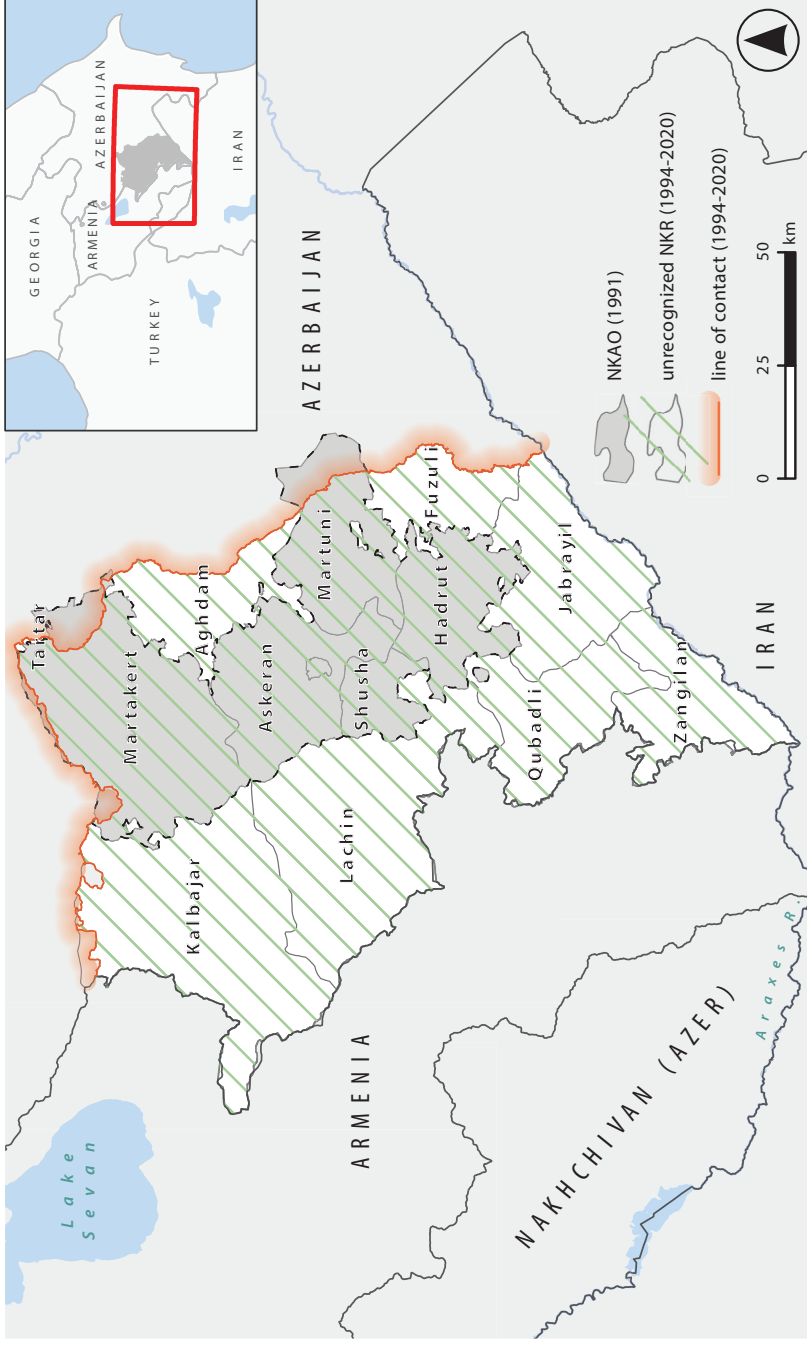


FIGURE 2.1. Map of Nagorno-Karabakh and surrounding provinces at the time of the 1994 ceasefire agreement that ended the First Nagorno-Karabakh War. Created by Ian Lindsay. Map data from Esri, HydroSHEDS OpenStreetMaps.

The monuments of Nagorno-Karabakh that contribute to the modern Azerbaijani heritagescape include mausoleums of the thirteenth to fourteenth centuries and mosques from the seventeenth to early twentieth centuries. Taken together, these sites speak to the historical development of building technologies on the northern fringes of the Islamic world and an ongoing dialogue between local traditions and widespread cultural influences resulting in a distinct architectural style.

The region's extant mausoleums present a wide array of design approaches. In contrast to the ornate tombs of the Nakhchivan tradition and elsewhere, the stone mausoleums of the Aras group—situated along the Hakari and Bargushat rivers—exhibit more modest decorative motifs and the deliberate absence of grand inscriptions (see, for example, the twin mausoleums in Damirchilar [N.308 and N.309; figure 3.3] or the Mirali Mausoleum [N.205; figure 3.9] in southeastern Karabakh). The influence of the Aras group style is echoed in mausoleums in other areas of Azerbaijan to the northeast of Karabakh, underscoring a broad regional conversation conducted in monumental stone mortuary architecture. At the same time, the mausoleums of Nagorno-Karabakh also present distinctive stylistic elements, such as the Melik Ajdar Mausoleum in the Lachin district (N.311), a tapered octahedral structure with parabolic roof dating to the twelfth to fifteenth centuries.¹¹ The structure's design elements point to cultural exchange with contemporary Armenian and Georgian architectural traditions.¹²

The mausoleums of Nagorno-Karabakh suggest the kind of architectural cosmopolitanism one might expect at the margins of empires and faith traditions. The late medieval interaction between Muslim and Christian artistic traditions of the Near East, Southern Caucasus, and Asia Minor is best exemplified by the Khachin-Darbatli Mausoleum in Aghdam (N.5), which blends elements of church architecture and iconography while also maintaining Islamic decorative patterns. The engraved animal motifs along its edges are highly reminiscent of designs found in Armenia's Geghard and Saghmsovank monasteries.¹³ The modern period is best represented by the 1970s mausoleum of Molla Panah Vagif (N.367), designed by Abdul Vahab Salamzadeh and Eldar Kanukov. This eighteen-meter-square edifice successfully integrates traditional Azerbaijani mausoleal concepts with modernist architectural materials and principles.¹⁴

Mosque architecture in Karabakh shows a similar eclecticism. The work of architect Karbalayi Safikhan Karabakhi (1817–1910) represents a pivotal development in regional religious architecture. An Azerbaijani from northwest Iran, Karbalayi Safikhan Karabakhi is regarded in Azerbaijan as the founder of a distinctive style of Islamic architecture. His designs, exemplified by the Juma Mosque in Aghdam (N.202) and the Upper and Lower Govhar Agha Mosques in Shusha (N.344 and N.345), demonstrate sophisticated spatial arrangement and structural innovation (figure 2.2). These mosques typically feature stone columns,



FIGURE 2.2. Photograph of the Juma Mosque (N.202). Image by Toghrol R (2021) courtesy of Wikimedia Commons and licensed under the Creative Commons Attribution-ShareAlike 4.0 International license.

domed ceilings, and two-story galleries that combine functional requirements with spiritual symbolism. The Saatli Mosque (N.355) in Shusha, constructed in 1883, represents another significant example of Safikhan's architectural style.¹⁵

Taken as a whole, the Azerbaijani architectural heritagescape of Nagorno-Karabakh testifies to an openness of aesthetic production to a range of influences from across southwest Asia, exemplifying the cultural interchange characteristic of the South Caucasus region before the Soviet era. While mosques ceased to function as such during the Soviet period due to the state's anti-religious campaigns, they acquired the secularized status of heritage, and were, in many cases, included in the state's heritage inventories.

Assessing Impacts

We compiled a database of 146 mosques, mausoleums, and historic cemeteries, of which we were able to geolocate 116 using a wide range of photographs, videos, scholarly publications, topographic maps, and satellite imagery (figure 2.3A)

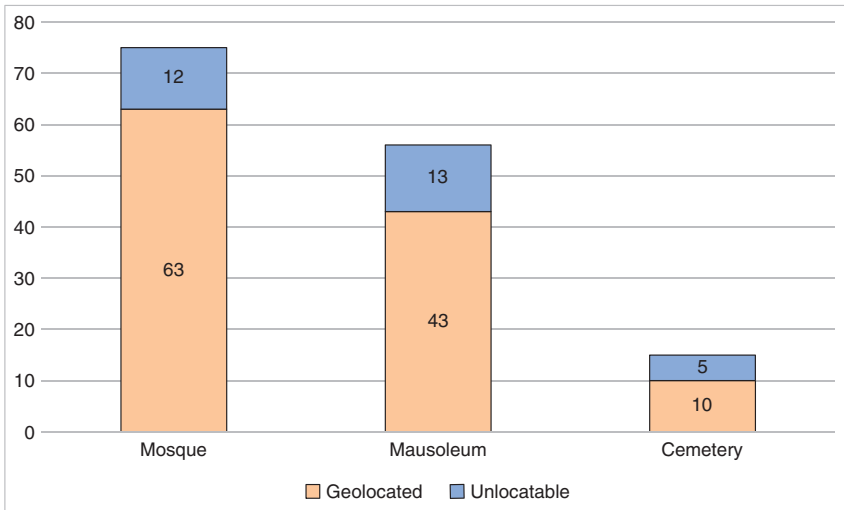


FIGURE 2.3A. Summary counts of CHW's site inventory of Azerbaijani heritage sites in NKR. Site types by geolocation status. © Caucasus Heritage Watch 2025.

(see chapter 3). We used seven categories to characterize impacts to these heritage sites between 1994 and 2020.

1. Sites described as **“unchanged”** have not been altered appreciably since the late Soviet period. To qualify as unchanged, a site must have maintained the same structural form between the First and Second Nagorno-Karabakh Wars, even if time and neglect have allowed it to fall into some minor disrepair.
2. Indications of **“minor damage”** include impacts to exterior facades or decorative elements, but the structural integrity of the building or site remains preserved. Other forms of minor damage include a small hole in a roof, damage to a wall, or limited encroachment on the territory of a cemetery.
3. An assessment of **“major damage”** indicates that a heritage site has sustained significant impacts since the late Soviet years, which have compromised its architectural integrity.
4. CHW assessed locations as **“destroyed”** when virtually nothing remains of a heritage site that was still standing in the late Soviet years. It has either been stripped to its foundations, completely erased, or reduced to rubble.
5. A limited number of sites were **“renovated”** to serve a different purpose than the original structure. This category was only relevant to the mosques in our database.

6. Only a single site CHW's database was "**restored**" such that the building was repaired while retaining its original function: the Upper Govhar Mosque (N.344) in Shusha.
7. In some cases, CHW was unable to make a determination concerning the changing condition of the heritage site with the sources of evidence available to us. These sites were classified as "**indeterminate.**"

Our assessments rely heavily on declassified high-resolution KH-9 HEXAGON American satellite imagery from the 1980s, which provides a baseline for the condition of sites in the late Soviet period. As the above assessment categories indicate, our evaluations refer only to the structural condition of heritage sites as it can be determined from satellite and other image sources. Certain forms of damage, such as vandalism of surfaces, bullet holes, decay, and erosion, are beyond CHW's "threshold of detectability" (see chapter 3).¹⁶

As a further caveat, it is important to note that our analysis does not undertake an examination of the wider landscape of cities, towns, and villages from which Azerbaijanis were forcibly displaced following the Armenian takeover of the region in 1994. After their exodus, industrial-scale looting decimated homes and public buildings, a pattern of ruination that attests not only to economic extraction and anti-Azerbaijani hatred, but a political imaginary in which Azerbaijanis could never return. Such "urbicide" is a worthwhile subject for a different systematic study by scholars with relevant expertise.¹⁷ This research instead focuses squarely on Azerbaijani cultural heritage—public sites of collective history, religious practice, and memory—in order to emplace this long-neglected case in the wider discourse on cultural heritage and conflict. The research design is further shaped by Azerbaijan's official monuments list, which provided the primary source for developing our dataset.¹⁸

Using a combination of high-resolution satellite imagery, photographs, videos, topographic maps, and scholarly publications, we were able to assess the condition of 109 sites in our dataset. Of these, forty-two (or 38 percent) remained unchanged from the late Soviet period through 2020, thirty-nine (36 percent) suffered major damage, sixteen (15 percent) were destroyed, nine (8 percent) suffered minor damage, two (2 percent) were renovated, and one (1 percent) was restored (figure 2.3B). Impacts were not evenly distributed across site types. While 67 percent of mausoleums were assessed as either unchanged or suffering only minor damage, only 22 percent of mosques survived with minor or no damage (figure 2.3C–D). We were only able to assess impacts to historic cemeteries when there was clear evidence of damage, due primarily to issues of satellite resolution. The condition of four cemeteries was thus assessed as indeterminate due to the limits of detectability (figure 2.3E). Likewise, impacts were not evenly distributed geographically (figure 2.4).

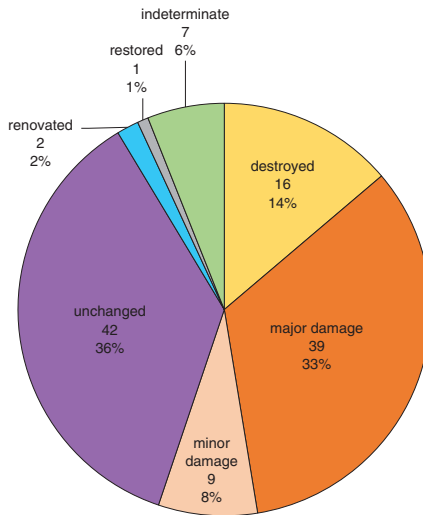


FIGURE 2.3B. Status of all 116 geolocated Azerbaijani heritage sites in NKR as of the Second Nagorno-Karabakh War. © Caucasus Heritage Watch 2025.

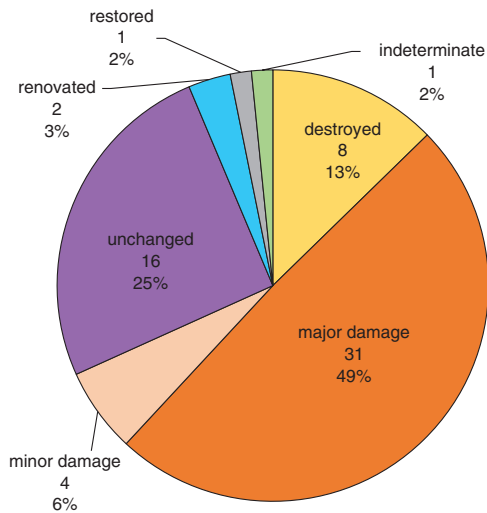


FIGURE 2.3C. Summary condition assessment of mosque sites in CHW's inventory of Azerbaijani heritage sites in NKR. © Caucasus Heritage Watch 2025.

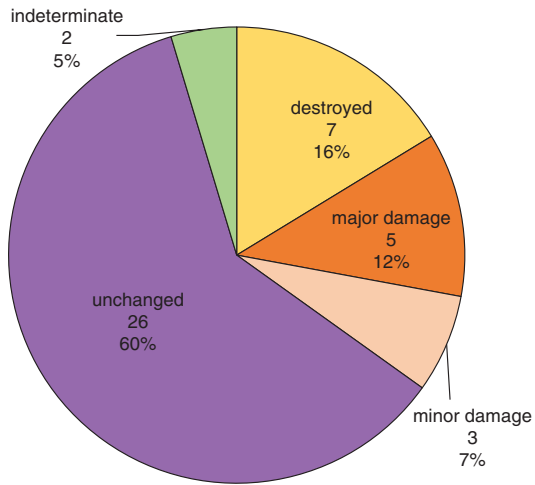


FIGURE 2.3D. Summary condition assessment of mausoleum sites in CHW's inventory of Azerbaijani heritage sites in NKR. © Caucasus Heritage Watch 2025.

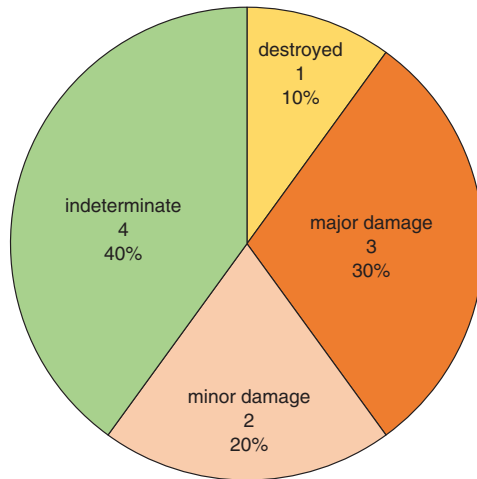


FIGURE 2.3E. Summary condition assessment of historic cemeteries in CHW's inventory of Azerbaijani heritage sites in NKR. © Caucasus Heritage Watch 2025.

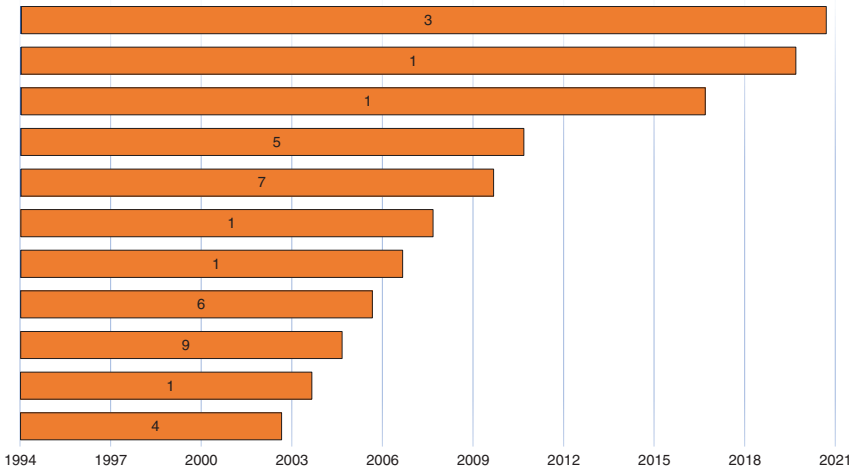


FIGURE 2.3F. Time ranges for major damage to Azerbaijani sites, including the number of impacted sites. © Caucasus Heritage Watch 2025.

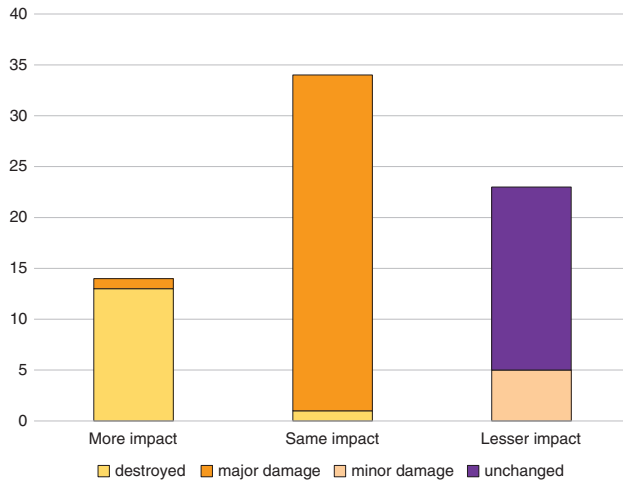


FIGURE 2.3G. The condition of Azerbaijani heritage sites relative to surrounding architecture. © Caucasus Heritage Watch 2025.

Immediately evident from these basic statistics is that the fate of Azerbaijani heritage under Armenian control was so variable (in striking contrast to Armenian heritage in Nakhchivan; see chapter 1) that it could not have been regulated by a singular governmental policy. A plurality of sites remained unchanged from the late Soviet years to the 2020 war, and the rate of outright destruction was low

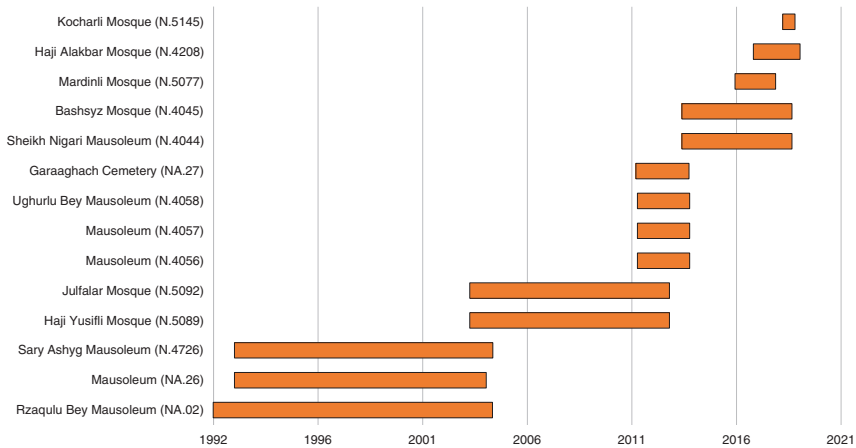


FIGURE 2.3H. Time ranges of Azerbaijani heritage destruction events across mosques, mausoleums, and historic cemeteries. Created by Lori Khatchadourian and Adam T. Smith. © Caucasus Heritage Watch 2025.

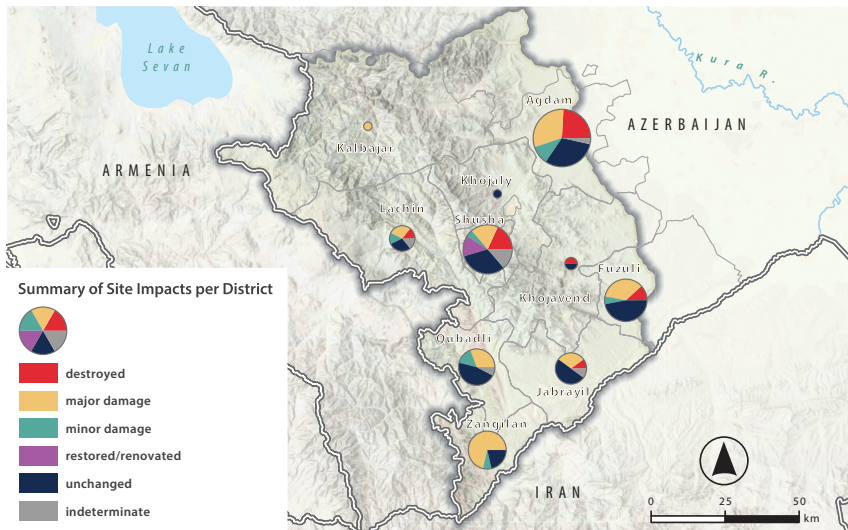


FIGURE 2.4A. A map of condition assessments by district. Created by Ian Lindsay. Map data from Esri, HydroSHEDS.

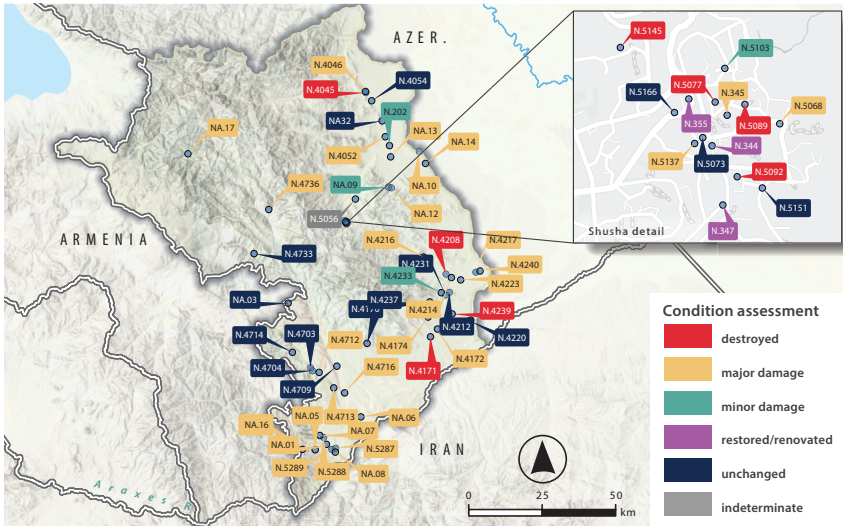


FIGURE 2.4B. A map of condition assessments for mosques. Created by Ian Lindsay. Map data from Esri, HydroSHEDS.

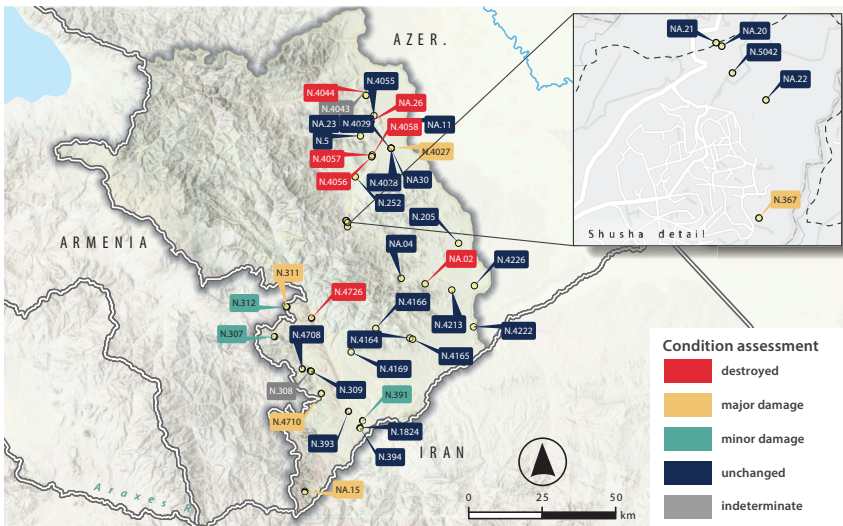


FIGURE 2.4C. A map of condition assessments for mausoleums. Created by Ian Lindsay. Map data from Esri, HydroSHEDS.

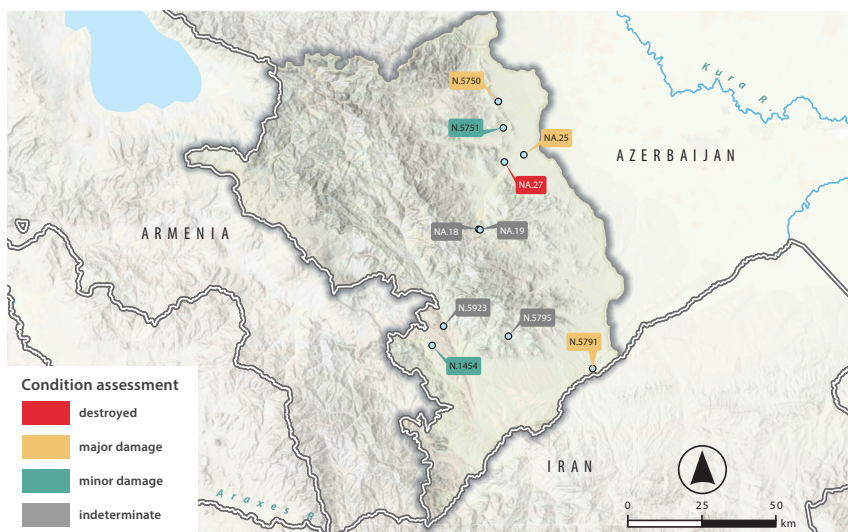


FIGURE 2.4D. A map of condition assessments for historic cemeteries. Created by Ian Lindsay. Map data from Esri, HydroSHEDS.

(15 percent). Nevertheless, a great many sites sustained some form of damage (44 percent including both major and minor damage), and the total of heavily (major) damaged ($n=39$) and destroyed ($n=16$) sites represents a majority of the dataset (51 percent).

Major Damage

Major damage occurred at thirty-nine mosques, mausoleums, and cemeteries. Mosques make up the largest percentage, with thirty-one heavily damaged structures. By far the most common and significant impact was the removal of metal roofs and, likely, other interior fixtures made of usable or saleable materials, as seen at the thirteenth-century Dashkasan Mosque in Jabrayil (N.4172), the eighteenth-century Mamar Mosque in Qubadli (N.4713), and the Chukhur Mahalla Mosque in Shusha (N.5068) (figure 2.5).¹⁹ The thirty-one mosques that sustained major damage remained in that heavily damaged condition until 2020, while in four additional cases, the removal of the roof was followed in later years by the complete ruination of the structure due to targeted destruction, as at the nineteenth-century Mardinli (N.5077) and Kocharli (N.5145; figure 2.6) mosques in Shusha. Of the sixty-three mosques we were able to geolocate for this investigation, no fewer than thirty-five were looted of their fungible material resources.



FIGURE 2.5. Photograph of Chukhur Mahalla Mosque (N.5068) in Shusha. Image by Rəcəb Həsənbəyov (2021) courtesy of Wikimedia Commons and licensed under the Creative Commons Attribution-ShareAlike 4.0 International license.



FIGURE 2.6. Satellite imagery of the Kucharli Mosque (N.5145) in Shusha. 1980 US reconnaissance imagery (*left*) shows mosque intact, though partially obscured by tree cover (image source: USGS). Imagery from 2003 (*middle*) shows roof has been removed and only walls remain (image source: Google, ©2003 Maxar Technologies). A subsequent image from June 5, 2019 (*right*) shows recent demolition of the mosque, including visible spoil heaps and construction of a new adjacent building (image source: Google, ©2019 Maxar Technologies). © Caucasus Heritage Watch 2025.

In the case of mausoleums, major damage denotes significant impacts to the dome, roof, and sometimes the walls of the structure. Of the five mausoleums that sustained major damage, resource extraction appears to have been the cause at the two structures with large metal elements. At the modernist Vagif Mausoleum in Shusha, looters removed the anodized aluminum mesh that adorned the structure in between granite pillars (N.367). Roofing was also removed from the Khanazur Mausoleum in Zangilan (NA.15). In the remaining three instances, CHW's imagery seems to point to natural decay, as in the case of the collapsed dome at the fourteenth-century Melik Ajdar Mausoleum in Lachin (N.311), as well as to intentional damage, as at the Panah Ali Khan Mausoleum in Aghdam (N.4027) and the Boyunakyar Mausoleum in Qubadli (N.4710). Major damage to historic cemeteries denotes the visible disturbance of tombstones or excavations in the territory of the site (e.g., Papravend Cemetery, N.5750, Karkhulu Cemetery, N.5791, Imarat Cemetery, NA.25). In sum, historic buildings with metal roofing and fixtures that could be stripped and sold on the scrap metal market or reused elsewhere were more significantly impacted than heritage sites made of earth and stone.

The public availability of satellite imagery determined our ability to define date ranges for impacts. The current lack of available high-resolution satellite imagery prior to 2002 greatly limited our understanding of the timing of events (see figure 3.3). Newspaper accounts indicate that, in some regions, the looting of Azerbaijani property began during the First Nagorno-Karabakh War. For instance, the *Chicago Tribune* reported at the time that looters from Armenia "streamed into" the border town of Lachin following its fall to Armenian forces in May 1992, "their flatbed trucks so groaned with booty they could scarcely negotiate the narrow mountain roads."²⁰ An Armenian commander described the looting of Kalbajar in April 1993 by Armenian soldiers as "organised pillage."²¹ Weeks after Fuzuli fell to Karabakh Armenian forces in August 1993, journalists documented a "bizarre caravan" in a parade of plunder: "big trucks, small trucks, tractors and hay wagons, cars, donkey carts, donkeys, baby carriages, all of them bound for Karabakh."²²

Evidence suggests that most of the major damage to Azerbaijani heritage took place in the decade after the 1994 ceasefire. Of the forty-three sites that sustained major damage, as many as twenty-four, or 56 percent, had already been impacted by the end of 2005 (figure 2.3F).²³ Further temporal refinement in the immediate postwar years is difficult given the available satellite imagery for this region. But we can say with certainty that as many as seven of those twenty-four sites were damaged by 2002 and that an additional five sites were damaged before 2004. Most of the remaining nineteen heavily damaged sites are located in places where the earliest publicly available satellite imagery dates to 2009 or 2010, leaving the

date of damage an open question. Nevertheless, in light of the evidence, we find it likely that most, if not all, of the major damage to Azerbaijani heritage took place in the decade following the First Nagorno-Karabakh War.

It is difficult to disentangle the convergence of factors that may have made heritage mining possible in the wake of the first war. It would seem reasonable to suggest a relationship between impacts to cultural heritage sites and the broader decimation of the towns from which Azerbaijanis were expelled, such as Aghdam and Fuzuli. We examined the extent to which Azerbaijani heritage sites might have been specifically targeted in the wide-scale looting of abandoned property that consumed Nagorno-Karabakh during and after the first war. In the seventy-three cases in which heritage sites were located either within or near to villages and towns, CHW assessed their relative condition compared to the surrounding residential and civic structures. As figure 2.3G shows, we found that in thirty-four of the seventy-three cases (47 percent), heritage sites suffered the same degree of damage as the surrounding vernacular architecture. That is, the pattern of resource extraction appears proportionally equivalent for the mosques as for other buildings in their vicinity, showing the removal of metal roofs and other building components, and subsequent erosion, decay, and ruderal plant colonization. Only in the case of Pichanis Mosque (N.4736) in the Lachin district did a heritage site sustain major damage while some of the surrounding structures remained intact. But even here, several buildings in the village were stripped of their metal roofs.

The major damage of the postwar years thus cannot be explained in isolation from the wider-scale looting of vernacular buildings in towns and cities of expelled Azerbaijanis. But, while the devastating ruination of Azerbaijani settlements is well-documented due to a proliferation of images in news and social media since the Second Nagorno-Karabakh War, researchers have yet to study it in any depth. The political, legal, and economic conditions that made rampant looting possible, as well as the actors and networks involved, remain largely unknown as a result of two key legal ambiguities.

The first concerns the structure of governance, property relations, and legal jurisdiction in NKR in the years after 1994. What was the property status of forcibly abandoned buildings, and what authority administered the territories after the expulsion of Azerbaijanis? A convoluted body of property laws and government decisions obscures more than it reveals concerning the legal disposition of Azerbaijani cultural heritage in Nagorno-Karabakh during thirty years of Armenian administration. NKR never passed a comprehensive abandoned property law. In 1995 and 1996, the de facto government issued decisions and laws pertaining to the confiscation of abandoned land and housing, but these instruments omitted religious and other cultural properties.²⁴ It is thus unclear

what legal instrument would have authorized the transfer of mosques, mausoleums, and historic cemeteries that, until 1991, had been the property of the Soviet state, to the new, unrecognized republic. Moreover, it is notable that the de facto National Assembly of NKR defined the borders of the polity (figure 0.2B) to include the wartime conquests beyond the Soviet limits of Nagorno-Karabakh only in June 1998 (a political geography later affirmed in the 2006 constitution).²⁵ This implies an extended void in executive, legislative, or juridical authority following the 1994 ceasefire. According to Laurence Broers's 2014 interview with Ararat Danielyan, de facto Minister of Justice of the NKR, Armenia's legislation applied in NKR, "until and unless the parliament adopts legislation."²⁶ But it is not clear whether this legal arrangement was established by the mid-1990s, again leaving open the possibility of a juridical void, even within a de facto polity. Some form of military governance was likely present in most regions adjacent to the Line of Contact. But questions remain as to what authorities and institutions held jurisdiction in the seven territories immediately after 1994, and thus who bore the responsibility (even if not the will) to prevent the plunder of abandoned properties, including sites of cultural heritage.

A second ambiguity arises from uncertainties regarding the agents of looting and their motivations. Subsistence looting likely played a role, given the dire economic hardships of the 1990s across the former Soviet Union. The economic calamity that followed the collapse of the planned economy was particularly severe in Armenia and NKR due to blockades of road, rail, and pipeline transit by both Azerbaijan and its regional ally, Turkey. Scavenging for abandoned movable property and easily removable metal in this war-torn landscape may have been a strategy to alleviate destitution for some.

Yet research on the post-Soviet "ruins economy" in Armenia has shown that subsistence looting, while relevant, does not alone account for the large-scale asset stripping of the mid 1990s and 2000s.²⁷ In Armenia, the post-Soviet elite (the former *nomenklatura*) who had benefited from the inequities of the privatization process pursued personal enrichment through the stripping of heavy machinery, building materials, and scrap metal from their newfound industrial assets. As Lori Khatchadourian notes, "this pursuit of wealth accumulation was made possible by an unregulated market, a weak legal structure, and complicity between the private sector and government officials mired in graft."²⁸ Informants in Khatchadourian's ethnographic research at decommissioned factories across Armenia consistently note that the booming post-Soviet scrap metal economy of the 1990s and early 2000s was overwhelmingly directed toward Iran, whose brokers scoured Armenia's factories, making deals with owners that led to convoys of metal hauled across the Armenian-Iranian border.²⁹ There is every reason to suppose that, in some measure, the massive flows of scrap metal pillaged from

abandoned properties in NKR belonged to this same system of privilege and extraction that was decimating Armenia's Soviet factories in those same years.

As the stripping of Azerbaijani cultural heritage in Karabakh cannot be understood apart from the wide-scale looting of the landscapes within which it is situated, so too must the phenomenon be considered in the context of the wider, contemporaneous post-Soviet "ruins economy," in which powerful, networked, oligarchic interests as well as impoverished individuals played a role. This is especially so given the extreme entanglements of the economic structures and political elites of Armenia and NKR, through both formal institutions and "informal sinews."³⁰ Yet while the processes are interrelated, the property regimes that undergirded them differed. In Armenia, it is possible to speak of "asset stripping" to the extent that much large-scale ruination of decommissioned Soviet factories is generally regarded to have been orchestrated by individuals who owned the properties in question, regardless of the corruption that pervaded and discredited the privatization process. In contrast, in NKR the ambiguous and unlawful postwar property conditions render the stripping of fungible materials nothing other than outright plunder.

Heritage mining introduces a new concept in the economics of heritage destruction in war, which to date has focused overwhelmingly on looting and the illicit trade in antiquities. Like antiquities looters, the agents of heritage mining can include both subsistence practitioners and organized, criminal groups. The economic incentives behind both economies can range from alleviating destitution to accumulating wealth through differential access to regional or global (antiquities or scrap metal) markets.³¹ Moreover, the shadowy workings of both economies and the conditions of lawlessness in which both forms of looting thrive limit the prospects for accountability.

Unchanged and Minor Damage

At least fifty-one Azerbaijani heritage sites remained unchanged or sustained only minor damage during the decades of Armenian control in Nagorno-Karabakh, including twenty mosques, twenty-nine mausoleums, and two cemeteries. This assessment category includes mosques and mausoleums that were already severely damaged in the late Soviet years, but do not appear to have suffered any further damage.³² That said, in most cases the sites we assessed as "unchanged" are also well preserved. The building materials of these heritage structures appear to have contributed to their being passed over by looters. Virtually all of the mosques that we deemed unchanged or slightly damaged have earthen roofs that could not be stripped and sold. In several cases, these are modest village mosques with flat earthen roofs, such as the nineteenth-century Damirchilar Mosque (figure 2.7;



FIGURE 2.7. Satellite imagery of the Damirchilar Mosque (N.4703). 1980 US reconnaissance imagery (image source: USGS) shows the mosque intact (*left*). Imagery from 2022 (image source: Google, ©2022 Maxar Technologies) shows it still intact even as the surrounding village lies in ruins (*right*). © Caucasus Heritage Watch 2025.

N.4703), which remained intact even as the surrounding structures of the village were severely looted.³³

Most notable are the numerous instances in which looters removed metal roofs that had been added to mosques sometime after their original construction (likely during the Soviet era, when the mosques were repurposed), only to expose the structure’s traditional domes. The domed mosques were then left largely unharmed. The Haji Abbas (N.5073) and Chol Gala (N.5103) mosques in the town of Shusha (figures 2.8 and 2.9) are both eighteenth-century structures that at some point in the Soviet period were covered with superimposed metal roofing. Satellite imagery indicates that at some time between the end of the First Nagorno-Karabakh War in 1994 and the earliest available commercial image from September 2002, the metal roofs were stripped, exposing the original domes of the mosque.³⁴ In only two instances did we identify “unchanged” mosques with metal roofs that remained intact throughout the thirty years of NKR administration (the Seyidli Mosque [N.5151] and Mamay Mosque [N.5166], both in Shusha).

Mausoleums that suffered minor damage or were unchanged from the late Soviet years make up a majority of all mausoleums in the dataset, at 67 percent (n=29). Virtually all of these structures were built of stone, including their roofs, and thus were not targeted for scrap metal extraction. Many mausoleums located



FIGURE 2.8. Satellite imagery of the Haji Abbas Mosque (N.5073) in Shusha. 1980 US reconnaissance imagery (*left*) shows the mosque with metal roof in place (image source: USGS). Imagery from 2002 (*right*) shows the original roof domes of the mosque exposed by the removal of the Soviet-era metal roofing (image source: Google, ©2002 Maxar Technologies). © Caucasus Heritage Watch 2025.



FIGURE 2.9. Satellite imagery of the Chol Gala Mosque in Shusha (N.5103). 1980 US reconnaissance imagery (*left*) shows the mosque with its metal roof in place (image source: USGS). Imagery from 2002 (*right*) shows the original roof domes of the mosque exposed by the removal of the Soviet-era metal roofing (image source: Google, ©2002 Maxar Technologies). © Caucasus Heritage Watch 2025.

near or within towns where looting was widespread remained unchanged or only slightly damaged. For example, the Ibrahim Khalil Khan (N.4028) and Mehdigulu Khan (N.4029) mausoleums, nineteenth-century monuments located in the center of the city of Aghdam, remained largely intact during the era of NKR control despite the extensive looting and destruction of the surrounding built environment (figures 2.10, 2.11).³⁵

Overall, of the forty-two sites in CHW's database that were assessed as unchanged, eighteen of these were located in or near villages and towns that suffered large-scale looting, yet these sites remained largely unscathed. In sum, the evidence suggests that while virtually all of the sites that sustained major damage appear to have been targeted as part of the wider effort to mine fungible economic resources from abandoned property, the mosques and mausoleums that remained in sound structural condition escaped damage in large measure because value could not be extracted from their building materials. Taken together, the patterns of major damage and neglect strongly indicate that Azerbaijani cultural heritage sites were attacked not out of animus toward their cultural meaning, but rather as part of a wider pillaging of the region's scrap metal and other recyclable building



FIGURE 2.10. 2023 photograph of Ibrahim Khalil Khan Mausoleum (N.4028). Behind it is the Panah Ali Khan Mausoleum (N.4027) and behind that, the Mehdigulu Khan Javanshir Mausoleum (N.4029). Courtesy of Wikimedia Commons and licensed under the Creative Commons Attribution-ShareAlike 4.0 International license.



FIGURE 2.11. Satellite imagery of the Ibrahim Khalil Khan (N.4028) and Mehdigulu Khan (N.4029) mausoleums. 2004 imagery (image source: Google, © 2004 Maxar Technologies) shows the mausoleums intact, their shadows clearly showing their rooflines (*left*). CNES/Airbus imagery from 2021 (image source: Google, © 2021 CNES/Airbus) shows the situation visibly unchanged (*right*). © Caucasus Heritage Watch 2025.

materials for economic gain. Looting in the aftermath of war was made possible by the unimaginability of Azerbaijani return to the region. And it also worked to foreclose that possibility in reality by leaving formerly inhabited villages in ruins. Likewise, sites that remained unscathed do not appear to have been “preserved” because of their cultural value but merely disregarded as economically worthless.

Destruction

While heritage mining is the defining feature of the abuse inflicted on Azerbaijani cultural heritage in Armenian-controlled Nagorno-Karabakh, we documented sixteen instances of total destruction. In several cases, mosques that had been previously looted of their metal roofs were subsequently destroyed. For example, the Haji Alakbar Mosque (N.4208) in Fuzuli (figure 2.12), whose looting had exposed traditional domes, was reduced to rubble between 2017 and 2019.

In Shusha, the nineteenth-century Mardinli Mosque (N.5077), which had functioned as a movie theater in the Soviet years, the nineteenth-century Kocharli Mosque (N.5145), and the eighteenth-century Haji Yusifli Mosque (N.5089) were first looted, then completely destroyed. A new structure was erected on the plot where the Haji Yusifli Mosque once stood (figure 2.13). In other cases, mosques

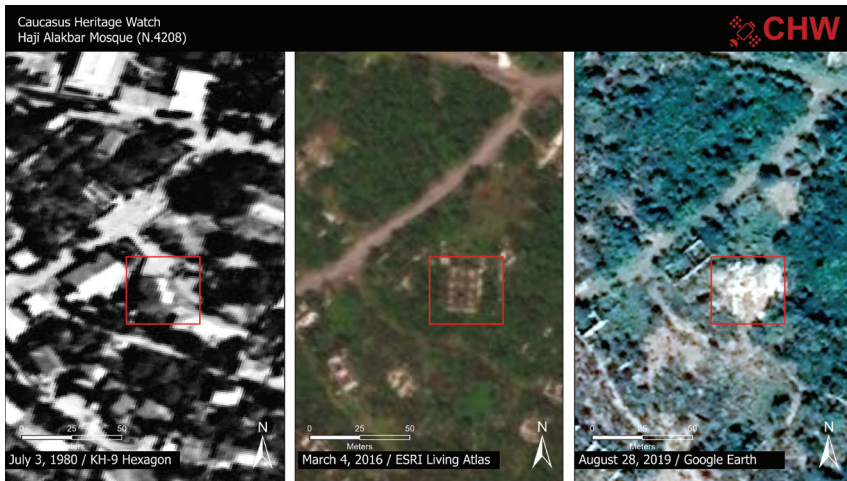


FIGURE 2.12. Satellite imagery of the Haji Alakbar Mosque (N.4208) in Fuzuli. 1980 US reconnaissance imagery (*left*) shows the mosque intact (image source: USGS). WorldView-2 imagery from 2016 (*middle*) shows the original roof domes of the mosque exposed by the removal of the Soviet-era metal roofing (image source: ESRI, © 2017 DigitalGlobe). Subsequent August 2019 image (*right*) shows it has been razed (image source: Google, © 2025 CNES/Airbus). Visible spoil heap indicates demolition had been recent as the disrupted earth had not yet been recolonized by vegetation. © Caucasus Heritage Watch 2025.



FIGURE 2.13. Satellite imagery of the Haji Yusifli Mosque (N.5089). 1980 US reconnaissance imagery (*left*) shows the intact mosque (image source: USGS). Only the exterior walls were standing by 2002 (*right*) (image source: Google, © 2002 Maxar Technologies). © Caucasus Heritage Watch 2025.

that had been left unscathed for years were later reduced to rubble (i.e., Bash-syz Mosque, N.4045, Julfalar Mosque, N.5092). We assessed as destroyed two mosques that appear to have been stripped to their foundations (Papy Mosque, N.4171, Pirahmadli Mosque, N.4239). In addition to mosques, seven mausoleums and one historic cemetery were also destroyed.³⁶

CHW's analysis of the timing of destruction events shows that only a few Azerbaijani heritage sites were razed in the first decade after they fell under the control of Armenian forces. Figure 3.2H represents the date ranges for the destruction of fourteen out of the sixteen destroyed sites in CHW's dataset (excluding the two whose destruction we attribute to excessive looting rather than targeted demolition). In the decade following the 1994 ceasefire, three mausoleums were destroyed across a widely dispersed area, suggesting distinct, isolated events.³⁷

The rate of destruction remained low well into the 2000s. Between 1994 and 2013, we have evidence for five destroyed heritage sites: three mausoleums in disparate parts of the seven districts and two mosques in Shusha (Haji Yusifli, N.5089, and Julfalar, N.5092, mosques). But between 2011 and 2020, the deliberate targeting of Azerbaijani heritage sites increased, with nine sites destroyed in the subsequent eight years. Due to the increased availability of commercial satellite data for this decade, it is possible to resolve the dates of several of these destruction episodes rather narrowly. Four sites in close proximity were destroyed between 2011 and 2014: three of them were mausoleums (N.4056, N.4057, and N.4058) in the historic Garaaghach cemetery, which may have been targeted in a single destruction event (figure 2.14).³⁸ At some point in that same interval, the cemetery (NA.27) as a whole was burned.

Between 2014 and 2019 the Bash-syz Mosque (N.4045) and a mausoleum (N.4044), located across the street from one another in the area of Papravend, were destroyed (figure 2.15). Given their proximity it is possible, but not clearly demonstrable, that these two events were related. The most recently destroyed sites documented by CHW include two additional mosques in Shusha and a mosque in Fuzuli. In Shusha, the already ruined Mardinli Mosque (N.5077) was completely cleared between August 2016 and September 2018. Shusha's Kocharli Mosque (N.5145) was destroyed and the site graded sometime just prior to June 2019 (figure 2.6). The Haji Alakbar Mosque (N.4208; figure 2.12) in Fuzuli was demolished between June 2018 and August 2019.

Two aspects of the destruction of Azerbaijani heritage are particularly striking. First, although the destruction is scattered widely, we do find three locations of heightened impacts: in Shusha, in Papravend along the Aghdere/Martakert highway, and in the large Garaaghach cemetery, west of Aghdam. These three locales represent 71 percent (n=10) of the fourteen episodes CHW identifies as targeted destruction. The remaining four episodes are geographic isolates. Second, we underline the compressed timing of these episodes. Five sites were



FIGURE 2.14. Satellite imagery of two mausoleums (N.4056, N.4058) in the Garaaghach Cemetery. Both were intact in late 2011 (*left*) (image source: Google, © 2011 Maxar Technologies). By June 2014, both had been destroyed (*right*) (image source: Google, © 2014 Maxar Technologies). © Caucasus Heritage Watch 2025.



FIGURE 2.15. Satellite imagery of the Bashsyz Mosque (N.4045) and nearby mausoleum (N.4044). Both were intact in September 2011 (*left*) (image source: Google, © 2011 Maxar Technologies). By April 2019, both had been destroyed (*right*) (image source: Google, © 2019 Maxar Technologies). © Caucasus Heritage Watch 2025.

destroyed sometime between 1992 and 2013 (a cumulative rate of roughly one site every four years). In contrast, nine sites were destroyed in the eight years between 2011 and 2019, a cumulative rate of approximately one site every eleven months. The final years before the second war clearly witnessed a relative acceleration in severe impacts to Azerbaijani heritage sites.

In an effort to explain why only some sites were destroyed, one variable we examined was geographic location. In particular, CHW examined the proximity of destroyed heritage sites to settlements that Armenians inhabited after the war but found no clear patterning. Half (n=8) of the destroyed sites were located within inhabited places or in very close proximity to them (within two kilometers), while the remaining eight destroyed sites were far from inhabited places (more than two kilometers distant). In other words, there was no correlation between proximity to settlement and incidence of destruction.

CHW is not able to determine the specific agents or the proximal causes of the destruction events, but it is notable that the acceleration in destruction after 2011 took place at a time when an expansive vision of NKR's geography was already firmly entrenched in Armenian geopolitical culture. In what Broers has called "a kind of inexorable geopolitical mission creep," by the mid-2000s the seven districts were no longer framed expediently as a "buffer zone" or a "security belt" that would be traded in an eventual settlement agreement in return for NKR's independence. Rather, these districts had been reimagined, as "liberated territories" belonging to an "augmented Armenia."³⁹ Toponymic and cartographic changes supported this shifting geopolitical vision. It is not overly speculative to suggest that this well-documented transformation in the geopolitical imagination of the region might have contributed to the acceleration in incidents of destruction that we have noted. Civilians may have been the agents behind some of the destruction. As Sigrid Van der Auwera has observed, in contexts of armed conflict sometimes it is civil society actors who perpetrate cultural heritage abuses in order to erase the "other's" claims on territory.⁴⁰

That said, while the evidence does not indicate a state-sponsored program of cultural erasure, several of the episodes of total destruction do appear to potentially implicate NKR authorities. Satellite imagery suggests that explosive devices may have been used in demolitions of some standing structures as, for instance, at Haji Alakbar Mosque (N.4208; figure 2.12 right) in Fuzuli, the Bashsyz Mosque (N.4045) in Aghdam, and three mausoleums (N.4056, N.4057, and N.4058) in the historic Garaaghach Cemetery (figure 2.14). The compact, bright reflectance of freshly exposed building materials, fine dust, and debris from exploded stone, concrete, or gypsum without any signs of vegetation removal, earthmoving, or heavy equipment tracks in the surrounding terrain suggests the use of controlled detonation to raze the structures. The Kocharli Mosque (N.5145; figure 2.6 right) in

Shusha appears to have been demolished using similar techniques, and its plot left an open field. But two other mosques in Shusha were replaced with new constructions: the Haji Yusifli (N.5089; figure 2.13) and Julfalar (N.5092) mosques. If these destruction episodes do represent cases of controlled demolition, as we suspect, they would have required more skill and resources than the more widespread practices of asset stripping discussed above, especially when sited in urban areas. Moreover, construction on the territory of former mosques would suggest some involvement of government agencies in bureaucratic activities. In other words, the absence of a systematic, governmental campaign of erasure does not mean that authorities of the de facto NKR state were entirely removed from acts of heritage destruction.

Reuse, Renovation, Restoration

In addition to heritage mining, another common economic practice in Armenian-controlled Nagorno-Karabakh was the appropriation of mosques as agricultural infrastructure for the subsistence economy. We documented as many as eight (and possibly nine) instances of informal agrarian reuse, in which mosques that were either unchanged or had sustained major damage were repurposed as animal pens. In five such cases, satellite imagery makes it possible to determine the approximate date when the mosque was reused as a barn. Giyasly Mosque in Aghdam (N.4052) was turned into a barn between December 2011 and June 2014, during which time the exterior areas to the north were cleared to contain animals. At the Merdinli Mosque in Fuzuli (N.4217), a roof was added to the heavily damaged structure and an exterior area was cleared for livestock between 2012 and 2019 (figure 2.16). Having sustained major damage, Qajar Mosque in Fuzuli (N.4216) was given a new roof by 2013, and by 2018, areas to the north of the mosque were cleared for tending animals. Satellite imagery also shows that an area to the north of the Haji Giyaseddin Mosque (N.4212) was cleared, likely for keeping animals, between 2014 and 2019.⁴¹ And it appears that the previously looted Mirlar Mosque in Qubadli (N.4712) was used for agricultural purposes between 2016 and 2020. Where it can be documented by satellite imagery, agrarian reuse was a relatively late development, occurring after 2011. The economic appropriation of cultural properties at this time may relate to the same expanded vision of NKR's geography that likely accounts for rising rates of destruction; that is, as the seven territories became a part of an "augmented Armenia," Azerbaijani cultural properties and the surrounding land were reimagined from sites for value extraction to infrastructure for value production.

Apart from the economic appropriation of Azerbaijani heritage properties, CHW's investigation revealed a few instances of renovation and restoration, all of them concentrated in the town of Shusha. The Upper Govhar Agha Mosque (N.344) reopened in 2019 following an extensive and contentious restoration



FIGURE 2.16. Satellite imagery of the Merdinli Mosque (N.4217) in Fuzuli. 1980 US reconnaissance imagery (*left*) shows the mosque intact (image source: USGS). Imagery from 2010 (*middle*) shows the roof has been removed (image source: ESRI, © 2010 Maxar Technologies). A subsequent October 2020 image (*right*) shows the mosque has been roofed and an adjacent enclosure constructed to the east consistent with reuse as an animal pen (image source: Google, © 2025 Maxar Technologies). © Caucasus Heritage Watch 2025.

project conducted in collaboration with Iranian heritage experts.⁴² Planning documents and media sources regularly described the structure as a Persian mosque, and indeed, various architectural details in the dome, minarets, and brickwork resemble Iranian architectural traditions.⁴³ But the Persian designation and Iranian involvement worked to obscure the Azerbaijani affinity of the mosque, as embodied in its nineteenth-century architect, Karbalayi Safikhan Karabakhi (discussed above). Renovated with funding from Iran and a Kazakh businessman, the structure became an Armenian-Iranian Cultural Center, completely erasing the mosque's Azerbaijani past.⁴⁴ The Taza Mahalla Mosque (N.347) was renovated in 2014 and turned into a geology museum. And the Saatli Mosque (N.355) was renovated between 2004 and 2013, but CHW was unable to ascertain the new function of the renovated structure.

Heritage and Displacement: A Comparative View

The tragedies of large-scale human displacement and dispossession caused by twentieth- and twenty-first-century wars have exacted an immense toll on global

cultural landscapes. The forced expulsion of unwanted ethnic or religious groups severs communities from their ancestral lands and exposes forcibly abandoned cultural properties in villages, towns, and cities to the physical and symbolic violence of destruction, neglect, and appropriation. In the aftermath of violent conflict, victorious powers—their military forces, settlers, developers, and looters—inflict continued harm on displaced communities through the abuse of their vacated built environment, from vernacular architecture to cultural, religious, and community buildings of artistic or historic value. Histories and identities are suppressed, eroded, and erased.

The precarious predicament of Azerbaijani cultural heritage after the First Nagorno-Karabakh War from 1992 to 1994 represents not an isolated instance, but a permutation of a broader phenomenon of heritage endangerment in the aftermath of ethnic conflict, which include the 1948 Arab-Israeli War (or Nakba) and the 1974 Turkish invasion of Cyprus. While the three cases may be incommensurate with respect to the geopolitical dynamics of the conflicts, and the global clout and political status of the players, comparison can nevertheless reveal common patterns, as well as distinctive features in the treatment of cultural heritage following war and large-scale population displacement. Instructive analogies and contrasts help illuminate the wider significance of the heritage quagmires in the Caucasus, of which Nagorno-Karabakh is just one.⁴⁵

While we focus selectively on cultural heritage whose architectural or artistic forms are associated with a specific ethnic or religious group, we recognize that a more capacious understanding of heritage could extend beyond historic and religious buildings, “monuments,” and old cemeteries. The entire tangible fabric of social lives—residential buildings, shops, fields, orchards, schools, etc.—was also decimated by violence and memorialized by victims as places of memory, nostalgia, and grievance. But the focus in our studies of Armenian and Azerbaijani heritage under the control of the Other is on the relationship between conflict and cultural erasure. Hence, our comparative analysis singles out archetypal components of cultural heritage—mosques, churches, monasteries, mausoleums, and historic cemeteries—from the wider, war-torn landscapes to which they belong.

Palestinian Cultural Heritage: The 1948 Arab-Israeli War or the Nakba

The 1948 Arab-Israeli War, or the Nakba, which led to the creation of the state of Israel, resulted in the displacement of approximately 750,000 Palestinians and the abandonment of at least 418 Palestinian villages.⁴⁶ Refugees were forced to abandon not only their homes, neighborhoods, and villages, but also countless

historic districts, cemeteries, mosques, shrines, and churches. Subsequent episodes in the Israeli-Palestinian conflict, most notably the 1967 Arab-Israeli War, caused yet further displacement, with many second-time refugees from the previous war forced into exile. We focus here on the Nakba because the impact to Palestinian villages and their cultural sites was the most extensive and has been systematically documented. Researchers have begun to record the impact of the 2023 Israel-Hamas war, which the ICJ has determined plausibly meets the definition of genocide, and the devastation of Gaza's cultural landscapes.⁴⁷ But the long-term impacts of this ongoing conflict on the region's heritage sites remains to be seen.

Many of the 418 Palestinian villages depopulated in 1948 were ravaged in the course of the war or in its immediate aftermath.⁴⁸ Fighting forces or civilians from neighboring settlements demolished villages. During and immediately after the war, looting of Arab movable properties was also widespread, and it included the dismantling of houses.⁴⁹ Meron Benvenisti writes that "the drive to seek vengeance and the desire to eject hostile neighbors and enjoy the spoils of war acted together with military exigencies to encourage the destruction of property."⁵⁰ The demolition of the Palestinian villages was initially the work of the Zionist movement and was ostensibly carried out without government involvement, but the military played a leading role in the destruction.⁵¹ After 1949 and especially in a 1965 operation of the Israel Land Administration, the Israeli government actively cleared the ruins of abandoned villages.⁵² Military, political, and economic factors were at play, but above all, the purpose of the eradication was to prevent the refugees' return. Under the 1950 Abandoned Property Law, the state expropriated refugee properties and reallocated land and houses either to existing Jewish communities or to settlers in newly established settlements located within or, more often, near to the abandoned villages. Today, apart from some recent restoration projects, all that remains is rubble, ruins, and dilapidated buildings in places where bulldozer access was difficult.

Given that the primary objective was to block Palestinians from returning to their homes, Benvenisti notes a certain "tendency to avoid demolishing mosques, churches, and the graves of Muslim saints."⁵³ But his analysis of Walid Khalidi's authoritative catalog, *All That Remains*, shows the staggering extent of the damage to Palestinian mosques in the abandoned villages. About 100 of the 140 mosques extant in 1948 had been demolished by the time the fieldwork compiled in Khalidi's volume was conducted between 1987 and 1990.⁵⁴ Of those that remained, "twenty mosques are currently in various stages of deterioration and decay; six are being used as living quarters, sheep-pens or stables, carpentry shops, or storehouses; six have been, or are at present, serving as museums, bars, or tourist sites of some sort; four are being used wholly, or in part, as synagogues;

and two have been partially renovated for Muslim worship, but that use has been either prohibited or restricted.”⁵⁵ Benvenisti further notes that only around forty of the hundreds of Arab cemeteries were still visible. As Forensic Architecture’s investigations have demonstrated, demolition and destruction continue to the present, shattering the heritagescape of the West Bank and repeatedly demolishing historical sites in Gaza.⁵⁶

Cultural Heritage in the Crosshairs on Cyprus

According to the UNHCR, the Turkish invasion of Cyprus in 1974 resulted in the expulsion of an estimated 180,000 Greek Cypriots from their homes and villages in the north, while approximately 60,000 Turkish Cypriots were forced to flee from the south. To “fill the void” left by the flight of the Cypriot Greeks and consolidate a new state to which the expelled “Other” could never return, Turkey encouraged the migration of an estimated 30,000 to 45,000 settlers from Anatolia to northern Cyprus.⁵⁷

The Turkish army in the north of the island took control of over one hundred known archaeological sites, over five hundred churches, chapels, and monasteries, and four castles.⁵⁸ Throughout the 1970s and later, looting of movable property ensued at the hands of Turkish officers, Turkish Cypriots, and Turkish settlers from the mainland.⁵⁹ The Turkish Cypriot term used for the looting of abandoned properties, *ganimet*, is an “affectively charged concept” that implies self-criticism for a “morally problematic social practice.”⁶⁰ People plundered goods not only from abandoned Greek Cypriot houses, shops, factories, and farms, but from churches, museums, and archaeological sites in what Sam Hardy has called “one of the most methodical cultural asset-strippings in the world.”⁶¹ After the initial wave of opportunistic looting, professional smugglers and antiquities dealers stepped in, linked to what Hardy has called the “deep state economy” in northern Cyprus.⁶² International markets, already inundated with Cypriot icons and antiquities since the 1960s, experienced another deluge, now including frescoes and mosaics removed from churches and monasteries.⁶³

In addition to looting, cultural destruction took several other forms in the decades after the war, unchecked by an unenforced antiquities law.⁶⁴ A full, systematic assessment was only possible after the opening of the checkpoints at the border in 2003, when all Cypriots were able to travel to the other side of the island,⁶⁵ but journalists had been reporting on the damage for years.⁶⁶ Many churches, monasteries, and historic buildings in the north were deliberately demolished, while others were simply neglected, left to fall into ruin. Some analysts have attributed the decay of heritage sites to the constraints on Turkish

Cypriot heritage professionals caused by a lack of resources, the “legal limbo” of the unrecognized Turkish Republic of Northern Cyprus (TRNC), and the insufficiencies of international legal instruments like the 1954 Hague Convention.⁶⁷ According to the 2003 survey published by Charalampos Chotzakoglou, at least seventeen churches had been reused as stables or chicken coops.⁶⁸ In at least another twenty cases, churches were repurposed as storerooms or granaries. Approximately forty churches and monasteries were turned into military camps or hospitals for Turkish forces. Under the TRNC’s 1975 Abandoned Immovable Property Law, all ecclesiastical Christian properties passed to the ownership of the unrecognized state, which has since sold or rented former church properties to Turkish or European buyers.⁶⁹ In at least thirty-three cases, the new owners of the properties have converted them into art studios, workshops, residences, cafés, cultural centers, gyms, storage facilities, car mechanics, hotels, restaurants/clubs, theaters, baths, sports clubs, dance schools, offices, garages, and even a mortuary. The antiquities department converted approximately nine churches into icon museums in a display of “tolerance.”⁷⁰ In approximately seventy-seven cases, churches located in town centers were converted into mosques, some of which were subsequently left vacant when new mosques were built in response to Greek-Cypriot grievance and international pressure.⁷¹ In some cases, village churches remained structurally “intact and well maintained,” even if Islamic symbols had replaced Christian icons.⁷² Despite these disturbing statistics, it is important to also note that restorations and interethnic cooperation around cultural heritage have also taken place, and scholarship has brought nuanced perspectives to the politics of heritage in the Cyprus conflict.⁷³

Turkish-Cypriot heritage in the south has also suffered grave losses, at least since the burning of Turkish-Cypriot villages in the late 1950s and the Greek Cypriot attacks on Turkish Cypriots in 1963 that drove the latter from their ancestral villages into segregated enclaves.⁷⁴ After the 1974 invasion, numerous mosques and cemeteries were torched, demolished, or vandalized and ruined. A comprehensive, English-language scholarly assessment of impacts has yet to be published, but a partial report produced by the unrecognized TRNC indicates that, as of 2006, at least ten mosques were destroyed, seven damaged, and several neglected.⁷⁵ That same report noted the destruction of at least thirty-four Turkish-Cypriot cemeteries, and damage to at least nineteen more. Tombs and mausoleums were also destroyed or damaged. Villages such as Alihodes were demolished.⁷⁶ Hardy notes that these episodes differ from the “programmatic demolitions” in the north.⁷⁷ In general, the Republic of Cyprus “has been comparatively more careful than the Turkish-Cypriot side in seeking to symbolically protect and reconstruct the ‘Turkish’ ethno-religious heritage. In order to emphasize

the destruction of 'Greek' ethnoreligious heritage in the north, Greek Cypriots have made some efforts to preserve Turkish-Cypriot mosques in the south, and have also highlighted that preservation in their own official propaganda.⁷⁸

Material Realities and Heritage Phantasms

Palestinians, Cypriots, and Azerbaijanis have all endured severe abuses of heritage as a result of displacement and dispossession. Quantitative comparison is possible to some extent, particularly between Israel and Nagorno-Karabakh. For example, it is evident that the rate of outright destruction is far higher in the aftermath of the 1948 Arab-Israeli War (as of the late 1980s) as compared to the First Nagorno-Karabakh War, with an estimated 71 percent (n=100) of mosques in Palestinian villages destroyed, versus just 13 percent (n=8) of the mosques in the towns, cities, and villages surrounding Nagorno-Karabakh. Also notable is the large number of Azerbaijani heritage sites that CHW assesses as structurally unchanged since the First Nagorno-Karabakh War (forty-two sites, or 38 percent), a statistic that we cannot compare with either the Cypriot or Israel/Palestine contexts given the datasets available. In both the abandoned Palestinian and Azerbaijani settlements, the majority of surviving Muslim heritage sites are in damaged condition (major or minor). Twenty of the 140 extant Palestinian mosques (14 percent) were in ruins at the time of Khalidi's fieldwork as compared to forty-eight damaged Azerbaijani sites (44 percent) in and around Nagorno-Karabakh. Quantitative comparison is not possible with Northern Cyprus with respect to damage, but here, too, many churches and cemeteries were damaged more or less severely due to looting, vandalism, or neglect.

But of greater interest than the quantitative comparisons are the qualitative similarities and differences that shed light on distinct patterns in the politics of heritage in postwar contexts, and the impact of ethnic conflict on abandoned cultural landscapes. In Northern Cyprus, the value that was mined from abandoned cultural landscapes and historic structures resided in the age value of antiquities, religious icons, and frescoes that could be commodified on the antiquities market; in and around Nagorno-Karabakh, Armenians appear to have discovered exchange value in fungible building materials, particularly metal roofs likely destined for the scrap metal market. There is currently limited verifiable evidence of Azerbaijani cultural artifacts circulating from Nagorno-Karabakh onto the global antiquities market.⁷⁹

The opportunistic nature of the damage to Azerbaijani heritage sites in and around Nagorno-Karabakh between 1994 and 2020, coupled with the limited cases of outright destruction, indicates that the authorities of the unrecognized NKR did not pursue a policy of systematic cultural erasure. Rather than coordi-

nated state action, the problem is precisely the state's absence: the failure of de facto Armenian authorities to safeguard abandoned heritage properties. In most cases that we examined, although not all, looters appear to have damaged monuments not because they were heritage sites of an enemy Other but because they possessed extractable economic resources.

The most notable difference among the three cases under examination here is the relatively limited reuse, renovation, and restoration of Azerbaijani heritage structures. While in all three cases, some of the sacred sites of the adversary were desecrated through reuse as animal shelters, Armenians did not otherwise repurpose Azerbaijani heritage sites to any appreciable degree. None of the Azerbaijani mosques were converted into Armenian churches, in contrast to the widespread "Judaization" of Muslim holy places between 1948 and 1967, and the pervasive conversion of churches into mosques in Northern Cyprus.⁸⁰ And it appears that virtually none of the Azerbaijani monuments had been put to commercial or military purposes, also in contrast to both Mediterranean cases. In light of the relatively few instances of restoration, renovation, and agrarian reuse, it appears that Armenians accorded Azerbaijani heritage low reuse value or were rather indifferent to its presence.

The most salient factor to explain the differences in the fate of abandoned heritage in Nagorno-Karabakh, Israel/Palestine, and Cyprus is the degree to which the victors in the armed conflicts sought to consolidate a new state through settler colonialism and the appropriation of properties and landscapes. Notwithstanding important differences in the settler colonial projects in Israel and northern Cyprus,⁸¹ in both cases large-scale settlement in abandoned landscapes was "successful" state policy, encouraged and organized by government institutions allocating land, housing, and resources.⁸² In both Israel and Northern Cyprus, laws were enacted that nationalized abandoned properties and allowed for their disbursement or sale to new settlers, including cultural properties that were inadequately protected by antiquities and heritage laws.

In contrast, Armenians did not settle in large numbers in the seven territories surrounding Nagorno-Karabakh, even if the geopolitical culture in Armenian society supported a "cartographic exhibitionism" that imagined a maximalist Armenian territory.⁸³ Two OSCE fact-finding missions found that the settler population ranged from 9,000 to 12,000 in 2005, growing to approximately 14,000 by 2010. This settlement was largely concentrated in the Lachin and Kalbajar regions immediately adjacent to Armenia, as well as in Zangilan and Qubadli.⁸⁴ During the Syrian Civil War, the resettlement of Syrian-Armenian refugees in the territories around Nagorno-Karabakh appears to have been negligible, estimated as of 2013 at about ninety people, or some thirty families.⁸⁵ Despite the efforts of the de facto authorities to incentivize settlement (especially

in Lachin) through start-up disbursements and monthly payments per child, they were unable to attract large numbers of Armenian settlers to what Broers called “the wild frontier of Armenian nationalism.”⁸⁶ In fact, the demographic records of the unrecognized state indicate stagnant or declining populations in Shahumyan (Kelbajar) and Kashatagh (Lachin, Zangilan, and Qubadli) provinces, respectively.⁸⁷ The OSCE’s finding of limited Armenian settlement is borne out by our own analysis of the satellite imagery, which shows little evidence for significant occupation in most of the seven territories other than the region then known as Kashatagh (Lachin, Zangilan, and Qubadli). Amid the ruins of a countryside shattered by war, we see only small-scale agro-pastoral activity in a few isolated places. In so many respects, what Yael Navaro-Yashin has theorized as the “make-believe,” “phantasmic state” of Northern Cyprus—simultaneously a material reality and an apparition—is equally apt for the unrecognized NKR, where the limited population further reveals the phantasmagoric qualities of the material reality. In sum, limited Armenian settlement and the attendant lack of development in the seven territories likely inadvertently protected Azerbaijani heritage from the more severe impacts documented in the cases of Northern Cyprus and Israel/Palestine.

Common Ground

Finally, the three cases under examination here can be compared with respect to the prospects for heritage preservation and its capacity to bring about positive change in post-conflict societies. To date, cultural heritage remains a locus of active violence, cultural appropriation, and lawfare in the ongoing conflict between Armenia and Azerbaijan (see chapter 4). In the Middle East, prior to the recent war in Gaza, there were a few faint signs that cultural heritage initiatives had significant potential as a medium for redevelopment, if not reconciliation.⁸⁸ In the absence of statehood, numerous Palestinian heritage initiatives have taken shape through the actions of NGOs, religious organizations, and the Palestinian Authority.⁸⁹ In the West Bank, Palestinian heritage-making by non-governmental groups has focused on improving socioeconomic conditions through urban regeneration of the vernacular past, including homes, shops and schools. Beyond the West Bank, a religious organization called the Al-Aqsa Foundation plays a leading role in Palestinian heritage-making, maintaining, restoring, and rebuilding the remains of Palestinian mosques, shrines, and cemeteries in the post-1948 abandoned villages.⁹⁰ These examples suggest that heritage work conducted outside state institutions (particularly in the West Bank) can bring about meaningful social change. But Israel’s currently ongoing war in Gaza has once again moved cultural sites on to the front lines of an intractable conflict, as the Israel

Defense Forces have unleashed a devastating new wave of Palestinian heritage destruction.⁹¹

One might hope that the case of Cyprus might be most instructive for the Caucasus, for while the conflict itself remains unsettled and the political divide firmly rooted, bicomunal heritage restoration efforts are promoting cooperation and reconciliation.⁹² The Technical Committee on Cultural Heritage on Cyprus (TCCH), a bicomunal organization founded in 2008, has conserved and restored over fifty-five cultural heritage sites on the island, including churches, mosques, and other archaeological sites.⁹³ TCCH involves archaeologists, architects, art historians, and town planners from both communities in the process of site selection and implementation. Education and community engagement are core aspects of TCCH's mandate. With support from the EU and other funders, TCCH harnesses heritage conservation to support the peace-building process. Its efforts in "heritage diplomacy" work to promote sustainable development and social relations across the island's divided communities.⁹⁴ The TCCH's programs exist in parallel with the grassroots work of Greek Cypriots, who have been maintaining, cleaning, and purifying profaned religious sites on their pilgrimages to the north since the opening of the checkpoints in 2003.⁹⁵

It is, of course, highly significant that most of the mosques and mausoleums in and around Nagorno-Karabakh are sufficiently intact to allow for restoration. Indeed, restoration projects have already been launched at Vagif Mausoleum (N.367), Upper Govhar Agha Mosque (N.344), and Saatli Mosque (N.355), and are planned for Giyasly Mosque (N.4052) and Aghdam/Juma Mosque (N.202), "one of the most important sacred sites and symbols of Azerbaijan's victory in the 2020 war."⁹⁶ But even as restorations proceed and the threat to Azerbaijani cultural heritage in Karabakh has receded with the fall of NKR, scores of Armenian churches, monasteries, and historic cemeteries in territories now under Azerbaijani jurisdiction face threats of appropriation, damage, and destruction (see chapter 4). There is thus considerable danger that the next decade in Azerbaijani-controlled Karabakh will witness the juxtaposition of Azerbaijani heritage restoration with Armenian heritage destruction. Such an unraveling of the region's cultural landscape would only make the heritage politics of the region worse, further jeopardizing the fragile remains of the region's past. A bicomunal organization of scholars, practitioners, and religious leaders committed to protecting and preserving Azerbaijani and Armenian heritage in Nagorno-Karabakh and surrounding regions, on the model of TCCH, has greater potential to foster meaningful steps toward peace-building and regional prosperity than top-down ministerial restoration initiatives. So, too, would granting Armenians secure access to the sacred and ancestral heritage sites that they were forced to abandon, as is now possible in Cyprus.

Abuses of Azerbaijani and Armenian cultural heritage between the First and Second Nagorno-Karabakh Wars were real events, and not merely the fabrications of propaganda machines. They are also profoundly unequal in their severity. Armenian cultural heritage under Azerbaijani control, especially in Nakhchivan, has suffered far greater physical and symbolic violence than Azerbaijani heritage under Armenian jurisdiction (see chapter 1). This is not to excuse any of the abuses. They are all reprehensible. But they are not commensurable. Cultural heritage has served as a powerful weapon in the Armenia-Azerbaijan conflict, deployed by nationalists, chauvinists, and cynical propagandists to incite hatred and advance political objectives while eroding the prospects for a sustainable peace. This fact-starved vitriol serves only to make the tangible cultural heritage of both communities less secure by undermining a common respect for the material remains of the past and centering the conflict on the fragile materials of collective cultural expression. The preservation of Armenian and Azerbaijani cultural heritage should instead become a common ground, not merely for replacing stones, preserving inscriptions, cleaning ruins, and competing over historical primacy, but for mutual recognition through grassroots, bicomunal social action.

Accountability and Counter-Forensics

The government of Azerbaijan has made numerous efforts to draw attention to abuses of Azerbaijani cultural heritage in Nagorno-Karabakh through multiple appeals to the secretary-general of the United Nations.⁹⁷ Insofar as Azerbaijan regards the Republic of Armenia as the responsible state party, it has sought accountability by recourse to the 1954 Hague Convention and its protocols.⁹⁸ Azerbaijan also appealed to UNESCO to send a fact-finding mission to the region, but according to a 2004 UNESCO report, “the Secretariat has been prevented from sending a mission to verify the state of cultural properties in the area, as other specialized agencies of the United Nations have not been able to enter these territories since their occupation by Armenian military forces.”⁹⁹ Azerbaijan’s reports and communiqués to the UN provide important testimony to legitimate grievances concerning the grave abuses of cultural heritage during the decades of de facto Armenian control in Nagorno-Karabakh. No authority, whether in NKR or in Armenia itself, has taken responsibility or held anyone to account and it is uncertain at present what accountability would look like for the mining of Azerbaijani heritage.

Azerbaijan brought the matter to international courts in the aftermath of the Second Nagorno-Karabakh War. In January 2021, the government filed an

application at the European Court of Human Rights (ECHR) that included “the destruction of cultural and religious property” since 1992 among its allegations of Armenia’s violations of the European Convention on Human Rights.¹⁰⁰ As of this writing, there is no public information about this case. In September 2021, Azerbaijan brought forward another international case, this time before the ICJ (a reciprocal filing to *Armenia v. Azerbaijan*; see chapter 4), which accused Armenia of violations of the CERD. With respect to cultural heritage, Azerbaijan cited violations of Articles 2, 3, and 5, noting “the pursuit of a broad-based policy of cultural erasure against Azerbaijanis, including through the destruction, desecration, plundering, and expropriation of Azerbaijani towns, cultural monuments and other pieces of Azerbaijani ethnic and cultural property.”¹⁰¹ In November 2024, the Court ruled that it lacked jurisdiction concerning events that took place before Azerbaijan became party to the CERD in September 1996.¹⁰² This judgment somewhat narrows the scope of Azerbaijan’s claims with respect to cultural heritage, although as discussed above, satellite imagery allows us to definitively date several destruction episodes to after 1996 (see figure 2.3H). The case has yet to be decided on the merits, but as of this writing its continuance is now in question (see chapter 4). Azerbaijani domestic law could also address cases of heritage abuse now that Karabakh is fully under Baku’s sovereign control and, as of this writing, three former presidents of the unrecognized republic as well as its other high-profile political and military figures are jailed in Baku. There is some evidence that Azerbaijani prosecutors intend to include abuses of heritage among the crimes for which they may eventually be prosecuted.¹⁰³ However, the failure of Azerbaijan’s domestic law to hold anyone accountable for the total erasure of Armenian heritage in Nakhchivan would significantly undermine the credibility of any cultural heritage prosecutions focused on the leaders of the NKR. Such a move would likely resurrect the Nakhchivan destruction in global media and risk dismissal of any legal proceedings as manufactured show trials. It therefore seems unlikely that heritage abuses will surface in any future trials of NKR officials.

The methods of “heritage forensics” also reveal significant errors in Azerbaijan’s earlier appeals that have the effect of undermining the state’s justifiable complaints. First, while correct in describing serious abuses to the character of Azerbaijani historical and cultural landscapes, official Azerbaijani narratives inflate the severity of the impacts, making indiscriminate use of the word “destruction,” and using imprecise terminology in categorical ways that work to conflate destruction with different degrees of damage and vandalism.¹⁰⁴ Azerbaijan’s officials have wrongly claimed the near total destruction of mosques in the region. The official factoid, frequently recited by President Ilham Aliyev and also communicated to the UN, incorrectly holds that sixty-five out of sixty-seven

mosques were destroyed.¹⁰⁵ In several cases, we have proven the claims of governmental sources concerning the impacts to Azerbaijani cultural heritage to be false (see chapter 3). For instance, while a list of all sixty-five mosques alleged to have been destroyed has not surfaced, CHW was able to identify one instance in which Azerbaijan informed the UN secretary-general that a still intact mosque had been destroyed, and another case where a standing mosque was assessed in a UN communiqué as “partially destroyed.”¹⁰⁶

A second notable flaw in official Azerbaijani state discourse is its concern to pass over the irrefutable evidence that a great many Azerbaijani cultural heritage sites were neither appreciably damaged, destroyed, nor desecrated, and remain in sound structural condition despite decades of neglect. The strategic agenda of the state’s discursive tactics has been to manufacture evidence pointing to the intentional erasure of Azerbaijani culture and history in Nagorno-Karabakh as a *policy* of Armenia. Indeed, the general discourse in Azerbaijan’s communications with the UN portrays the abuses of Azerbaijani cultural heritage as a systematic, state-sponsored program of deliberate cultural erasure enacted by the Republic of Armenia and its affiliate state, NKR, “with the aim of total annihilation of the Islamic historic and cultural heritage in the territories of Azerbaijan during occupation.”¹⁰⁷ As our research has demonstrated, the evidence does not support this accusation.

Our investigation was an effort to clearly define what has been lost, what remains, and how the fate of abandoned Azerbaijani heritage in Nagorno-Karabakh compares to other cases of heritage caught up in conflicts that resist resolution. Overall, the patterning of the impacts between 1994 and 2020 does not indicate a program of cultural erasure implemented and sustained by a state actor. Armenian authorities of NKR failed to prevent both widespread resource extraction and several instances of targeted destruction. Civil and military authorities may bear direct responsibility for some of the destruction episodes, as discussed above. At the same time, the forensic evidence shows no attempt to systematically erase the material traces of Azerbaijani history and cultural life in the lands that Armenians controlled from 1994 to 2020.

Patterns in the treatment of Azerbaijani cultural heritage under Armenian control suggest an initial phase (1994 to 2011) of extensive damage caused primarily, but not exclusively, by the mining of building materials. By 2011, the available resources for looting were largely exhausted across the region. But what we found instead was the economic appropriation of cultural properties to agricultural production and an increase in the rate of targeted destruction concentrated primarily, but not exclusively, in three geographic areas. These patterns set the treatment of Azerbaijani heritage between the wars in a rather unique frame of reference, fundamentally different from the project of state-sponsored cultural

erasure that we documented in Azerbaijan's demolition of Armenian heritage in the autonomous region of Nakhchivan (see chapter 1).

This study has also uncovered an economic dimension to heritage destruction in war zones that is quite distinct from the looting practices more commonly studied by archaeologists. To be sure, the specific targets of heritage abuse in conflict will vary depending on a given region's cultural resources and the motivations and capacities of the actors involved. But the case of Nagorno-Karabakh suggests that a fuller understanding of wartime heritage economics may require broadening the archaeological gaze beyond looters' pits and illicitly traded antiquities to modern, standing heritage structures and the informal economic practices with which they become entangled. In addition, the case at hand points to the need for continued monitoring after active military hostilities have ended. In war's aftermath, the antiquities trade demands a spatial reorientation of the researcher's gaze away from the "archaeological rich market" and toward the "destination market" from which antiquities should be returned.¹⁰⁸ But other economies of heritage abuse, particularly in contexts of ethnic cleansing, call for continuous monitoring of the war-torn landscape itself, even after the guns have quieted. Forcibly abandoned cultural properties remain ripe for practices of value extraction, whether through looting of fungible commodities or utilitarian reuse.

With Karabakh now fully under Azerbaijani sovereignty following the 2020 war and the military offensive in 2023, the country's heritage managers will ultimately have to decide amongst alternative post-conflict mitigation strategies for Karabakh's historic Azerbaijani/Islamic sites, from reconstruction (restoring monuments to a prior state), to preservation (retaining the status quo in support of remembrance), to creative, non-physical interpretive approaches.¹⁰⁹ The central question surrounding any of these approaches will be whether they seek opportunities for reconciliation or simply reproduce durable narratives of grievance.

The goal of CHW's forensic investigation of the treatment of Azerbaijani heritage between the wars has been to provide Azerbaijanis, Armenians, and outside observers with painstaking evidence that can support deeper understanding and an honest reckoning. We sought to recognize the historical belonging of Azerbaijani people to the South Caucasus region, living alongside Armenian communities, and provide verifiable data on the state of Azerbaijani heritage in Nagorno-Karabakh after almost three decades of control by the unrecognized NKR. We also advance CHW's larger goal of removing cultural heritage from the crosshairs of conflict; it is only with full and accurate information, informed publics, and dialogue that Karabakh's diminished, endangered, and centuries-old Azerbaijani and Armenian cultural heritage can be spared new abuses and manipulation in the ongoing culture war between the two states.

TECHNIQUES, TECHNOLOGIES, THRESHOLDS

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As an emerging form of knowledge production, heritage forensics requires novel research techniques that muster observations into evidence for a variety of public fora: from courtrooms to diplomatic arenas to news outlets to social media to university classrooms. These techniques have developed in diverse global contexts of late twentieth- and early twenty-first-century wars, where sacred sites, historical monuments, cultural materials, and dedicated repositories, such as museums and libraries, have been singled out as both the sites and stakes of armed conflict. As a public form of research, heritage forensics catalyzes new connections. It brings together scholars, human rights advocates, lawyers, journalists, and stakeholder communities in a unique form of investigation that seeks to not simply document abuse but to bear witness to violence in ways that can promote deterrence, provide testimony, and hold perpetrators accountable, both in the public sphere and, when possible, in a court of law. In this chapter, we first review the emergence of heritage forensics before detailing the specific approach that has developed from CHW's investigations of cultural sites caught up in the enduring conflict between Armenia and Azerbaijan.

Toward a Forensic Approach to Cultural Heritage

Heritage forensics traces its roots to the confluence of heritage destruction and international law that followed in the wake of World War II. The Nazi regime's

systematic destruction of synagogues across Europe and the looting of Jewish estates and cultural institutions led to two significant responses: the establishment of investigative units such as the Monuments, Fine Arts, and Archives Section (a.k.a. The Monuments Men), and the collection of evidence documenting heritage-related war crimes for potential use at the Nuremberg International Military Tribunal.¹ While the post-war years witnessed major international conventions for the protection of cultural heritage, most notably the 1954 Hague Convention and succeeding protocols, the 1970 UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property and, rather unintentionally, the 1972 UNESCO World Heritage Convention, none of these conventions established a methodology for detecting abuse and compiling evidence admissible in a legal forum.²

It was not until heritage was targeted during the Yugoslav Wars that a methodology for documenting heritage abuse began to coalesce. During the siege of Dubrovnik in late 1991, officials from UNESCO who had come to establish heritage protections for the Old Town, a World Heritage site, found themselves caught in heavy shelling from the Yugoslav People's Army's Second Operational Group commanded by Pavle Strugar. The shelling targeted public and religious structures as well as historic homes and infrastructure. Amid the bombardment, Colin Kaiser and Bruno Carnez improvised a methodology for documenting damage to heritage that considered the nature of the incoming projectiles, the pattern of fire, and the objectives of the gunners—details critical to the prosecution of war crimes.³

Determining culpability was also a key focus of András Riedlmayer's post-conflict surveys of cultural heritage destruction in Bosnia and Herzegovina and later Kosovo. Riedlmayer's methodology combined site visits, interviews, and photographic evidence to develop timelines for attacks on heritage sites. These timelines could then be cross-referenced with chronologies of troop movements and shifting control of territory in order to assign responsibility. Riedlmayer's survey in Bosnia and Herzegovina examined 392 sites, 234 of which were inspected in person.⁴ Analysis of the remaining 158 was gathered from photographs and information obtained from other sources, including testimony from local religious communities and photographs taken by ICTY investigators, Council of Europe survey teams, and local Institutes for the Protection of Monuments. The survey focused on sites of religious worship (such as mosques and churches) and education (such as archives and libraries) but excluded cemeteries. Each site was assessed for damage according to a five-point scale: in good condition, lightly damaged, heavily damaged, almost destroyed, completely destroyed.⁵ Mapping of the sites allowed for the detection of patterns of destruction that pointed to culpability. As Riedlmayer testified in the trial of Radovan Karadžić: "if one

mapped the destroyed mosque sites, it was almost possible to draw a territorial map of what areas had been conquered by the Bosnian Serb forces. On the other side of that, there would be damage just beyond the confrontation line and only scattered damage elsewhere, but in the areas that were controlled by Bosnian Serb forces, there were virtually no mosques left intact.⁶ Riedlmayer tailored his intensive methodology to a heavily securitized, post-conflict environment within a spatially compact zone that could be safely traversed within the two and a half weeks allotted for the survey.

The 2003 US invasion of Iraq presented a very different challenge for investigations of heritage abuse. Here, worry centered on the widespread looting of archaeological sites that accompanied the collapse of the Iraqi government. It was in this context of regional insecurity, and the inability to conduct site visits à la Riedlmayer, that scholars began to explore the capacities of the nascent fleet of earth observation satellites, such as IKONOS and QuickBird.⁷ Elizabeth Stone's study of looting patterns across some 1,949 sites in southern Iraq examined imagery of 9,729 square kilometers collected by DigitalGlobe satellites between 2002 and 2006. Stone was able to clearly identify patterns in sites selected for looting by size and period of occupation, but the work was not directed toward supporting accountability efforts. Nevertheless, it did establish basic practices in the remote detection of looting that continue to shape satellite-based monitoring of archaeological sites today. The devastations of the Iraq War catalyzed important discussions on the causes and consequences of damage (collateral and targeted) to tangible and intangible heritage in war, new operational mandates for military and peacekeeping forces engaged in heritage landscapes, and enhanced international dialogues on the illicit antiquities trade.⁸

CHW, founded in late 2020 in direct response to the brief but devastating Second Nagorno-Karabakh War between Armenia and Azerbaijan, is part of a growing cluster of international cultural heritage monitoring projects that utilize remote observation to respond to impacts on the global heritagescape, including the Endangered Archaeology of the Middle East and North Africa, the Afghan Heritage Mapping Partnership, the American Society of Overseas Research's Cultural Heritage Initiative, and the Cultural Heritage Monitoring Lab.⁹ Each has employed what have become canonical remote sensing observation methods, assembling regional site databases and historical and contemporary imagery to document abuses of cultural heritage. In most cases of heritage destruction ongoing at the time of this writing (e.g., Ukraine, Gaza), the violence of conflict makes the presence of heritage observers untenable. In other cases, it is the secrecy of the destruction program that precludes the presence of direct observers, as is the case with Uyghur heritage destruction in western China. Absent direct observation,

the refinement of remote methodologies represents a critical challenge to the development of heritage forensics and the ability of researchers and stakeholders to document abuse and erasure.

One important result of the new wave of remote heritage observation programs has been closer scholarly attention to tensions between the narratives of heritage impacts carried in public media and the facts on the ground. Both the Afghan Heritage Mapping Partnership and the American Society of Overseas Research's Cultural Heritage Initiative documented more complex relationships between site impacts and responsible actors than was typically advanced in the media. In doing so, these initiatives expose how heritage discourses are operationalized in the public forum by parties with competing goals and interests. In northern Syria, for example, the spectacles of heritage destruction by ISIL galvanized a singular narrative of extremist iconoclasm even though a wider array of regional actors were involved in looting than was typically indicated in the media.

The growth of remote Earth observation heritage monitoring programs has encouraged ethical and methodological discussions around what constitutes "good data," possibilities for automating change detection workflows, and empowering impacted communities in the use of computationally and financially prohibitive detection methods, among other issues.¹⁰ However, it is important to note that CHW differs from many of the explicitly archaeological monitoring efforts in two particularly critical respects. First, CHW only investigates abuses of living heritage, historical sites directly tied to a descendant community that claims them as places of memory and practice.¹¹ We do not examine the looting of prehistoric sites or damage to monuments disconnected from the dynamics of the conflict driving heritage abuse. As a result, our work is less directed to assessing impacts on the archaeological record than illuminating attacks on a community's right to culture. Second, like Riedlmayer, we constitute our observations as evidence of potential crimes, reviving the commitment seen during the Yugoslav Wars to presenting observations in ways that support accountability, whether in the public sphere or a court of law.

In sum, the recent emergence of remote heritage observation programs has established the epistemological foundations for satellite-based image assessment as well as the methodological parameters for impact detection. And these programs open the door to a potentially more robust critical inquiry into the public discourses that surround heritage, from the procedures of its invention to the processes of its destruction. In this, the remote observation of heritage is never truly remote. Although highly mediated and geographically distant, the satellite observation is immediate, caught in the political maelstroms that surround the heritagescape, and readily available to be constituted not just as observation but as evidence.

Evidence and Thresholds

Remote heritage monitoring projects, whether immediate or retrospective, share the common methodological challenge of operating at what Weizman terms the “threshold of detectability,” the point at which an observed object challenges the capacity of a given sensor to discern it.¹² At its most straightforward, this term refers to the qualities of an image required to visualize impacts, such as the pixel resolution that allows the human eye to perceive indices of a building transformed by a missile strike or targeted demolition. But CHW’s investigations encountered additional thresholds of detectability beyond the technical limits of optic *visibility*, extending to *temporal*, *epistemological*, *categorical*, and *interpretive* thresholds, each encountered at different stages of our investigations. Our datasets and workflow, outlined below, consisted of two components: first, building a geodatabase of known Armenian and Azerbaijani heritage sites in the Nakhchivan and Nagorno-Karabakh regions of Azerbaijan compiled from a wide range sources, and second, assembling high-resolution, declassified historic and recent satellite imagery for site geolocation, condition assessments, and approximate dating of site impacts.

Building Heritage Inventories at a Distance

The archival dimension of our work required building databases of heritage sites remotely, without direct access to any of the places in the inventory. Access to Azerbaijan’s Nakhchivan Autonomous Republic has been highly regulated both during the Soviet period and in the years after Azerbaijan’s independence, when it became the personal fiefdom of its appointed ruler Vasif Talibov.¹³ Nagorno-Karabakh was also a restricted space for travel under de facto NKR rule, especially for Azerbaijanis. Since the 2020 conflict, access to Karabakh has been even more tightly regulated by the Azerbaijani government and its military. As a result of constraints on direct observation, CHW’s heritage inventories are necessarily built on existing archival and published sources checked via remote observation. Argam Ayvazyan’s publications were a vital source for constructing our database of Armenian heritage sites in Nakhchivan discussed in chapter 1.¹⁴ Ayvazyan is a Yerevan-based researcher who was born in Soviet Nakhichevan and spent the late Soviet years conducting field surveys of the region’s heritage sites, often at considerable personal risk. As a designated “border zone” of the USSR, access to Nakhchivan was significantly restricted, even for Soviet citizens, requiring entrance permits from security services. Expressing interest in Armenian monuments was (and indeed is) strictly prohibited.¹⁵ Through covert visits over the course of many years, Ayvazyan documented and published a comprehensive inventory of 509 cultural heritage sites.

From this initial inventory, we excluded certain site types such as historic bridges, fountains, and fortresses that we deemed at low risk for destruction and/or too difficult to discern at the spatial resolution of the declassified Cold War-era satellite imagery we used for georeferencing and baseline condition assessments. We also excluded monuments that Ayvazyan noted were already completely ruined or destroyed at the time of his fieldwork. The final dataset contained 159 Armenian cultural heritage sites in Nakhchivan, including eighty-two cemeteries, forty churches, twenty-nine monasteries, and eight chapels, all which were either well preserved or at least partially standing in the 1980s.

Building the inventory of Azerbaijani heritage sites in Nagorno-Karabakh (discussed in chapter 2) brought a different set of challenges. Islamic heritage sites were significantly underrepresented on the official monument lists of the unrecognized NKR, compiled before the 2020 war. But the AzSSR had approved heritage inventories in 1968 and 1988 that included the NKAO. These lists were followed by a subsequent inventory, assembled by the independent Republic of Azerbaijan in 2001, that included sites under NKR control and thus inaccessible to heritage officials of Azerbaijan. This most recent inventory, which lists all heritage sites currently under state protection, served as a primary reference for constructing our database. CHW used this document to identify 112 mosques, mausoleums, and historic cemeteries located in the regions administered by NKR from 1994 to 2020. In addition to these 112 sites, CHW identified an additional thirty-two mosques, mausoleums, and historic cemeteries that were not on Azerbaijan's heritage lists using publicly available information from the State Committee on Religious Associations of the Republic of Azerbaijan, the Karabakh Center, the Ministry of Culture of the unrecognized NKR, and various academic publications and cartographic sources (detailed below). The integration of all these datasets resulted in a list of 146 Azerbaijani cultural heritage sites (seventy-five mosques, fifty-five mausoleums, and fifteen cemeteries) that could be deemed as potentially at risk while under NKR control.

Geolocating Heritage Sites

Once we defined the corpus of relevant sites in each study area (i.e., 159 Armenian heritage sites in Nakhchivan, 146 Azerbaijani heritage sites in NKR), we transformed the site inventories into structured geodatabases requiring the precise geolocation of each site (see chapter 1, figure 1.7; chapter 2, figure 2.3). Geolocation presented another set of obstacles, particularly in the case of Nakhchivan, where the obliteration of all Armenian heritage sites between 1997 and 2010

meant that sites could not be located on modern, open-source satellite imagery (see chapter 1). In Nagorno-Karabakh, geolocation was made difficult by the fact that Azerbaijan's monument lists do not provide geographic coordinates for entries. Determining the precise location of sites therefore required extensive investigation, cross-referencing four main contemporary and archival sources: scholarly publications, topographic maps, open source photographic and video records, and satellite images. Individually, each source has its own thresholds of detectability—optical, temporal, epistemological, categorical, and interpretive—that shape and constrain the overall process of site assessment. Taken together, they provide powerful source triangulation that increases geolocation accuracy and precision through cross-referenced datasets, while strengthening site assessments and reducing concerns about investigator bias.

Given the omission of historic Armenian sites on Azerbaijan's official monument lists for Nakhchivan (see chapter 1), Ayvazyan's narrative descriptions of site locations provided the starting point for geolocation.¹⁶ Ayvazyan's works describe both the placement of monuments (such as their position within towns or distance from villages) and their topographic settings (like hillside locations or valley positions), providing key details that aided in geolocation. Ayvazyan's photographs also facilitated geolocation, as orienting landscape features captured in the images allowed us to pinpoint several sites. His descriptions and photographs were cross-referenced with declassified KH9-HEXAGON satellite imagery, which provided a baseline of the monuments when they were still extant in the late Soviet period.¹⁷ Indeed, for much of this work, we leaned heavily on HEXAGON imagery, the products of a photographic reconnaissance satellite program launched by the US National Reconnaissance Office between 1971 and 1986, with a ground resolution of two to four feet (0.6 to 1.2 meters).¹⁸ The US government declassified the HEXAGON archive in 2011, making available a vast trove of spatial imagery, including expansive coverage of the Soviet Union during its final decades. Despite these sources, we were still unable to geolocate thirty-two Armenian heritage sites in Nakhchivan.

Soviet-era scholarly publications from Azerbaijan also proved indispensable, providing locational information, archival images, sketches, plans, information on site condition, and other important attributes. When sources provided conflicting information regarding a site's location, for instance if a given mausoleum or mosque appeared to be confused with a nearby structure, co-author Ghulyan carefully resolved such ambiguities by consulting Soviet-era images and descriptions. Indeed, photographs and videos were critically important sources for geolocating Azerbaijani monuments and Islamic cemeteries in our database, as well as identifying additional mosques and mausoleums absent in official site registries. In addition, images and videos disseminated on social media and news outlets about villages transferred to Azerbaijani control after the 2020 war allowed

CHW to precisely locate certain sites and assess their most recent condition. This research also drew on 1:25,000- and 1:50,000-scale Soviet topographic maps produced between the 1950s and 1980s. In some instances, such maps allowed for approximate geolocation, after which we obtained the precise coordinates using historical and recent satellite imagery. In addition, cartographic sources occasionally revealed mausoleums not on the official registries. Our procedures left us a corpus of thirty sites in Nagorno-Karabakh that we were unable to geolocate.¹⁹

Once we confirmed each site's precise coordinates, CHW assessed site conditions, comparing their appearance in historical baseline imagery and recent satellite imagery, photographs, and videos, as discussed above. Typically, the available declassified imagery provided a baseline assessment of condition during the late Soviet period of the 1970s or early 1980s.

It is important to emphasize that our assessments refer to the *structural* condition of heritage sites, as this can be determined from satellite images and the other image sources available to us. Many Azerbaijani cultural heritage sites that were not destroyed sustained forms of damage that are generally beyond our visual threshold of detectability, such as the elimination of decorative elements, bullet holes, graffiti, and other impacts to surfaces. In some cases, the social media commons augmented the view from space, allowing us to discern non-structural impacts.

Confronting Thresholds of Detectability

High-resolution commercial satellite sensors achieved a first generation spatial resolution of 1.0-0.5 meters per pixel, which was subsequently reduced to 0.3 meters thanks to both technical enhancements and enabling legislation in 2014. These platforms, operated by Digital Globe (later Maxar, now Vantor), Airbus, and Planet Labs (amongst others), can capture images detailed enough to identify individual monuments, structures, and even looters' pits. This capability has established a significant role for satellite technology in capturing the frequency, scope, and severity of heritage abuse.²⁰ Nevertheless, Earth observation technology is not without its limits as a forensic tool, and we pushed our evidentiary assemblages to find their thresholds. We highlight these gaps in our data in order to advance both epistemological transparency and methodological innovation in anticipation of growing entanglements between heritage forensics and jurisprudence.

In our account of the destruction of Armenian cultural heritage in Nakhchivan, we encountered seventeen sites whose condition could not be conclusively assessed and therefore are rendered in our database as "indeterminate." In NKR, we assessed seven Azerbaijani heritage sites as likewise indeterminate. These sites

were typically obscured by at least one of five “thresholds of detectability”²¹—optical, temporal, epistemological, categorical, or interpretive. Notably, many of the thresholds constraining our ability to assess the condition of sites from afar stem from a sixth “geopolitical threshold” wherein on-the-ground access is constrained by the refusal of authorities to allow international organizations to examine heritage sites in person, either in Nagorno-Karabakh or Nakhchivan.

The *optical threshold*, the most frequently encountered challenge to remote assessment, describes the ability of satellites to provide sufficient resolution or image quality to detect small sites or clusters of features. Tracking closely to Weizman’s original use of “threshold of detectability,” such technical factors as pixel resolution, off-nadir angle, atmospheric conditions, time of capture, or topographic distortion shape the optical threshold. As a result of the varied image sources CHW deploys, the optical threshold of detectability has evolved with the available technology. American reconnaissance imagery of the 1970s and 1980s, for example, varied greatly in its ability to resolve objects on the ground (at best about 0.61m).²² Twenty-first-century commercial satellite imagery typically provides more consistent resolution across the image and yet variation in image quality between individual captures can and do limit the detection of attacks on heritage.

The resolution of HEXAGON imagery was adequate for discerning large built structures, such as monasteries and mosques. But detecting historic cemeteries for our baseline assessments proved more difficult. Old tombstones often have a lateral extent well under a meter, falling below the optical threshold for HEXAGON imagery. As a result, historic cemeteries marked on Soviet maps were, at times, difficult to discern (figure 3.1). Moreover, in many older cemeteries, accumulated sedimentation over the decades or centuries had partially buried tombstones or covered them with overgrowth. Argam Ayyazyan frequently noted in his description of cemeteries that gravestones were embedded in the ground. As a result, they too were difficult to discern in our baseline HEXAGON imagery.

These optical limitations posed a challenge both for geolocation and for assessment, as it was at times difficult to understand the condition of a cemetery in the years before the eruption of conflict in the early 1990s. Indeed, condition assessments could not be made for 20 percent of the Armenian cemeteries in Nakhchivan (n=16) and 40 percent of the Azerbaijani cemeteries in Nagorno-Karabakh (n=4). That said, relatively large cemeteries can be discerned in historical satellite imagery because an extensive field of tombstones produces distinctive patterns of light and shadow that form a stippling effect on the terrain or, in some cases, a jagged effect very distinct from the surrounding ground cover. In all cases, we joined our observation of cemeteries in the HEXAGON imagery with clear

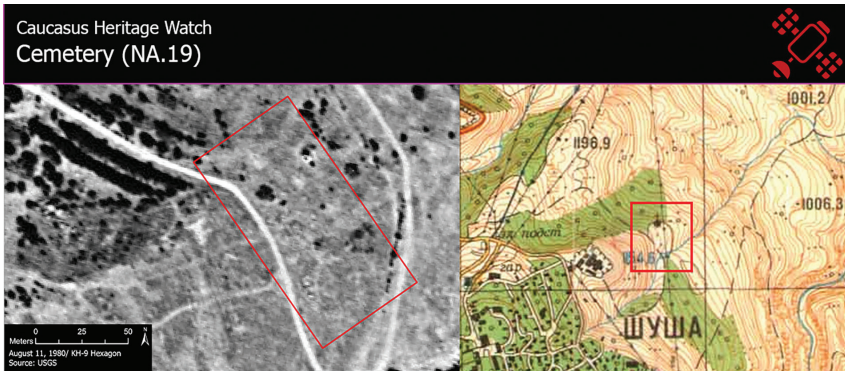


FIGURE 3.1. Optical threshold of detectability. The territory of cemetery NA.19 on the northern outskirts of Shusha. No grave markers are visible in a KH-9 HEXAGON image from 1980 (left) (image source: USGS) but the cemetery is clearly marked on a 1:25,000 Soviet map of 1983 (right). © Caucasus Heritage Watch 2025.

attestations of their location and extent from both Soviet-era topographic maps and Ayvazyan's research.

There is a critical gap in publicly available satellite imagery for the years immediately before and after the collapse of the USSR, from 1986 to 2000 (figure 3.2). As a result, CHW's historical investigations rely on archival imagery from the 1970s and early 1980s to provide baseline data on both the location and pre-conflict condition of heritage sites. Our ability to resolve the temporality of heritage impacts is thus rather coarse, missing the critical decade of the First Nagorno-Karabakh War and its initial aftermath. This *temporal threshold* of detectability places some constraints on our ability to more precisely date impact events. For example, trees obscure the fourteenth-century Damirchilar Mausoleum Number 1 (N.308) (figure 3.3) in the available HEXAGON imagery from 1980. As a result, it was impossible to assess the site's condition prior to the Nagorno-Karabakh War. Subsequent photos clearly show that the dome of the mausoleum was damaged at some point. It is certainly possible that the damage took place after the First Nagorno-Karabakh War, but without clear late Soviet baseline imagery, assessing the fate of the site exceeded our temporal threshold of detectability.

The launch of the IKONOS platform during the early 2000s (later joined by Quickbird and WorldView) provided the first available commercial imagery of sufficient resolution for heritage forensics. But it was not until the 2010s that the pace of image captures in the Caucasus became sufficiently regular, and their

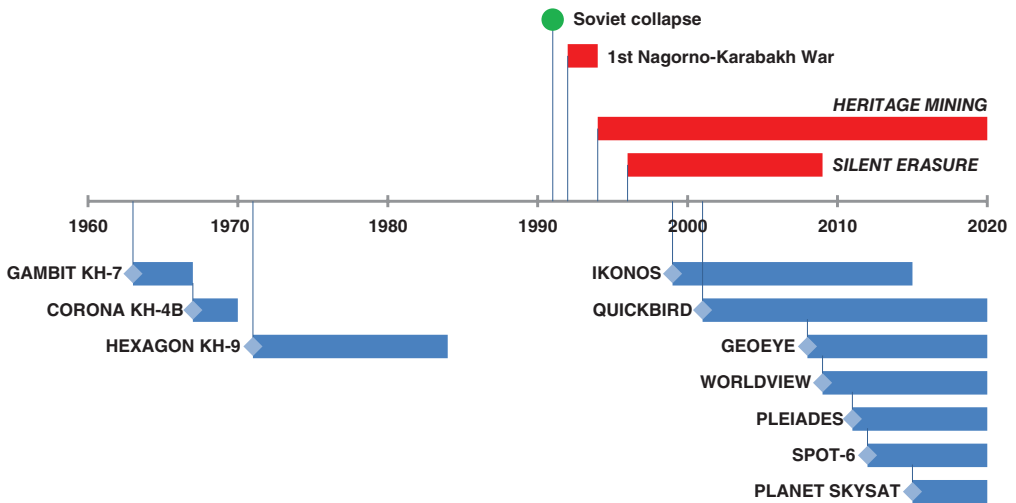


FIGURE 3.2. Timeline of available declassified US government and commercial satellite providers alongside the years examined in CHW's investigations of cultural erasure in Nakhchivan (chapter 1) and heritage mining in Nagorno-Karabakh (chapter 2). Note the gap between the collapse of the USSR and the earliest commercial imagery. Created by Ian Lindsay.

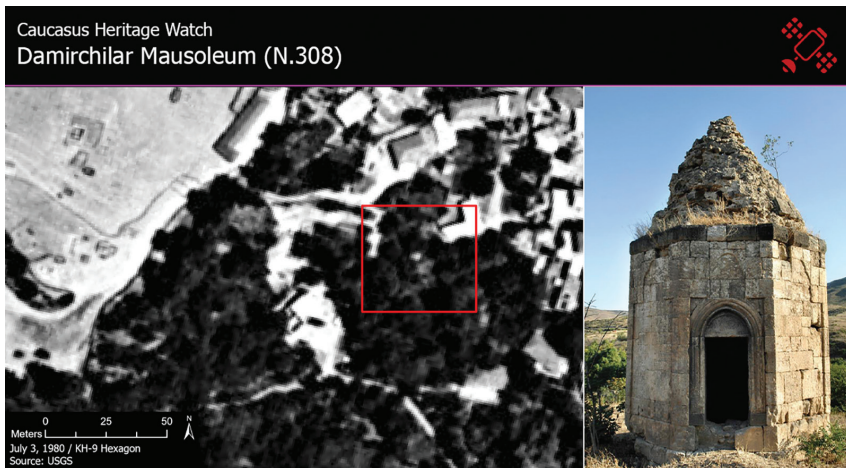


FIGURE 3.3. Temporal threshold of detectability. The Damirchilar Mausoleum (N.308) is not visible in the 1980 KH-9 HEXAGON image (left) due to the surrounding tree cover, making it impossible to assess site condition prior to the First Nagorno-Karabakh War (image source: USGS). The dome of the mausoleum has been damaged at some point, as seen in the photo (right) published in 2010 (image credit: Karapetyan 2010: 24, used with permission). It is not possible to securely date the impact to the site. © Caucasus Heritage Watch 2025.

release on Google Earth sufficiently timely, to allow for more refined time-series analysis and considerable improvement in the temporal threshold of detectability. The outbreak of renewed war in 2020 led to a brief uptick in the satellite imagery available on Google Earth. But likewise, the end of the fighting resulted in a return to spotty, episodic coverage.

The epistemological threshold of detectability emerged most formidably in cases where different strands of evidence provided conflicting information. For instance, in cross-referencing Soviet topographic maps and contemporary reconnaissance imagery, there were occasions where the location of a site clearly marked on a 1974 topographic map was a plowed field in a HEXAGON image from the previous year.²³ A similar issue can arise when official information concerning the location of a site is either erroneous or discordant, as was the case with the Ashyg Cemetery (N.5923). According to Azerbaijan's official heritage list, Ashyg Cemetery is located in the village of Mazmazak. But the cemetery appears to have taken its name from the Sary Ashyg Mausoleum, which is in the adjacent village of Gulabird where, indeed, Soviet topographic maps and postwar social media locate a large cemetery that aligns with Ashyg Cemetery (figure 3.4).

Errors and discrepancies were particularly severe for Azerbaijani heritage sites that had been excluded from official registers. We documented a total of twenty-eight excluded sites, including Jijimli Mosque (NA.03), Abdal Mosque (NA.09), Gulably Mosque (NA.12), and Merzili Mosque (NA.14). In several cases the available information for each was so conflicting that precise geolocation

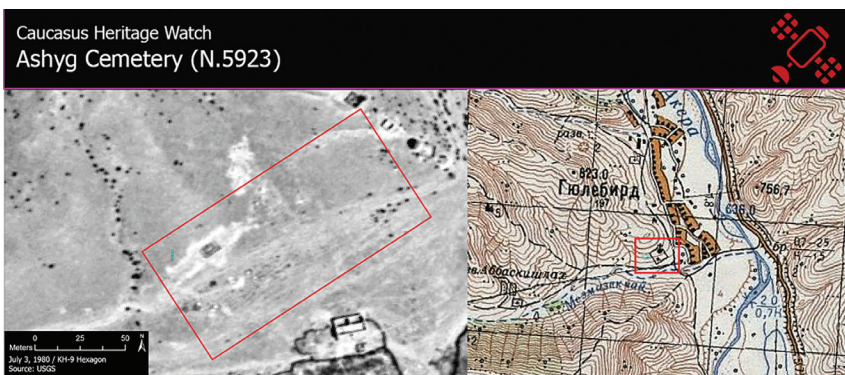


FIGURE 3.4. Epistemological threshold of detectability. Ashyg Cemetery (N.5923) in a 1980 satellite imagery (left) misattributed to Mazmazak village on Azerbaijan's heritage list, geolocated on the outskirts of Gulabird village, as seen on a 1:50,000 Soviet map of 1974 (right). © Caucasus Heritage Watch 2025.

was not possible. In several cases, it was difficult to reconcile official lists with academic or other sources that provided contradictory information. In other cases, official GPS coordinates (only included on the NKR lists) were inaccurate. In still other cases, bureaucratic data made geolocation difficult if not impossible. For example, Azerbaijan's monument list locates a mausoleum (#4354) in Khatek (Xatek) village. But there is no such village on any map or geographic registry. As a result, the site had to be excluded from our analysis as ungeolocated.

A fourth threshold of detectability is shaped by the categories CHW deploys in its investigations. Certainly, the most capacious of these categories is heritage itself, a term that embraces certain locations of cultural practice and memory but not others. The exclusion of certain sites from official lists underlines the role of the state in deciding what is and is not heritage and the potential for that power to be weaponized. Excluding sites from official lists not only denies them the legal status of "heritage," but it also significantly obscures their legibility by impeding geolocation and monitoring by non-state actors. Research groups such as CHW seeking to document attacks thus take upon themselves and their partner organizations the power to define heritage that is typically reserved by legal treaties for the apparatus of governments. In general, CHW defers to bureaucratic entities in defining what is and is not a cultural heritage site. But in cases where sites of consequence to a descendant community, the scholarly world, or both remain unlisted due to bigotry, bias, or simple oversight, heritage researchers may decide to augment existing inventories. This suggests that the responsibility to define the parameters of what is and is not heritage cannot be left solely to governments but rather should include a wider group of participants.²⁴

The categorical threshold of detectability extended beyond the definition of our objects of analysis to how we assessed them. In our investigation of Armenian heritage in Nakhchivan, our assessment categories were not complicated since everything had been destroyed. Assessment was thus a straightforward evaluation of presence or absence. But in our study of Azerbaijani heritage in Nagorno-Karabakh, the highly varied condition of monuments sometimes strained the boundaries of our assessment categories, particularly the distinction between destruction and major damage. We adopted a working definition that if standing walls remain, a site was not destroyed.

In the case of a mosque in the village of Horadiz (N.4221), this definition sparked debate within our team. As shown in figure 3.5, the mosque is clearly visible in a HEXAGON image from 1980. By 2005, its roof had been removed but the four exterior walls were still intact. The construction of a trench in the area demolished the northern half of the mosque, leaving the southern half standing. Post-war photos of the structure underline its ruination even as 2020 satellite imagery



FIGURE 3.5. Categorical threshold of detectability. Horadiz Mosque (N.4221) seen intact in a 1980 HEXAGON image (*left*) was damaged by 2005, by which time its roof had been removed (*middle*) (image source: USGS). Between 2005 and 2010, a trench was cut that removed the northern half of the structure leaving only the south wall and portions of the east and west walls still standing at the time of the 2020 image (*right*) (image source: Google, © 2020 Maxar Technologies). © Caucasus Heritage Watch 2025.

shows three walls still extant. CHW assessed the site as having suffered “major damage” rather than “destroyed,” reserving the latter term for cases where nothing remained of the monument, akin to the complete eradication we documented for Armenian heritage in Nakhchivan. If the patterns observed in Nakhchivan constituted destruction, then the mosque at Horadiz would seem to have stopped short of that. And yet the Horadiz mosque cannot be rebuilt on its existing foundations, as is possible for other sites we assessed as having suffered major damage. Hence our categories established their own kind of threshold of detectability as they worked to fit a variety of impacts into a functional but necessarily bounded typology.

The final threshold of detectability that we have encountered is *interpretive*. In several instances in our special investigations, the image quality for a given site was strong and the photographic and archival source material were consistent regarding site location, but the nature of the impact was simply too ambiguous to make a convincing determination of damage. For example, at the Shykhlar Cemetery (N.5795), HEXAGON imagery was not conclusive as to the extent and condition of the site even though grave markers were clearly visible as intact in recent imagery (figure 3.6). But the lack of clarity on the baseline condition combined

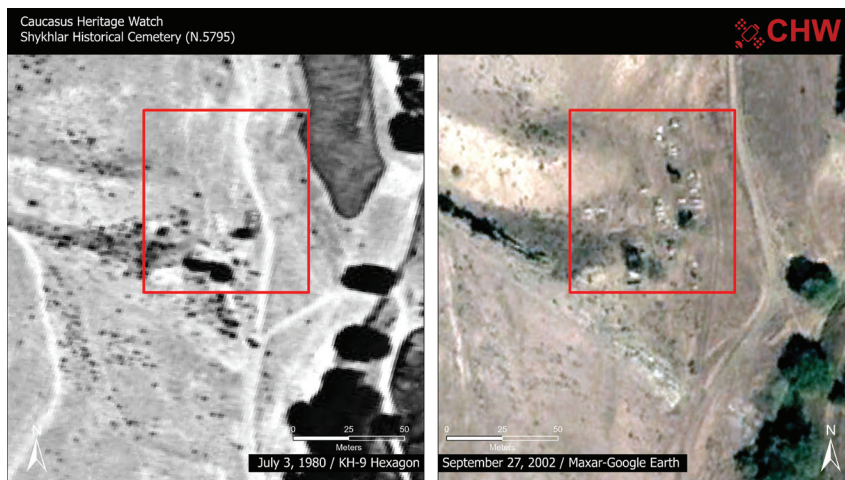


FIGURE 3.6. Interpretive threshold of detectability. Shykhlar Cemetery (N.5795), where clearly visible grave markers in the modern satellite image (*right*) are difficult to discern in the 1980 HEXAGON image (*left*) (image sources: USGS, Google, © 2002 Maxar Technologies). © Caucasus Heritage Watch 2025.

with the inability to understand the site at the level of the single tombstone created interpretive ambiguity. While a portion of the cemetery does appear to be intact, we were not able to confidently determine the condition of the cemetery as a whole, and thus assessed it as indeterminate.

Assembling the Evidence: From Heritage Observation to Heritage Forensics

The distinction between heritage observation and heritage forensics lies in what happens to assessments of individual sites after they are made (figure 3.7). Assessments form by joining a categorical framework for describing impacts (e.g., damaged, destroyed, unchanged) with a set of images captured at different points in time. Three procedures transform these determinations of condition into public discourse: (1) the compilation of individual assessments into an investigative consensus (i.e., among a team of researchers) that assembles facts, reveals patterns, and contests counter-factual claims; (2) the transformation of that consensus into evidence and a general determination of culpability; and (3) the employment of evidence into narratives that tell a story about what happened at a particular place, how it happened, and when. The materialization of our consensus into both evidence and stories is not a sequence; rather, these processes

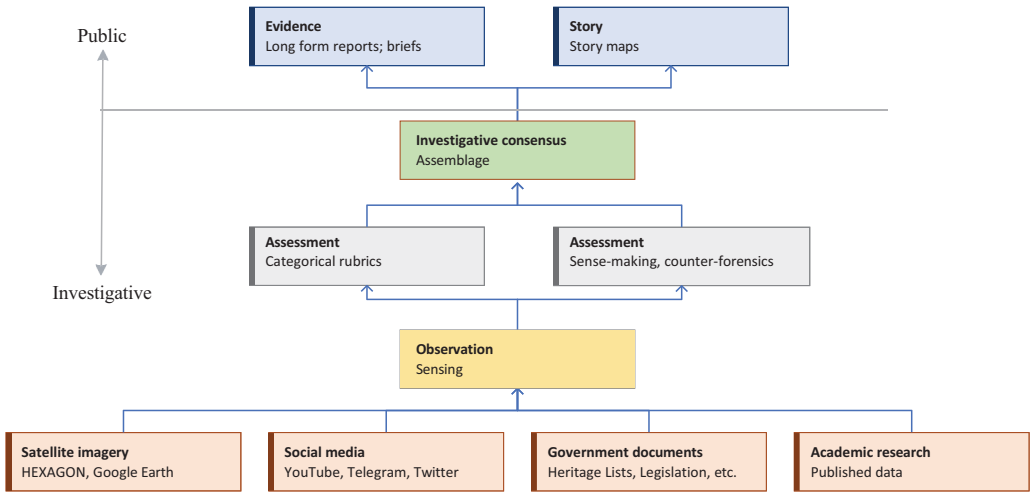


FIGURE 3.7. The heritage forensics process from investigative data sets to public assessments. Created by Adam T. Smith.

occur as parallel interventions in distinct fora that bring observations of heritage abuse to different publics through varying media aesthetics.

Assessments into Investigative Consensus

The most fundamental procedure in shaping an assessment into a forensic analysis is the transformation of observations derived from sensing into an investigative consensus. Consensus brings a collection of assessments into a unified understanding among a team of researchers that points to a patterned set of actions. In bringing forward patterns, consensus points to causation. CHW’s historical heritage forensic studies resulted in a total of 219 individual assessments. One set of observations focused on Armenian heritage in Nakhchivan (composed of 110 assessments), and another examined Azerbaijani heritage in Nagorno-Karabakh (with a total of 109 assessments). These discrete observations, forged out of a range of empirical sources, were woven together through investigative activities that searched for patterns across both time and space. Achieving consensus on what a satellite image shows is rather easier than a consensus around what it means, as Karen Litfin presciently noted two decades ago.²⁵ The work of transforming individual assessments of what an image shows into an investigative consensus around what it means entails what Fuller and Weizman call “investigative aesthetics,” an extremely careful sensory engagement that combines sensing—the capacity of humans and nonhumans to perceive or

register the world around them—with sense-making—activities that generate knowledge.²⁶ Where our assessments rest largely on the mechanical capacity of satellites to sense changes on the ground surface, our investigative consensus comes together through the additional labor of sense-making: the epistemological work of generating knowledge through interpretation. Investigative aesthetics is particularly vital when conflict is waged as much over truth as it is over territory.

In Nakhchivan, the region's isolation, and the silence around the erasure of Armenian heritage, meant that satellite imagery was our only means of sensing. Nevertheless, the work of sense-making was quite straightforward given the relative ease of detecting the total destruction of monuments using satellites, as well as the totality of the campaign overall. Sense-making involved a straightforward process of counter-forensics as a preponderance of visual evidence, combined with scholarship, census, and other data sources, easily debunked Azerbaijan's spurious denial of Armenian heritage in the region. In this case, the totality and scale of destruction together with historical evidence pointed unmistakably to state culpability.

In Nagorno-Karabakh, the process of sense-making was far more complex as the government of Azerbaijan (and its "online volunteer brigades and proxies"²⁷) was forwarding evidentiary materials—photos, videos, and testimonies—to project a particular narrative of unmitigated destruction of mosques and mausoleums under NKR control. Here, the process of sense-making required something more—a form of collage that brought together different media to produce an "investigative commons."²⁸ An investigative commons assembles publicly available traces of events and policies in order to see through official accounts seeking to obscure or deny and thereby establish a new terrain of fact. Assembling our observations about Azerbaijani cultural heritage sometimes required engaging directly with the aesthetic politics of Azerbaijan's representation of heritage abuses. Two examples illustrate how this process entailed more involved counter-forensics than in Nakhchivan, extending our assessments into more complex forms of sense-making that drew on the investigative commons.

First, according to Azerbaijan's Ministry of Culture website, Armenian forces destroyed the upper portion of the fourteenth-century Shykhlar Mausoleum (N.4166) in Jabrayil in 1993.²⁹ The mausoleum is one of many monuments featured in amateur videos captured and posted by Azerbaijani YouTubers since the 2020 war that depict Karabakh's landscapes ravaged by Armenian occupation. The decapitated mausoleum, colonized by vegetation, is meant to signify the losses attendant to Armenian assaults on Azerbaijani heritage. Satellite imagery shows that the monument is still standing (figure 3.8), but little more. But a photo of the site published in a 1992 Azerbaijani publication, taken before the First

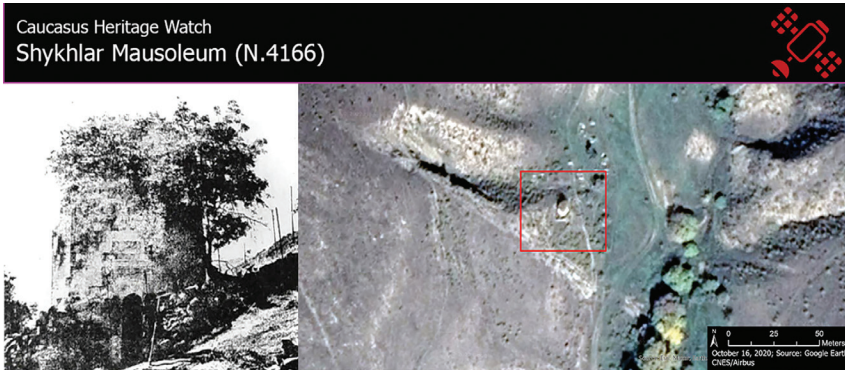


FIGURE 3.8. Shykhlar Mausoleum (N.4166) in a 1992 photograph (*left*) from Nemat (1992, pl. 4) and in a 2020 satellite image (*right*) (image source: Google, © 2020 CNES/Airbus). © Caucasus Heritage Watch 2025.

Nagorno-Karabakh War, clearly depicts the Shykhlar mausoleum with a mature juniper tree rising out of the dome. In other words, the damage to the site had occurred decades, if not centuries, prior to the modern conflict in which it was now caught up through state heritage propaganda.

Second, the fourteenth-century Mirali Mausoleum (N.205) in Fuzuli also appears largely unscathed on satellite imagery (figure 3.9). But that source does not tell the whole story. Postwar photographs of the monument show a hole in the eastern side, and it is precisely this side that features prominently in the images posted by the Karabakh Center, an Azerbaijani web platform initiated by Vice President and First Lady of Azerbaijan, Mehriban Aliyeva, that boasts over ten thousand images depicting the “catastrophic consequences of Armenian occupation.” Yet zooming outward from the monument itself, satellite images show that the mausoleum is just a few kilometers from what had been, for twenty-six years, the line of contact between Armenian and Azerbaijani forces. It is surrounded by what appear to have once been bunkers for NKR forces, suggesting that the hole in the mausoleum may have been the result of a munitions strike, quite possibly by Azerbaijani forces advancing from the east in the fall of 2020 and targeting Armenian positions near the mausoleum. In propaganda images, culpability is located in the superficial work of sensing: Azerbaijan’s Karabakh Center uses the frame of their photo to highlight damage and imply Armenian culpability.³⁰ But in forensic analysis, culpability emerges not from sensing alone but from sense-making. When seen through a wider lens, damage to the Mirali Mausoleum appears to be the result of both Armenian violations in siting military targets so close to a heritage site and likely Azerbaijani failures in targeting control.



Caucasus Heritage Watch Mirali Mausoleum (N.205)



FIGURE 3.9. Satellite imagery showing the location of the Mirali Mausoleum (N.205, blue dot in left image) adjacent to the line of contact between Armenian and Azerbaijani forces during the Second Nagorno-Karabakh War. Inset imagery shows locations of what appear to be Armenian defensive positions near the monument. At right, an illustration of the mausoleum (Bretanitskii and Salamzade 1951). © Caucasus Heritage Watch 2025.

In our investigation of Azerbaijani heritage under NKR administration, CHW's investigative consensus drew together images not only from satellites but also academic publications, official government sources, and "media flotsam" to create an assemblage of materials that provided assessments and also mustered facts to counter state-manufactured misinformation.³¹ The assembled facts rest on multiple material signals, each of which can be ambiguous on its own, some situated at the very threshold of detectability, but which come together to form powerful and verifiable statements through both sensing and sense-making. The material sensors of film, digital video and imagery, multispectral satellites, and material surfaces of built structures register traces of impacts that make possible the production of knowledge through the assembly of meaning.

Thus, investigative consensus entailed developing a distinct kind of assemblage formed largely out of digital media and cohering as a unity of sensing, assessment, judgment, and sense-making. Consensus emerged in our forensic workflow as the culmination of a detailed investigative process, a precondition to the materialization of our findings. Once assembled, CHW's investigative consensus followed two pathways into public fora: assembled as *evidence* for judicial proceedings (discussed in chapter 4), and, more visibly, as *stories* for concerned publics.

Consensus into Stories

CHW brings its investigative consensus to a wider public through stories that we develop in parallel with the assembling of evidence. Material witness to meaningful places threatened, damaged, or destroyed, evidence of heritage abuse leaks into the public sphere as testimonials to loss, trauma, and cruelty. How heritage forensic images move into the public sphere is fundamental to their transformation from consensus into elements of storytelling. Heritage abuse is not only an attempt to erase places or material objects but also the stories that swirl around them. Heritage forensics, as a practice of recuperation, must work not only to resurrect places—even if only digitally—but also to rebuild stories, starting with stories of erasure and existence. While CHW's investigations are entered as evidence in official proceedings as long-form reports, saturated with pages of imagery, and short briefing papers focused on immediate findings (see chapter 4), we use story maps to transform evidence into narrative.³²

The use of story maps in the digital humanities has proliferated in recent years as scholars and advocates have searched for ways to communicate quantitative datasets in narrative forms that promote understanding, engagement, and activity.³³ Giovanna Di Chiro posed the question quite aptly in asking: "How do we tell stories about living together justly, mutually, and sustainably on a damaged planet?"³⁴ Indeed, digital storytelling has emerged as a powerful technology in

global social justice movements, including efforts to enhance climate awareness, promote activist citizenship, and build empathy for migrant journeys. Digital storytelling through story maps provides an aesthetic form that allows for narrative to congeal around places—a convention well-suited to communicating the fate of cultural heritage sites.

Our ArcGIS StoryMaps are comprised of four primary narrative elements: a section detailing the evidence supporting geolocation, an account of the current state of the sites illustrated with “swipes” that compare before and after satellite imagery, a timeline setting out all of the evidence in chronological order, and a gallery of archival images testifying to the site’s form, construction, and, where relevant, iconography. Each CHW StoryMap has a simple narrative structure. The 108 StoryMaps for our investigation into the destruction of Armenian cultural heritage in Nakhchivan offered a singularly elegiac arc, shaped entirely by the tropes of presence followed by loss. Our work on the treatment of Azerbaijani cultural heritage in the unrecognized NKR produced 109 StoryMaps with more varied narratives. There was loss, to be sure, but also in some cases catharsis as, in an otherwise remorselessly bleak conflict, some remains of the region’s past were found intact. Taken together, our 217 StoryMaps make complex assessments accessible to general audiences using interactive and visually compelling imagery and clear, unpolemical prose. Our goal was to let both cases stand on their own but also to recognize that they were inevitably tied together by a common unresolved conflict. The dynamic quality of this online medium will make it possible in the future to use the story maps as the foundation for collecting oral histories that can testify to the lives lived amid sites caught on the frontlines of a “frozen conflict” that was never truly frozen (see introduction).

The narrative force of telling stories of heritage abuse and cultural erasure arises not inside the individual entries but rather between them, terrain mapped in each by what ESRI calls an “explorer map tour.”³⁵ The map tour binds together the individual pieces to create a greater whole that can provide the reader with a sense of the total picture. In the aftermath of the 2020 Nagorno-Karabakh War, the primary discursive form that coalesced around cultural heritage was *accusation*, as vitriolic claims and counterclaims circulated widely on social media across multiple languages. CHW’s map tours sought to counter accusation with narrative, using evidence to provide facts but also setting facts into a wider account that worked to establish culpability and did not seek to force moral equivalency. In future phases of this work, we hope to use the story maps as the foundation for collecting oral histories that can testify to the lives lived amid sites on the precipice of ethnic cleansing.

The development of heritage forensics as a distinct investigative practice has emerged in response to the targeted destruction of cultural heritage sites

in contexts of armed conflict and ethnic cleansing. As this chapter has shown, the methodological foundations of heritage forensics rest on the careful integration of multiple forms of evidence—from satellite imagery to archival records to social media—that must be assembled and interpreted with rigorous attention to various thresholds of detectability. While remote sensing technologies have dramatically expanded our ability to document and monitor heritage sites, the transformation of observations into evidence requires moving beyond purely technical assessments to build investigative consensus through processes of sense-making that can counter manufactured narratives and establish patterns of abuse. As heritage forensics continues to evolve, particularly in response to conflicts where direct access is impossible, the field must balance the imperative to document destruction with the need to tell compelling stories that can support both legal accountability and broader public understanding of cultural erasure. The systematic approach developed by CHW demonstrates how heritage forensics can generate both evidence admissible in legal proceedings and accessible narratives that bear witness to the human costs of heritage destruction.

COUNTER-FORENSICS ON THE CULTURAL FRONT

*Lori Khatchadourian, Adam T. Smith,
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Since its inception, satellite-based Earth observation has been predicated on the disciplinary power that awareness of surveillance creates.¹ For Western policy-makers, there has been a general assumption—ingrained since the Cold War—that surveillance creates enhanced transparency, which in turn promotes stability by reducing the risk of political miscalculation.² Recently, the Biden administration tried to utilize satellite imagery in this way in 2022, revealing Russian military preparations along the border with Ukraine in order, it was hoped, to deter the impending invasion.³

Yet there is also a widespread assumption by academic researchers that surveillance technologies, especially those firmly rooted in the military-industrial complex, augment oppression at home and abroad, as enhanced “legibility” forms a key foundation of state power.⁴ In this latter view, the synoptic vision of the satellite image is not just an element of control but constitutive of what Lisa Parks calls “vertical hegemony.”⁵ For Parks, geospatial imagery constitutes the “signature site” of vertical mediation, enlisting agents—from global media outlets to Google Earth—in a celebration of American political and corporate power, as well as the transformation of the earth’s surface into intellectual property.⁶ Seeing geospatial images “like a state” stridently forwards authoritative assessments. It was this form of legibility that played out so disastrously in the heavily annotated satellite images that US Secretary of State Colin Powell presented to the UN in 2003 as evidence of Iraq’s nonexistent weapons of mass destruction. As the filmmaker Errol Morris later pointed out, the fabrication of Powell’s images of alleged Iraqi weapons facilities lay not in manipulation of the photo itself but in the

annotations: “It is the labels, the captions, and the surrounding text that turn the images from one thing into another.”⁷

Despite its origins in military reconnaissance, as early as 2002 Karen Litfin recognized the potential of satellite imagery to decenter the operation of disciplinary power (long the sole purview of the state) and empower civil society to harness a technology originally intended for military purposes toward humanitarian applications.⁸ For Litfin, “the profusion of civilian and commercial satellite imagery opens up new opportunities for non-state actors to be involved in traditional national security issues.” She cites The Nature Conservancy’s use of satellite data to evaluate biodiversity and thus monitor the Environmental Protection Agency’s enforcement of the Endangered Species Act. Parks likewise notes the ability of nongovernmental organizations to read satellite images in ways that differ from the state, singling out the Satellite Sentinel Project (SSP) as an impactful example. Between 2011 and 2015, SSP used DigitalGlobe imagery to investigate human rights violations committed by the Sudanese military in South Sudan, documenting the systematic burning of villages and the construction of mass grave sites. Projects like SSP turn the tools of the state back on their original master, utilizing geospatial images to “question militarized aggression and vertical power hierarchies rather than trying to reinforce or naturalize them.”⁹ But it is important to note that the difference between seeing a satellite image “like a state” and utilizing it in counter-forensics does not lie in the process of sensing. SSP, CHW, and other organizations such as Bellingcat and Forensic Architecture (discussed below) examine satellite data collected from sensors that are largely the same as those used by state agents. Moreover, they scan the images in much the same way as state agents, attentive to morphological changes and alterations in the distribution of physical materials.

The distinction between hegemonic and counter-forensic work with satellite imagery lies in the procedures of what Weizman calls “sense-making” (see chapter 3). Hegemonic sense-making is highly overdetermined, allowing governmental policy objectives (e.g., an invasion of Iraq) to direct interpretation. In counter-forensics applications, sense-making slips beyond state control into a public sphere of argument, debate, and consensus building. For researchers, sense-making is comparatively underdetermined, allowing analysis of visible change to invoke a range of potential explanations and actors. In counter-forensic applications, the satellite image can be used to establish the terrain of fact even as it is recognized to be a mediated form of representation that merits constant scrutiny. As several critics have noted, the satellite image relies on analytical judgement, aesthetic tools, discursive elements, and technological expertise to convey meaning and does not, therefore, “speak for itself.”¹⁰ Even before reaching the analyst, the images collected by the sensors undergo a multi-step process of

geometric correction, color assignment, contrast enhancement, and other techniques to legibly represent the Earth's surface.

Researchers, for their part, determine both the frame and the focus of the image presented to the public, both of which derive from the procedures of assessment and not from the electronics of the camera or the algorithms of postprocessing. The frame refers to the geophysical space that is placed within the forensic view. It is the area of the Earth's surface that is presented for consideration. The focus is set within the frame. It is the geometric figure (typically a polygon or arrow) that demands the viewer's attention, calling the eye to a specific location and a specific contrast. These procedures render the process of satellite surveillance not merely one of image retrieval and use but one of image-making.¹¹ As a result of all of this work, satellite images are surrounded by a narrative apparatus of titles, captions, and (ideally) thick historical, political, and socio-cultural description that supports the analysis and conveys meaning.

Far from diminishing the power of satellite images to establish facts, as some critics imply, such interventions strengthen the possibility of arriving at verifiable information and truth claims. The complex procedures of heritage forensics, including triangulation, contextualization, collaboration with partners in the conflict zone, consensus-building, transparency, and public dissemination, support Parks's assertion that "satellite witnessing is a critical practice that refuses to accept the satellite image as an omniscient view, a strategic map, a penultimate perspective, and instead appropriates its abstraction to generate further interrogation, discussion, and inquiry."¹² Critics of the use of satellite imagery in forensic and humanitarian work have offered constructive critiques of problematic, uncritical uses of the technology, particularly by state actors,¹³ but skepticism and blanket arguments centered only on the inherently rhetorical and political nature of satellite surveillance risk underestimating the power of satellite-imagery in counter-forensics to challenge hegemony and establish a counter-forensic account of events.

Alan Sekula coined the term "counter-forensics" in his work on the relationship between photography, evidence, and the politics of human rights.¹⁴ For Sekula, the term refers to the adoption of state-sponsored forensic techniques—for example, imaging technologies that the surveillance state developed as instruments of discipline, legibility, and violence—to subvert projects of cultural erasure and human rights suppression among minority populations. His insights have been taken up by others. Thomas Keenan highlights Sekula's use of "counter-forensics" to achieve a rhetorical inversion away from an instrumental to a more humanist perspective on remotely sensed data, where aerial imagery and photos can be used to bear witness as legal testimony.¹⁵ In so doing, Keenan circumvents the question of whether photos lie (they certainly can) or tell the

truth (they can do that, too), situating photographic evidence instead in relation to its “conditions” and “presentational circumstances” within the public forum.

In a striking example of counter-forensics’ capacity to resist, resolve, and remember acts of state oppression, Keenan highlights the use of imagery captured during Saddam Hussein’s genocidal campaign to exterminate Iraq’s Kurdish population in the 1990s. Teams of forensic anthropologists subsequently used this imagery, along with the memories of survivors, to compile evidence of atrocities; as Keenan notes, “knowledge needs this rogues gallery of bones and images, memories and traces, when the aim of the genocidal assault is not just to erase people but also their history and their rightful claim to share the Earth with others.”¹⁶ Disappearances leave traces that can be documented, work that human rights organizations such as Amnesty International, Human Rights Watch, and Memorial have pioneered. As a means of resistance and public accountability, counter-forensics is more than just evidence gathering or an assemblage of computational techniques. Rather, as Weizman notes, it is a *civil practice* where the examination of the built environment aims to evaluate public claims about political or cultural violence, confront secrecy and denial, and air those findings in public fora.¹⁷ As such, counter-forensics as it is brought into the arena of cultural erasure sits squarely within the broader discursive arena of heritage rhetoric.

Recent work foregrounding the rhetorical power of heritage focuses on its strategic capacity for mobilizing publics through the activation of the past as a political position, metaphor, or vision of a possible future—what Lafrenz Samuels terms “heritage as persuasion.”¹⁸ Similarly, G.J. Ashworth and Brian Graham argue that the power of heritage ultimately lies not in its historical value, but in its ability “to mobilize people and resources, to reform discourses, and to transform practices,” as ethnic and territorial struggles unfold over social media, in international courts, and among the ruins of abandoned homelands.¹⁹ In the absence of evidence, however, “heritage as persuasion” can be reduced to facile rhetorical contests informed more by chauvinism than facts. Heritage forensics provides a methodology for reaching beyond the rhetorical contests between hyperbolic accounts presented on social media by opposing Armenian and Azerbaijani partisans and the false equivalences framed in Western media in the name of “even-handedness.” A counter-forensics of cultural heritage works to document threats to monuments, memorials, and memories—road construction, urban development, resource extraction, asset stripping, retrofitting, bigotry, and erasure—and assess responsibility, where possible. Within archaeology, Susan Pollock and Reinhard Bernbeck have called explicitly for a counter-hegemonic archaeology that embraces advanced imaging technologies to conduct counter-forensic examinations of state violence.²⁰ This represents a significant repositioning of a discipline that has been shown to do the very opposite—that is, to “unsee” the

remains of state violence. In Turkey, for example, where archaeology has been co-opted by extraordinary forms of state pressure and persuasion, Smith has documented archaeology's highly refined habits of unseeing the Armenian past, while in Syria, as Khatchadourian has shown, archaeologists have deliberately dismissed and disregarded the bones from mass graves of the Armenian Genocide.²¹ As a recent conference on archaeology, heritage, and forensics at Cornell University made clear, such practices of absencing can be found in numerous global locations where violence and oppression work to eradicate peoples and their inconvenient histories.²² Thus, the traces of heritage disappearances are only visible when research embraces the technologies of seeing, including satellite image interpretation.

Some have criticized stewardship-motivated responses of the archaeological community as fetishistic, prioritizing the sterile politics of archaeological preservation over the human politics of conflict, for instance in Iraq.²³ Assessments directed at satellite-based monitoring in the Syrian Civil War have likewise drawn a sharp distinction between documentation of heritage loss and humanitarian work, critiquing the priority that international experts have placed on recording impacts over assisting Syrians and Syrian heritage professionals on the ground.²⁴ While these critiques may be apt to the contexts that gave rise to them, the opposition of human lives and historical remains is a false dichotomy that fails to account for contexts where heritage is precisely the arena of human rights abuses, racism, and ethnic cleansing. In such contexts, as in Azerbaijan, satellite monitoring of cultural heritage is itself a humanitarian intervention in defense of the cultural rights and dignity of a forcibly displaced population.²⁵

A wider historical critique has pointed out that all aerial visioning technologies are products of the colonial gaze and thus implicated in the surveillance work that establishes and polices social, economic, and racial hierarchies. Raffi Greenberg and Yanis Hamilakis have referred to these procedures as the "purification" of colonized regions.²⁶ By combining archaeological discoveries with curated visual representations of heritage landscapes isolated from complicated palimpsests of the present, colonized landscapes are suspended in what Mirjam Brusius and Trinidad Rico refer to as "heritage time."²⁷ We recognize the colonial legacies of the panoptic gaze and the role that remote Earth imaging has played in the projection of violence. But the broad access to aerial and space-borne vision is also providing new opportunities to turn that gaze back on the state itself as a tool of counter-forensics. To abjure their use would be to forgo a form of investigation that can assist in countering state violence against both heritage sites and the communities for whom they hold meaning.

CHW's approach to counter-forensics aligns closely with work undertaken by both Bellingcat and Forensic Architecture. Both organizations utilize an extensive

array of tools to document human rights abuses around the world and bring them into the public forum, defined broadly from art exhibits to courts to news outlets. Both organizations have conducted studies of heritage abuses: Bellingcat in Syria, Ukraine, and Gaza and Forensic Architecture in multiple locations across Israel/Palestine as well as in northern Iraq and Ukraine.²⁸ And both organizations frame attacks on cultural heritage within their larger commitment to expose human rights abuses rather than in reference to principles of heritage stewardship or the outstanding universal value of the heritage sites targeted. CHW's intense longitudinal focus on a single conflict and its implications for cultural heritage across three decades is less event-based than the approaches of Forensic Architecture or Bellingcat. CHW's investigations detailed in this volume document hundreds of distinct events which, taken together, reveal long-term patterns and corrosive state policies. But like Forensic Architecture and Bellingcat, CHW's counter-forensics sets these patterns within a human rights framework.

Our primary commitments reside not in the preservation of the heritage landscape per se, but in exposing and countering abuses of power, post-truths, and the erosion of human rights as these unfold through the spectral materiality of heritage. The economics of commercial satellite image collection open new opportunities for researchers to control both the frame and the focus, appropriating the aesthetics of satellite imagery to turn the forensic lens on the very state actors that traditionally monopolize them. We undertake this work not in service to a cosmopolitan ethic of global archaeological stewardship;²⁹ rather, we detect, document, and try to deter attacks on tangible heritage to help reveal and combat the racism, ethnic hatred, and state violence that drive such attacks. Deterrence through satellite surveillance entails not only changing power relations among actors in a given arena but "helping to constitute those actors by modifying their own self-understanding," and thus our work asks whether heritage forensics can reshape the Azerbaijani government's awareness of its own actions and reactions vis-à-vis Armenian cultural heritage in its territory.³⁰ Referring to remote Earth observation as the "satellite Panopticon," Andrew Herscher is skeptical about the logic of "repeated seeing" and "reported seeing" for the purpose of deterrence.³¹ A deterrence logic, Herscher argues, can diminish political participation insofar as the satellite image is addressed not to global audiences but to perpetrators. But the dichotomy is a false one; repeated seeing and rapid reporting can raise public awareness, pressure institutions, and unsettle bad actors with the constant prospect of exposure. Indeed, deterrence can only take hold if the perpetrator is aware that others are seeing the same images that they are. The satellite is thus not panoptic but, more correctly, synoptic as it creates the potential for the many to watch the few.³²

CHW is fundamentally a political and ethical intervention. We seek to understand the forces that drive abuses of heritage, evaluate the nature of their impacts,

and assess the possibilities that new tools of sensing and sense-making offer for intervening in programs of cultural erasure. The heritage forensic techniques we have employed in Nagorno-Karabakh and Nakhchivan constitute initial steps toward Weizman's civil practice in an effort to bring acts of heritage violence, be they attritional or sudden, silent or explosive, into public view.

In our experience, state responses to counter-forensics have sought to ignore the evidence, delegitimize the technology, and disparage the witnesses. Hence, we rely on full transparency regarding who we are and what we do in order to undercut state denials and intimidation. Critical reactions on social media and broadcast from Azerbaijan's state media organs tend not to marshal empirical counterevidence in response to our findings but rather focus on *ad hominem* attacks tied to the ethnic background of some members of our investigative team.³³ The presumption is that researchers of Armenian heritage could not possibly evaluate empirical evidence fairly. This makes sense in the context of local racist ideology, but in the context of heritage forensic research it reveals more about the bigotry of Azerbaijani officials and state-controlled media than CHW's findings.

A second critique that circulates in Azerbaijan's media ecosystem works to undermine CHW's satellite images by suggesting they have been edited, exploiting the prevailing suspicion of evidence created by social media gaslighting. For example: "It turns out that suspicious 'satellite images' have suddenly become the main argument in the hands of the 'truth' lovers from Caucasus Heritage Watch. I wonder what Photoshop course these specialists have completed so that their pictures cause such delight in the Armenian media? Maybe instead of Heritage Watch they should rename themselves Heritage Photoshop Studio? It would be more honest."³⁴ All of CHW's images possess detailed metadata that indexes the direct chain of custody from the satellite platform or provider to publication. For Planet Labs imaging, this consists of three unique identifiers—a tasking ID, a capture ID, and an order ID—that clearly establish the integrity of the image. Most of our findings can also be confirmed independently by imagery widely available, in time, on Google Earth.

CHW, Satellite Monitoring, and the Risk Paradigm

Risk is foundational to the global institutional apparatus of cultural heritage, first codified in the World Heritage Convention of 1972 (article 11.4) as UNESCO's List of Heritage in Danger and later amplified by the World Monuments Fund's "Watch List" (beginning in 1996). But it was only after the bombing of the Bamiyan Buddhas in 2001 and UNESCO's resulting 2003 Declaration Concerning the

Intentional Destruction of Cultural Heritage that the notion of risk came to be inseparably tied to the deliberate targeting of monuments. From its initial implementation in 1979 to 1999, the List of Heritage in Danger never contained more than ten cultural sites. Since 2001, the list has grown steadily, reaching forty-one properties as of 2024.³⁵ UNESCO's 2003 declaration, although nonbinding, called on states to cooperate in the exchange of information concerning the risk of intentional destruction to cultural heritage (VIII.1.i). UNESCO further expanded on the issue at its 2015 General Conference in Paris, at the height of the Syrian Civil War, where delegates addressed categories of risk during armed conflicts that threatened not just cultural properties but people.³⁶ In addition to discussions of looting, collateral damage, and neglect, the category of "intentional damage" was framed in terms of the deliberate destruction of cultural symbols and properties as a weapon of war in service of cultural erasure or ethnic cleansing. Similarly, in a 2021 policy document the ICC declared the intent to adjust its terminology in dealing with cases of destruction of cultural sites, abandoning the term "cultural property" in favor of "cultural heritage" to better capture the associative social value of places beyond the material, and how these associations are put at risk in conflict scenarios.³⁷

The complexities of risk—its assessment, differing temporalities and causal factors—have been the subject of recent scholarship.³⁸ Rico has been critical of the 'heritage-at-risk' framework that mobilizes heritage policy by focusing on a "quantification of threats rather than a contextual analysis of culturally specific understandings of risk and consequences."³⁹ The propensity for policymakers and heritage professionals to identify and typologize threats, Rico argues, leads to a false impression of objectivity given the many limitations in assessing the intensity and temporalities of threats when making condition assessments.

It is within this wider atmosphere of heritage in peril that, beginning in 2021, CHW launched a program to monitor endangered Armenian cultural heritage sites located in territories transferred to Azerbaijan following the Second Nagorno-Karabakh War. Given the erasure that had taken place in Nakhchivan years earlier (see chapter 1)—the broad contours of which were known even before our investigation thanks to the testimony of eye-witnesses and whistleblowers—it was abundantly clear that Armenian heritage sites within the transferred territories were at risk, threatened by the same policy of zero tolerance for Armenian historic remains. In its initial years, CHW's program of satellite surveillance took shape in a context of shifting and unstable borders. Azerbaijan's final offensive in fall of 2023 and the capitulation of NKR marked the military denouement in the decades-long struggle over Nagorno-Karabakh, a culmination that placed hundreds more Armenian churches, monasteries, and historic cemeteries under Azerbaijan's jurisdiction. The line of contact between Armenian and Azerbaijani

forces has since retreated to the internationally recognized boundaries of the two states, which, though in dispute, have considerable force in global geopolitics as the margins of sovereign territories. But the Armenian-Azerbaijani “rivalry,” as Broers aptly dubs it, now plays out in different arenas, most notably in international courts as lawfare, at the negotiating table, in the global media as “mediapolitik,” and on the cultural front.⁴⁰

The only current means to monitor the state of heritage sites on the cultural front in Karabakh is remotely, by satellite. The region remains largely closed and is off limits to international scholars asking unwelcome questions about the condition of Karabakh’s Armenian cultural heritage sites. Their very existence is largely denied under the force of a distorting historiography that appropriates them to Caucasian Albania (see chapter 1). Moreover, after the wholesale ethnic cleansing of the region’s Armenian inhabitants in 2023, no stakeholders remain to witness and give testimony to heritage abuses, while decades of state-sponsored Armenophobia ensure an Azerbaijani public that is, at best, disinterested in preservation, and at worst, supportive of cultural erasure. In Azerbaijan’s repressive environment, where dissidents face persecution both at home and abroad, witness testimony has become virtually impossible to obtain. Critics of satellite witnessing have cautioned against privileging the distant, extraterritorial, technological gaze of the satellite over situated knowledge and the testimony of on-the-ground witnesses.⁴¹ By employing satellite surveillance to monitor cultural heritage sites in Karabakh, CHW is not replacing the human witnesses who were expelled but rather asserting an alternative practice of bearing witness. CHW’s monitoring work seeks to turn the spectral power of heritage into a political force able to shape the present and reimagine the future, not least by creating evidence that can hold perpetrators of heritage crimes accountable in courts of law and in public fora.

CHW’s Nagorno-Karabakh site monitoring inventory was built upon the state heritage lists of the NKR. These lists include thousands of sites, from Paleolithic caves to twenty-first-century war monuments. Most sites on the lists also had accompanying certificates that provide historical and geographic information, and, following Soviet-era conventions, a notation of significance, classifying them by national, regional, or local importance. In some areas, the state lists were incomplete, requiring supplementation from scholarly, cartographic, ecclesiastical, or other sources. In relying on these lists, CHW’s monitoring of Karabakh’s cultural front is clearly founded on the paradigmatic material of what Laurajane Smith termed “Authorized Heritage Discourse” or AHD.⁴² Authorized heritage discourses in the post-Soviet world are not isomorphic with their cousins in the West, the primary target of Smith’s critical insight, but they do share key features.⁴³ Most notably, they arise from a rigid, bureaucratic

institutional setting that understands heritage as objects of regulation, rather than subjects of cultural (re)production. That said, heritage in the post-socialist contexts of the South Caucasus does not reside behind a protective “glass case” demarcating a managed heritagescape from the daily activities of human movement and interaction.⁴⁴ Indeed, protection is often limited to an asserted, but not demarcated or maintained, site boundary that is largely invisible on the landscape. Rather, heritage sites suffuse the wider lived experience of towns, villages, and the countryside, markers along pathways of people, herds, and visitors alike.

Our aim in constructing CHW’s database of heritage sites and categories of assessment has been to avoid using what Rico calls “blanket ‘at risk’ categorizations” and to account for the specific temporality, spatiality, and intensity of risk for each site;⁴⁵ in short, we take into account not only what heritage elements are at risk, but why, when, and how at risk a site may be.⁴⁶ CHW assigns a risk level to each site based on its proximity to the conflict’s cultural front. Sites entangled with medieval and modern Armenian historical ties to Nagorno-Karabakh were deemed to be at the highest risk of abuse, while archaeological sites of the remote past were identified as at low risk and hence excluded from monitoring. As Dacia Viejo Rose notes, it is critical that researchers contextualize violence against cultural heritage: “not doing so leads to failures in ‘reading’ both the act of destruction and what this reveals about the nature of the conflict.”⁴⁷

For the purposes of site monitoring, CHW conceives of risk in reference to the probability of *physical* harm, and not the *symbolic* refashioning of monuments. Satellite images can reveal changes in site morphology indicative of abuse, but they have substantially less capacity to identify attacks on the authenticity and historical integrity of monuments. Nevertheless, it is important to keep in mind that, in areas of conflict, cultural heritage may be at greater threat of appropriation or polemical cooptation than of physical violence.⁴⁸ This is especially salient in territorial land claims that turn on questions of cultural and linguistic ethnogenesis, and it is an issue that weighs heavily on the hundreds of Armenian churches, monasteries, and cemeteries in the territories ceded to Azerbaijan. As we discussed in chapter 1, the rebranding of medieval Armenian ecclesiastical landscapes in Karabakh as “Caucasian Albanian” was a brazen act of historical revisionism that took place in the late Soviet period, and thus symbolic destruction is no longer a *risk* facing Armenian monuments in Azerbaijan but an already completed *outcome* of what has been a decades-long project to negate the historical grounds of Armenian belonging in Karabakh. In this sense, Azerbaijani appropriation of Armenian cultural heritage is not intelligible as a risk but only as a *fait accompli*. The risk that remains is that this symbolic claim upon Armenian

heritage in Karabakh will be followed by the elimination of physical markers of Armenian identification, such as decorative art, iconography, and inscriptions, destructive acts largely hidden from the gaze of satellite observation.

Monitoring Heritage: Damage, Destruction, and Threat on the Cultural Front

A number of international heritage research projects have built monitoring workflows around low-cost, open access Earth observation imagery.⁴⁹ Some of these options, like the European Space Agency's Sentinel-2 platform, trade lower spatial resolution for a rapid return rate over a site (typically five to ten days).⁵⁰ But it can be difficult to assess site impacts from low-resolution imagery with a high degree of confidence. Hence, the very high-resolution imagery available from commercial vendors such as Maxar/Vantor (e.g., DigitalGlobe and WorldView satellites) and Planet's SkySat constellation is indispensable for forensic investigations that seek to constitute observations as evidence suitable for public and legal fora. Other open-source options, such as Google Earth, do provide high-resolution imagery from providers such as Maxar and AirBus, but on an unpredictable and inconsistent schedule, hamstringing efforts to monitor on a regular basis, which is vital to the highly fluid conditions of conflict settings. It is at present only possible to secure both high-resolution imagery and a predictable schedule of image capture by directly tasking satellites. But the high cost of satellite tasking creates a significant financial barrier to their use, absent sustained funding or special licensing agreements with satellite vendors or government agencies (through programs such as Maxar's Global Enhanced GEOINT Delivery).

CHW's monitoring program maintains regular surveillance of over five hundred at-risk medieval and early modern sites using tasked imagery from Planet Labs' SkySat constellation. We conduct this work with due consideration of the AAAS's cautionary note on "Satellite Imaging of Cultural Sites in Conflict."⁵¹ In each monitoring mission, our team examines the sites individually, carefully comparing the new satellite images with imagery from prior missions, and assigning a condition assessment to each site: destroyed, damaged, threatened, unchanged, or indeterminate. The evaluation of satellite images entails a process of sustained interrogation across a series of captures. It is as much an aesthetic practice of detecting objects in and out of place as it is an analytic procedure. And it is a process shaped by a panoply of variables—some controlled, others uncontrollable—ranging from the mechanics of the satellite sensor to Earth's atmospheric conditions at the time of image capture. Indeed, satellite images require

critical examination because of the biases, limits, and distortions of their distinct mode of sensing. For instance, we sometimes deem that the condition of a site is “indeterminate” because cloud cover or image anomalies render it impossible for us to make an assessment with a high level of confidence.

Sites are designated as “destroyed” when they have been virtually eradicated. As of October 2025, CHW has documented fourteen destroyed sites since our first mission in spring 2021, including two churches and four historic cemeteries (figure 4.1). The nineteenth-century St. Hovhannes Mkrtych (or St. John the Baptist) church (SH.053-0) in the historic city of Shusha (Arm. Shushi), which had sustained damage during the 2020 war, was flattened between December 28, 2023 and April 4, 2024, despite the fact that the Russian Church had claimed it, various religious officials had visited it, and renovations were underway as of 2021 (figure 4.2).⁵² In another enigmatic case that called for a detailed StoryMap, the unassuming eighteenth- or nineteenth-century church of St. Sargis in the village of Susanlyq (Arm. Mokhrenes), in the Khojavend region (Arm. Hadrut), was destroyed between March 5 and July 6, 2022 (figure 4.3).⁵³ A new structure was later built in its place that bears some resemblance to the original St. Sargis. The church, which had been in active use until the Armenians of the village were forced to evacuate in 2020, had been added to the AzSSR’s list of cultural monuments in 1988 as an “Albanian temple” as part of the wider appropriation of Armenian historic structures (see chapter 1). It is possible that the reconstruction reflects an effort to correct the mistake of having destroyed a so-called “Albanian temple” that was mistaken (correctly) as Armenian.

“Damage” denotes partial destruction of a site. As of October 2025, we have documented fourteen damaged sites, including three churches and five historic cemeteries. For example, roadwork has cut through the historic Yerevan Gates cemetery (SH.105) in Shusha (figure 4.4) and the cemetery near Hajisamly (Arm. Vazgenashen; LN.177-0) in the Lachin region (figure 4.5).⁵⁴ CHW also documented construction-related damage to Shusha’s Northern cemetery in spring of 2021 (figure 4.6) and Ghazanchetsots cemetery in fall 2023, the latter of which was completely destroyed by spring 2024 (figure 4.7).⁵⁵ Given the optical thresholds of detectability (see chapter 3), individual tombstones are usually not visible in satellite imagery of historic cemeteries, and thus our ability to detect damage to such sites depends on available documentation from fieldwork-based mapping, site plans, and photographs that provide the spatial extent of the burial ground (indicated by the red polygons layered on the satellite imagery) and the distribution of tombstones (figure 4.8).

Sites are assessed as when earth-moving activities infringe on the immediate perimeter of a site but stop short of damaging it. As of October 2025,

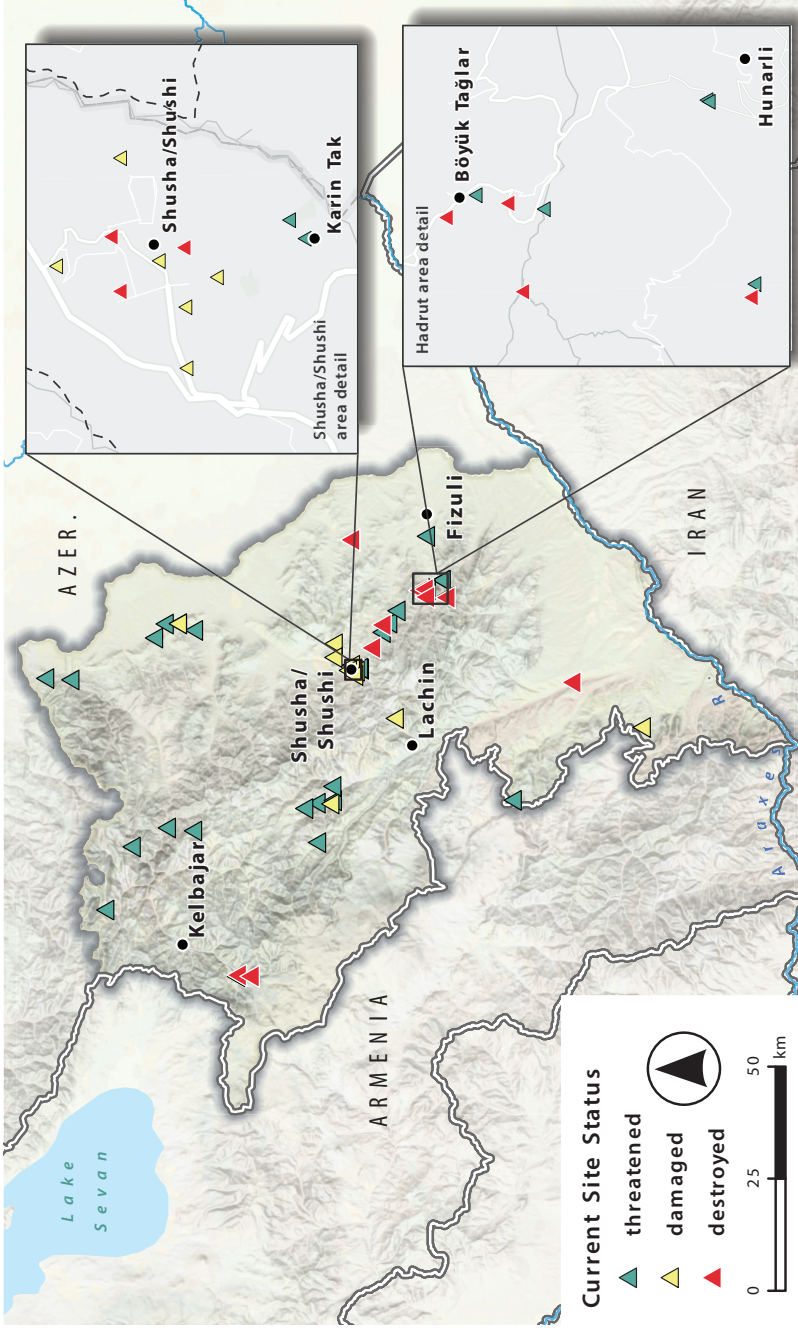


FIGURE 4.1. Map of impacts (destruction, damage, threat) to Armenian cultural heritage in Karabakh documented by CHW from spring 2021 to spring 2025. Created by Ian Lindsay. Map data from Esri, Natural Earth, OpenStreetMaps.



FIGURE 4.2. Satellite imagery showing the spring 2024 demolition of Hovhannes Mkrtych Church (Kanach Zham) in Shusha (SH.053-0). *Above left* shows the structure prior to the Second Nagorno-Karabakh War (image source: Google, © 2018 Maxar Technologies); *above right* image from 2023 shows the standing church with cupolas damaged during the 2020 conflict (image source: © 2023 Planet Labs PBC); *below* image shows the empty site of the demolished church (image source: Google, © 2024 Airbus). © Caucasus Heritage Watch 2025.

CHW has warned of threats to thirty-seven heritage sites in Nagorno-Karabakh since our first mission in 2021, including, for example, the nineteenth- and eighteenth-century churches in the villages of Taghaverd (Arm. Taghavard) (MI.023-0, figure 4.9) and Madatkend (Arm. Madatashen) (AN.226-0, figure 4.10), where roadwork graded earth within a couple meters of the structures.⁵⁶ Satellite imagery over multiple missions captured successive



FIGURE 4.3. Satellite imagery showing the destruction of the Armenian Church of St. Sargis in Susanlyg/Mokhrenes (HT.061-0). *Left* shows the church still intact in October 2021 (image source: © 2021 Planet Labs PBC); *middle* shows the church standing in early March 2022, although obscured by atmospheric conditions (image source: © 2022 Planet Labs PBC); *right* from July 6, 2022 shows that the church has been razed along with most, though not all, of the surrounding buildings (image source: © 2022 Planet Labs PBC). © Caucasus Heritage Watch 2025.

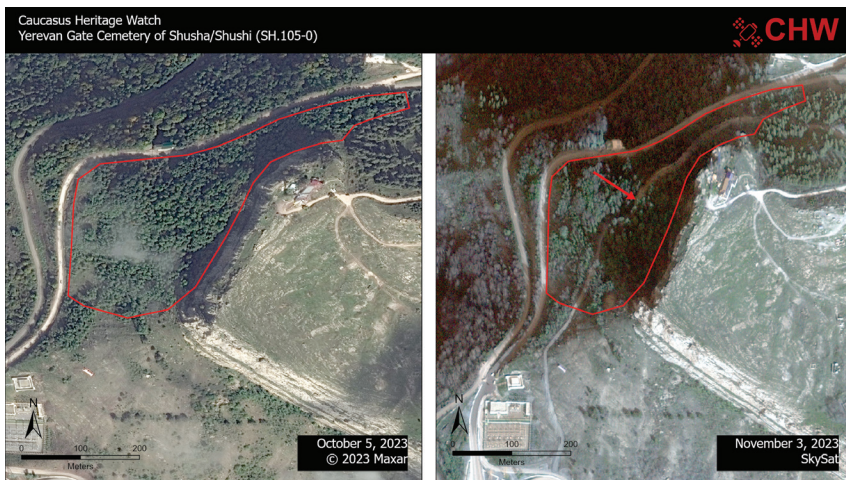


FIGURE 4.4. Satellite imagery showing damage to the Yerevan Gate Cemetery of Shusha (SH.105-0). *Left* shows the cemetery still intact in October 2023 (image source: © 2023 Maxar Technologies); *right* from November 2023 shows a new road cut through the cemetery (image source: © 2023 Planet Labs PBC). © Caucasus Heritage Watch 2025.

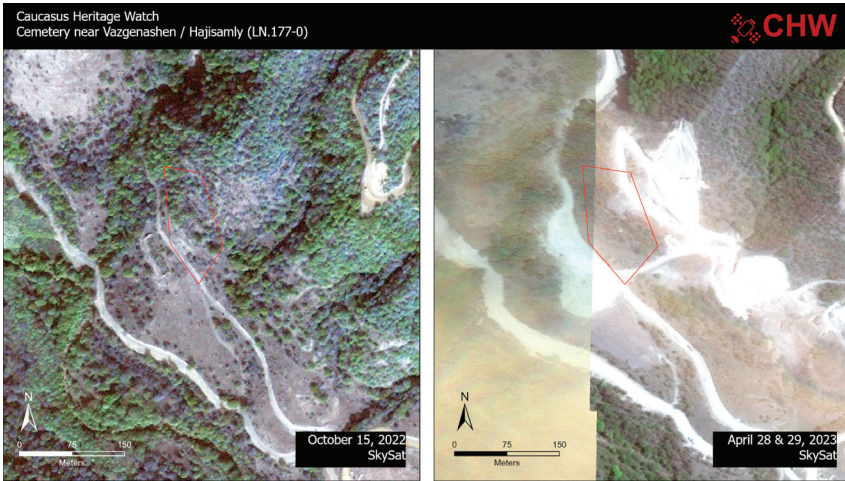


FIGURE 4.5. Satellite imagery showing damage to a cemetery near Hajisamly/Vazgenashen (LN.177-0) in the Lachin region. *Left* shows the cemetery still intact in October 2022 (image source: © 2023 Planet Labs PBC); *right* from April 2023 shows extensive earth moving encroaching on the cemetery (image source: © 2023 Planet Labs PBC). © Caucasus Heritage Watch 2025.

snapshots of a slow process of accretive destruction that came to the doorstep of historic structures.

The “threat” category is, in many respects, both the most complex and the most intriguing. On the one hand, the fact that earth-moving activity stops short of encroachment could be interpreted as an indication of prudence on the part of state-contracted construction firms (although in many such cases the earth-moving activity approaches so close to the heritage object, often within meters, as to plausibly threaten its structural integrity); on the other hand, the category of “threat” is what most powerfully opens the possibility of deterrence, drawing attention to potential impacts before it is too late. To our knowledge, CHW is the first satellite monitoring program that has attempted to anticipate impacts to heritage before they occur and sound the alarm. It remains to be seen, over the long term, whether the “threat” category can reshape activities on the ground.

Arguably the most consequential variable in heritage monitoring is time. We provide Planet Labs with start and end dates when we would like imagery acquired. But the actual date and time of capture is largely out of our hands, defined by the orbital trajectories of the satellite constellations and by the vagaries of cloud cover and atmospheric conditions. Orbital trajectories shape the day and time of day (including lighting conditions) of image captures while weather ensures that successful monitoring of an area of interest could require



FIGURE 4.6. Satellite imagery showing the spring 2021 damage to the Northern Cemetery in Shusha (SH.101-2). *Above left* shows the cemetery prior to the Second Nagorno-Karabakh War (image source: © 2020 Maxar Technologies); *above right* shows initial construction atop the site following the 2020 conflict (image source: Google, © 2021 Maxar Technologies); *below left* shows completed construction atop a portion of the cemetery area (image source: © 2021 Planet Labs PBC). *Below right*, photo of the cemetery in the early 2000s (NKR Tourism Department, site certificate). © Caucasus Heritage Watch 2025.

as many as a dozen images extending across days and sometimes weeks. There is also a lag in CHW’s analysis, as it typically requires several days for new imagery to be processed and made available for our analysis and then additional time for us to inspect each site and arrive at an assessment. When impacts are detected, the team confers over the evidence and debates a course of action, consulting with our partners in Yerevan, the research groups Monument Watch (MW) and Research on Armenian Architecture (RAA). We value



FIGURE 4.7. Satellite imagery showing the destruction of the Armenian Ghazanchetsots Cemetery in Shusha (SH.103-0). *Left* shows the cemetery still intact in June 2023 (image source: © 2023 Planet Labs PBC); *right* shows the cemetery in early stage of demolition during Fall of 2023 (image source: © 2023 Planet Labs PBC). © Caucasus Heritage Watch 2025.

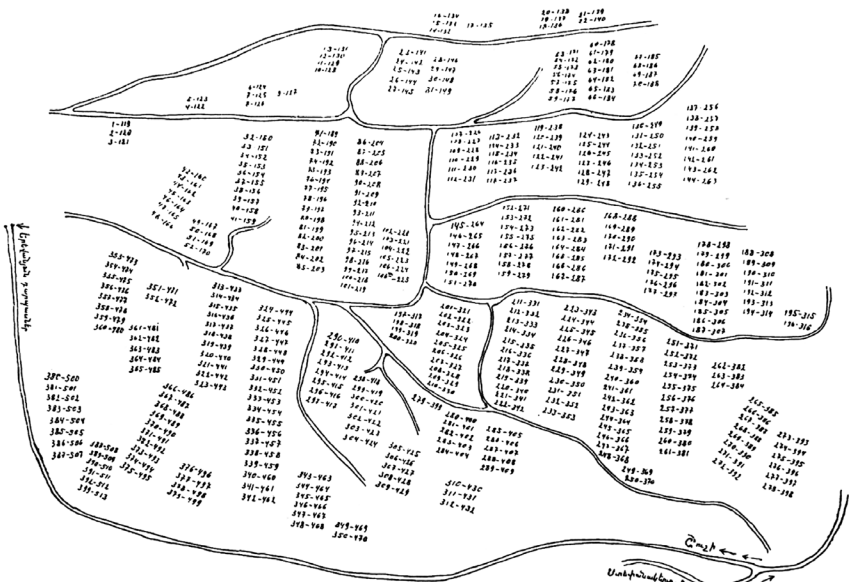


FIGURE 4.8. A hand-drawn site plan of the Yerevan Gates Cemetery showing the approximate distribution of tombstones (Harutyunyan 2008). Plans such as this assist CHW in determining whether construction or roadwork in historic cemeteries is likely to have caused damage to the burial ground.



FIGURE 4.9. Satellite imagery showing the increasing proximity of earthmoving operations to St. Astvatsatsin Church in the village of Taghavard/Tag'averd (MI.023-2). *Left* shows the church and surroundings in spring 2021 prior to construction activities (image source: © 2021 Planet Labs PBC); *middle* shows demolition of adjacent structures (image source: © 2021 Planet Labs PBC); *right* shows clearance of the ruined debris with equipment tracks up to the doorstep of the church (image source: © 2021 Planet Labs PBC). © Caucasus Heritage Watch 2025.

these consultations in recognition of the fact that our program of satellite tasking, made possible by economic privilege, should not “displace other forms of information” collected by actors operating within the disparities of the global economy.⁵⁷ As a result of these necessary but time-consuming procedures, our assessments are based on imagery that may be several weeks old by the time we make them public. Destroyed, damaged, and threatened sites are automatically posted to the GIS-powered dashboard on our website, and we disseminate the most consequential findings through social media “alerts.” At the conclusion of most monitoring missions we release a report that presents the satellite evidence for the newly discovered impacts and tracks cumulative statistics and patterns.⁵⁸

In the case of destruction and damage, time is a less significant issue since the impact events have already occurred in the interval between monitoring missions. But in assessing threats, this asynchrony of image and forensic conclusion is significant. What does it mean to detect a threat several weeks after the imaged event? For one thing, it means that the temporality of risk resides somewhere between imminent and sustained. Our mode of visualization does not allow us



FIGURE 4.10. Satellite imagery showing the increasing proximity of earthmoving operations to St. Astvatsatsin Church in the village of Madatashen/ Mədədkənd (AN.226-0). *Above left* shows the church and surroundings in fall 2020 just prior to the Second Nagorno-Karabakh War (image source: © 2020 Maxar Technologies); *above right* shows the initial earthmoving in the area just east (image source: © 2021 Planet Labs PBC); *below left and right* images show the gradual approach of earthmoving and the demolition of adjacent structures during the summer and fall of 2021 (image sources: © 2021 Planet Labs PBC). © Caucasus Heritage Watch 2025.

to declare an immediate threat happening with a sense of “now.” But likewise in a general sense, all Armenian heritage in the region is at risk. For CHW, threat resides in a temporal space between the now and the always, an elevated state of tension occasioned by observation of material relations out of place. Our effort to define an emerging threat to heritage—to identify impacts about to be, rather than already, suffered—presumes a temporally distended aesthetic field,

one with visual principles more akin to the halting animation of a flip book than to televisual or filmic media.

The deliberate targeting of historic cemeteries is an emerging feature of heritage destruction in Karabakh, one that harkens back to the forty bulldozed cemeteries we documented in Nakhchivan (see chapter 1). In sum, as of October 2025 we have documented four destroyed and five damaged historic cemeteries, impacted over the course of twelve monitoring missions spread over five years. The heightened threat to cemeteries in particular was apparent from our earliest monitoring mission, when we issued our first destruction alert (figure 4.11) based on a satellite image of an historic Armenian cemetery in the village of Böyük Tağlar (Arm. Mets Tagher) (HT.069-1).⁵⁹ The wooded cemetery, visible in earlier imagery as crowded with plots and memorials, had been reduced to a gray earthen smear, a slash of the bulldozer visible amid the churned earth and dislodged burial markers. The demolition took place during road construction initiated soon after the ceasefire to link the city of Shusha to Fuzuli and points east. Imagery from subsequent missions would show not only the wreckage of the cemetery but also the proceeding roadwork, which in its final form barely impinged on the territory



FIGURE 4.11. Satellite imagery showing the destruction of the Armenian cemetery of Mets Tagher/Böyük Tağlar (HT.069-1). *Left* shows the cemetery in spring 2020 prior to the Second Nagorno-Karabakh War (image source: © 2020 Maxar Technologies); *middle* shows large-scale earthmoving that destroyed the cemetery in spring 2021 (image source: © 2021 Planet Labs PBC); *right* from fall 2021 shows the continued grading and burial of the cemetery beneath a new road as construction vehicles sit atop the former graveyard. © Caucasus Heritage Watch 2025.

of the former cemetery. The destruction was thus not a necessary sacrifice to the needs of development but rather a collateral benefit, a chance for development to not only create a new future but to silence the ghosts of the past.

Why have Armenian cemeteries borne the brunt of destruction thus far? The demolition of a cemetery is a form of heritage exorcism, a removal of spirits and ancestors. Where mortuary ritual is a form of metaphysical attachment of ancestors to land, the bulldozing of cemeteries is an effort to break that attachment, to negate social relations between past and present by breaking the bones of the ancestors, burying the stone testimonials to their existence, and terraforming the land. The project is thus not reducible to the strategic logic of political rivalry; it is an aesthetic project that operates at the very root of social relations, an act of power that directs itself not to reason but to the sensible. Unable to construct a future on the basis of the region's real history—the inconvenient testimony of its multiethnic past—the bulldozer builds a new consensus atop the erased, a spectral present non-presence, imagined but no longer visible.

Consensus into Evidence

In chapter 3 we discussed the procedures entailed in the analytical movement from impact assessments to investigative consensus and their public dissemination as stories. Here we turn to the assembly of investigative consensus into evidence, which focuses forensic discovery on the search for accountability. This concern pushes heritage forensics to engage directly with public policy and the law, bringing counter-forensic work back into an articulation with the institutional loci of power that it seeks to keep at a distance. To say that this work is tricky is an understatement. Although CHW's findings have been put before various governing bodies from the UN to the European Parliament to the US Congress, it is the ICJ—an institution that had not previously entered into matters of cultural heritage—that has emerged as an important forum for seeking accountability.

Satellite imagery has been used to document violations of human rights since the launch of the IKONOS high-resolution commercial Earth observation platform in 1999. Prior to that, remote imagery was only available through government image repositories declassified years or decades after the date of image capture (e.g., the declassification in 1995 of CORONA, ARGON, and LANYARD imagery collected between 1960 and 1972) or selectively released by governments. Amid the conflicts in the former Yugoslavia in the 1990s, the United States government provided declassified satellite photographs as evidence for use in cases at the ICTY (most notably in the prosecution of Radislav Krstić), including imagery related to mass graves and other evidence of atrocities, particularly

around Srebrenica.⁶⁰ Despite the proliferation of satellite imagery in support of human rights cases, there is no single standard for their submission as admissible evidence. The ICC has been particularly engaged with the question of how to utilize satellite imagery in relation to human rights cases. This court has broad discretion, conferred by the founding Rome Statute and its operationalization in the court's rules and procedures, "to assess freely all evidence submitted in order to determine its relevance or admissibility."⁶¹ But the Court must establish that evidence presented is both authentic (unaltered) and reliable.

To assess authenticity, the ICC typically relies on an image's chain of custody to ensure it has not been tampered with. To ensure reliability, the Court has an agreement with the United Nations Satellite Centre (UNOSAT) to provide expert image analysis. For example, in the case *Prosecutor v. Bosco Ntaganda* (ICC-01/04-02/06) that emerged from violence in the Ituri province of the Democratic Republic of Congo, the prosecutor presented satellite evidence documenting the burning and demolition of buildings, comparing images of the same locations from 2002 and 2003. Lars Bromley, a geospatial analyst with UNOSAT, provided expert testimony as a witness for the prosecution, detailing evidence for fires at the locations of the alleged human rights violations. More apropos to this discussion, satellite imagery also played a key role at the ICC in the case of *Prosecutor v. Ahmad Al Faqi Al Mahdi* (ICC-01/12-01/15). The defendant was charged with war crimes linked to the intentional destruction of historic and religious structures in Timbuktu, a UNESCO World Heritage Site, in 2012. (However, because the defendant pleaded guilty, the satellite imagery submitted in the case was never evaluated for its probative value.)

Beyond the ICTY and ICC, satellite imagery has made its way into evidence at the ICJ (e.g., *Cameroon v. Nigeria*), the Extraordinary Chambers in the Courts of Cambodia (e.g., *Prosecutor v. Nuon Chea and Khieu Samphan*, Case 002/01), the People's Tribunal on Sri Lanka, the Special Court for Sierra Leone (in the trial of Charles Taylor), the European Court of Human Rights, and the Inter-American Court of Human Rights.⁶² Yet, as the AAAS noted in a 2018 report from the Scientific Responsibility, Human Rights, and Law Program, there is not a currently recognized set of evidentiary standards for geospatial data. The AAAS has, through its human rights investigations, developed a set of protocols "to ensure that the courts are presented with, and have procedures in place to properly assess and weigh, rigorous and scientifically sound geospatial evidence."⁶³ In 2021, CHW's satellite-based assessments of cultural heritage impacts gained legal salience in a different forum as the Armenian government initiated proceedings against Azerbaijan at the ICJ, alleging numerous violations of the 1966 CERD.⁶⁴

In the ongoing case *Armenia v. Azerbaijan*, Armenia has argued that the deliberate targeting of Armenian heritage sites in Azerbaijan (along with other abuses,

such as the wrongful detention of Armenian prisoners of war and the inflaming of racial animosity), plausibly constitutes a violation of the CERD, particularly the right to equal participation in cultural activities as guaranteed by Article 5 of the Convention. Such participation, Armenia has argued, “entails the right to the protection and preservation of such heritage for the minority population,” and called for “provisional measures” to protect the sites.⁶⁵ The use of this underutilized international treaty represents a novel approach for compelling states to protect cultural heritage, and could set new precedent.⁶⁶ As Lando Kirchmair has noted, the CERD had not previously been regarded as a cultural heritage instrument.⁶⁷ In addition to drawing a connection between cultural heritage abuse and racial discrimination, Armenia’s use of the CERD represents an implicit recognition of both the inability of Azerbaijani law to protect Armenian cultural heritage, as well as the inadequacy of the Hague Convention.⁶⁸ It is important to note that there is no comprehensive inventory of the forms of evidence that parties to cases before the ICJ may submit nor any considered assessment of their different probative significance. In the absence of defined rules of evidence, the ICJ has allowed parties to submit any evidence they believe to be relevant to the case, including satellite imagery.⁶⁹

CHW’s findings have entered into the context of the ongoing case at the ICJ. Our findings were mentioned in the oral proceedings for the indication of provisional measures in October 2021, and CHW’s monitoring reports and social media posts were among the annexes attached to Armenia’s written pleadings, both in the original application of September 2021 and the additional request for provisional measures in September 2023. Recognizing the urgency and the threat of irreparable harm, as well as the plausible link between racial discrimination and abuses to cultural heritage, on December 7, 2021, the ICJ issued its indication of provisional measures, which included the requirement that Azerbaijan “take all necessary measures to prevent and punish acts of vandalism and desecration affecting Armenian cultural heritage, including but not limited to churches and other places of worship, monuments, landmarks, cemeteries, and artifacts.”⁷⁰ This was a significant development. It makes the World Court a potential new tool for heritage preservation, and links such preservation directly to cultural rights.⁷¹ More broadly, it is also the first legal finding that draws a connection between racial discrimination and cultural heritage destruction. Armenia’s novel recourse to the CERD has had potentially consequential results for the global efforts to identify pathways to securing cultural heritage and cultural rights when they are threatened not by the collateral or targeted damages of war, but by ethnic discrimination and the sublimated hostilities common to unresolved conflicts.

Armenia v. Azerbaijan continues to make its way through legal arguments and has yet to be decided on the merits as of this writing, so it remains unclear whether the ICJ will step into a new role of protecting cultural heritage. Moreover,

continuing efforts by Armenia and Azerbaijan to forge a peace deal in the wake of the violence of 2020 and 2023 may result in the withdrawal of Armenia's ICJ case. In March 2025, both parties reportedly agreed to "withdraw, dismiss, or settle legal claims against each other currently filed in international courts" as a precondition for peace.⁷² Additional roadblocks to a comprehensive deal remain, leaving the ultimate achievement of a negotiated settlement to the conflict uncertain. But it is clear that Azerbaijan has prioritized the withdrawal of Armenia's suit in ongoing negotiations.

In the meantime, it also remains to be seen how the World Court will respond to violations of its order. Since the ICJ indicated the provisional measure in December 2021, CHW has documented eight destruction events, including the demolition of the St. John the Baptist and St. Sargis churches discussed above (figure 4.2, 4.3) and four historic cemeteries (e.g., figures 4.5–4.7). Will the court take its sole enforcement recourse and turn to the Security Council to intervene? There is no such precedent. As Weizman notes, "legal cases are only as good as the political processes of which they are a part," and thus we approach the juridical process with due caution.⁷³ Future legal judgements from conflict zones will determine whether heritage forensics will play an increasing role in broadening debates about the jurisdiction of international heritage laws, such as the CERD.⁷⁴ But as Kirchmair summarizes in a recent case note on the rulings in *Armenia v. Azerbaijan*, "the readiness of the ICJ to . . . consider [the case] and to adopt provisional measures might open avenues for future cases before this court and also before other courts."⁷⁵ Indeed, with only two out of the fifteen presiding judges dissenting on the question of ICJ's jurisdiction in *Armenia v. Azerbaijan*, the case strongly suggests that this could be a new frontier of heritage law, and the international heritage community would do well to consider the opportunities and constraints of how heritage forensics constitutes evidence moving forward. Even as CHW's monitoring work continues to shape the case at the ICJ, and also informs reports and deliberations at the European Parliament, the State Department and other US government agencies, and the UK's House of Lords, it remains unclear whether any international or national body has the will to impose a cost for attacks on heritage, be they in Azerbaijan, China, Israel/Palestine, or elsewhere.⁷⁶

Prognostications

Since the end of the Second Nagorno-Karabakh War in 2020, Baku has been signaling its plans for massive infrastructure and redevelopment projects in Karabakh, along with its utopian vision for turning the ethnically cleansed ter-

ritories into a “green energy zone” with extensive solar and wind energy farms.⁷⁷ As reported in the international press,⁷⁸ such rapid redevelopment, including massive highway construction projects, hydroelectric power plants, two international airports (just 160 kilometers apart), and planned housing developments is wreaking havoc on the environment per the United Nations Environment Programme⁷⁹ and threatening cultural heritage sites in the path of the earth movers. While our monitoring to date shows that the logics of heritage abuse in Karabakh are complex and entangled, there is reason to think that economic development will play a larger role in determining the fate of Armenian cultural heritage than was the case in Nakhchivan, where erased sites still mostly lie fallow.

At present, it seems likely that development will encroach upon cultural heritage along two distinct tracks. On one track, massive investment and rapid redevelopment projects appear to be providing convenient cover for a program of slow and silent erasure. Consider the example of the *Büyük Tağlar/Mets Tagher* cemetery, where, as noted above, the completed roadway only minimally encroached upon the land where the cemetery had once been (figure 4.11). Along a second track, Azerbaijan’s courting of international tourism, promoted first in Baku’s hosting of the 2019 UNESCO World Heritage Meeting and then in the 2024 COP29 forum, suggests that several of Karabakh’s Armenian-turned-Caucasian Albanian “temples,” such as *Dadivank* and *Gandzasar*, may be transformed into major tourist attractions. Archaeologists and historians will undoubtedly play roles in the unseeing of the region’s Armenian past, as they have in Turkey. But embedding appropriated sites into the networks of global tourism will further advance the symbolic erasure of the region’s Armenian heritage, as the churches and monasteries are promoted through the canard of Caucasian Albanian affiliation.

At the same time, development does not appear to account for the entire range of abuses CHW has documented to date. In *Shusha*, for example, where the entire city is undergoing redesign, it is difficult to pin several cases of heritage destruction exclusively on the collateral benefits of economic development. As noted above, the nineteenth-century *St. John the Baptist Church* had already been enveloped by an appropriation narrative, claiming it as Russian instead of Armenian, when it was suddenly demolished in early 2024 (figure 4.2). Likewise, there was no visible logic to the road that was driven through the *Yerevan Gates cemetery* on the southwestern outskirts of the city (figure 4.4). Thus, even though economic development may create opportunities for heritage damage and destruction, there is still evidence of Azerbaijan’s heritage anxiety (see chapter 1) and a readiness to eliminate the perceived threat posed by the material vestiges of Armenian cultural life through their eradication.

The enlisting of the forces of economic development to the cause of heritage erasure significantly complicates not only assessments of causality, but also the

assignment of culpability, as the actors involved expand to include not only Azerbaijani authorities but also international urban design firms (such as the British firm Chapman Taylor, which secured the contract for Shusha's redesign), architects, and construction companies.⁸⁰ Heritage forensics opens important analytic terrain for tracing the lines that weave together state and corporate power in the eradication of cultural remains. As such, it pushes analysis far beyond the assessment of satellite images to the implications of those findings for networks of global capital. And yet, heritage forensics cannot secure accountability. That relies on bringing counter-forensic evidence back into the institutions of enforcement and justice to create actual costs for heritage destruction. Only when the forensic gaze provides a kind of friction on the abuse of cultural remains can it serve as an effective deterrent. To create that friction requires pushing heritage forensics to engage with state institutions even as the work seeks to keep them at arm's length, a complex relationship that will require constant recalibration as the situation in Karabakh unfolds and as the discipline of heritage forensics matures.

SITE INVENTORY FOR SILENT ERASURE

The inventory below lists the sites that CHW was able to geolocate and assess for its investigation into the destruction of Armenian cultural heritage in Nakhchivan, Azerbaijan. Each site has a dedicated ArcGIS StoryMap with detailed information, satellite imagery, and photographs.

There are multiple ways to access the story maps. Readers can go to the Caucasus Heritage Watch website (<https://caucasusheritage.cornell.edu/>) and select Special Report #1, which will lead to an ArcGIS Explorer Map Tour.

Alternatively, the ArcGIS Explorer Map Tour can be accessed directly at this link: <https://storymaps.arcgis.com/stories/48703f664f2f467b8f4f42008d8c75da>.

Finally, readers of the *Heritage Forensics* e-book can access the story maps at the hyperlinks in the below inventory.

- St. Stepanos Church of Agulis (N.9)
- St. Tovma Monastery of Agulis (N.10)
- St. Kristapor Church of Agulis (N.16)
- City Cemetery of Agulis (N.21)
- St. Shmavon Church of Agulis (N.26)
- St. Hovhannes-Mkrtich Church of Agulis (N.29)
- Bek Cemetery of Agulis (N.33)
- St. Hakob-Hayrapet Church of Agulis (N.34)
- Mets Astvatsatsin Monastery of Agulis (N.35)

- Cemetery of Mets Astvatsatsin Monastery of Agulis (N.38)
 St. Nshan or Amarayin Church of Agulis (N.43)
 St. Stepanos or St. Yerrordutyun Church of Agulis (N.44)
 Cemetery of St. Stepanos and St. Nshan Churches of Agulis (N.46)
 St. Stepanos Church of Ordubad (N.53)
 St. Khach Monastery of Trunis (Nunis) (N.70)
 Church of Kaghakik (St. Stepanos Church) (N.75)
 St. Astvatsatsin Church of Tanakert (N.82)
 St. Hovhannes Church of Berdak (N.85)
 St. Gevorg Church of Disar (Deghsar) (N.86)
 St. Astvatsatsin Church of Ramis (N.94)
 Cemetery of St. Astvatsatsin Church of Ramis (N.95)
 Cemetery of Ramis (N.97)
 St. Astvatsatsin Monastery of Tsghna (N.100)
 Cemetery of St. Astvatsatsin Monastery of Tsghna (N.102)
 Cemetery of Tsghna (N.103)
 St. Sargis Church of Tsghna (N.106)
 St. Stepanos Monastery of Mtsgun (N.112)
 St. Targmanchats Monastery of Norakert (Nor Gyut) (N.114)
 St. Gr. Lusavorich or Mesrop Mashtots Monastery of Mesropavan (N.124)
 Cemetery of Mesropavan (N.125)
 St. Stepanos Church of Voghohi (N.132)
 Cemetery of Voghohi (N.135)
 St. Nshan or Kopatap Monastery of Bist (N.136)
 Cemetery of St. Nshan or Kopatap Monastery of Bist (N.138)
 St. Astvatsatsin Monastery of Bist (N.139)
 New Cemetery of Bist (N.142)
 Church of Shrju (N.150)
 St. Stepanos Monastery of Navush (N.154)
 St. Shmavon Church of Paraka (N.157)
 St. Hakob-Hayrapet Monastery of Paraka (N.159)
 Cemetery of Paraka (N.163)
 Church of Verin Aza (N.172)
 Cemeteries of Verin Aza (N.173)
 St. Astvatsatsin Church of Der (N.175)
 Amenaprkich Monastery of Shahkert (Ghazanichi) (N.193)
 Old Cemetery of Shahkert (N.196)
 St. Gevorg Monastery of Yernjak (N.207)
 St. Astvatsatsin Monastery of Norashen (N.211)
 Cemetery of Norashen (N.217)

- Cemetery of Verin Ankuzik/Anzur (N.221)
Church of Mijin Ankuzik/Anzur (N.223)
Church of Nerkin Ankuzik/Anzur (N.227)
St. Gevorg Church of Nor Poradasht (N.232)
Cemetery of Nor Poradasht (N.234)
Church of Hin Poradasht (N.236)
St. Stepanos Monastery of Hin Poradasht (N.238)
Cemetery of St. Stepanos Monastery of Hin Poradasht (N.240)
St. Grigor Church of Gagh (N.242)
St. Hakob-Hayrapet Church of Shorot (N.257)
Main Cemetery of Shorot (N.264)
St. Astvatsatsin or Kusakan Monastery of Shorot (N.266)
Cemetery of St. Astvatsatsin or Kusakan Monastery of Shorot (N.267)
St. Gr. Lusavorich Monastery of Shorot (N.268)
St. Stepanos Monastery of Shorot (N.277)
St. Astvatsatsin or Kusaber Monastery of Kirna (N.282)
St. Karapet Monastery of Abrakunis (N.287)
Cemeteries of St. Karapet Monastery of Abrakunis (N.293)
Cemetery of Old Jugha (N.307)
Amenaprkich Monastery of Old Jugha (N.310)
Cemetery of Amenaprkich Monastery of Old Jugha (N.312)
St. Astvatsatsin Monastery of Old Jugha (Julfa) (N.317)
Pomploz Church of Old Jugha (Julfa) (N.319)
Cemetery of Pomploz Church of Old Jugha (Julfa) (N.319-1)
St. Gevorg Church of Jugha (Julfa) Village (N.323a)
Cemetery of Jugha (Julfa) Village (N.323b)
St. Stepanos or Karmir Monastery of Astapat (N.328)
St. Gevorg Church of Nakhchivan (N.335)
New Armenian Cemetery of Nakhchivan (N.337)
St. Astvatsatsin Church of Aliapat (N.341)
St. Hripsime Church of Kyul-Tapa (N.346)
Cemetery of Leninapat (N.351)
St. Tovma Monastery of Aznaberd (N.352)
St. Grigor Church of Aznaberd (N.353)
St. Hovhannes Church of Aznaberd (N.356)
St. Hakob Chapel of Aznaberd (N.357)
Cemetery of Aznaberd (N.359)
St. Hovhannes Church of Tambat (N.367)
Cemetery of Vasakakert (N.395)
St. Hovhannes Church of Chahuk (Jahri) (N.396)

- St. Khach or Kamu Khach Monastery of Shamen (Shadan) (N.417)
St. Astvatsatsin Monastery of Otsop (N.418)
Cemetery of St. Astvatsatsin Monastery of Otsop (N.419)
“Zham” Church of Otsop (N.420)
Cemetery of Otsop (N.423)
Cemetery of Shahapunik (N.428)
St. Grigor Church of Kyolk (Kyulus) (N.431)
St. Khach Monastery of Agarak (N.435)
Cemetery of Babonk (N.438)
St. Yerrordutyun Church of Nors (N.446)
Old Cemetery of Nors (N.448)
Cemetery of Nerkin Tagh of Arinj (N.456)
Cemetery of Verin Tagh of Arinj (N.457)
St. Nshan or Hazarabyurats Monastery of Kuki (N.468)
Cemetery of St. Nshan or Hazarabyurats Monastery of Kuki (N.472)
St. Astvatsatsin Church of Kzhadzor (N.480)
Cemetery of Kzhadzor (N.481)
St. Grigor Church of Gomer (Gyomur) (N.485)
Cemetery of Gomer (N.487)

SITE INVENTORY FOR HERITAGE MINING

The inventory below lists the sites that CHW was able to geolocate and assess for its investigation into the treatment of Azerbaijani and Islamic cultural heritage in Nagorno-Karabakh. Each site has a dedicated ArcGIS StoryMap with detailed information, satellite imagery, and, where possible, photographs.

There are multiple ways to access the story maps. Readers can go to the Caucasus Heritage Watch website (<https://caucasusheritage.cornell.edu/>) and select Special Report #2, which will lead to an ArcGIS Explorer Map Tour.

Alternatively the ArcGIS Explorer Map Tour can be accessed directly at this link: <https://storymaps.arcgis.com/stories/e1c69b7dd46f4c839dff0fab9248368>.

Finally, readers of the *Heritage Forensics* e-book can access the story maps at the hyperlinks in the below inventory.

Unchanged Sites

- Khachin-Darbatli Mausoleum (N.5)
- Mirali Mausoleum (N.205)
- Khojaly Mausoleum (N.252)
- Damirchilar Mausoleum no. 2 (N.309)
- Yenikend Tomb (N.393)
- Sharifan Mausoleum (N.394)
- Ibrahim Khalil Khan Mausoleum (N.4028)

Mehdigulu Khan Javanshir Mausoleum (N.4029)
Boyahmadli Mosque (N.4054)
Mausoleum (N.4055)
Khubyarly Mausoleum—Round Mausoleum (N.4164)
Khubyarly Mausoleum—Octagonal Mausoleum (N.4165)
Shykhlar Mausoleum—Round Mausoleum (N.4166)
Dagh Tumas Mausoleum (N.4169)
Chalabilar Mosque (N.4170)
Haji Giyaseddin Mosque (N.4212)
Garghabazar Mausoleum (N.4213)
Juma Mosque (N.4220)
Imamzadeh Mausoleum (N.4222)
Yukhary Seyidahmadli Mausoleum (N.4226)
Sardarli Mosque (N.4231)
Garadaghly Mosque (N.4237)
Damirchilar Mosque (N.4703)
Dondarly Mosque (N.4704)
Khodzhamusakhly Mausoleum (N.4708)
Yusifbeyli Mosque (N.4709)
Khalaj Mosque (N.4714)
Garygyshlag Mosque (N.4733)
Mausoleum (N.5042)
Haji Abbas Mosque (N.5073)
Seyidli Mosque (N.5151)
Mamay Mosque (N.5166)
Jijimli Mosque (NA.03)
Mir Mehdi Khazani Mausoleum (NA.04)
Mausoleum (NA.11)
Mausoleum (NA.20)
Mausoleum (NA.21)
Mausoleum (NA.22)
Mausoleum (NA.23)
Tomb (NA.30)
Shahbulaq Mosque (NA.32)

Sites with Minor Damage

Aghdam Mosque (N.202)
Gurjulu Mausoleum (N.307)

Kar Gunbaz Mausoleum (N.312)
Mammadbeyli Mausoleum (N.391)
Cemetery (N.1454)
Gochahmadli Mosque (N.4233)
Chol Gala Mosque (N.5103)
Cemetery (N.5751)
Abdal Mosque (NA.09)

Sites with Major Damage

Melik Ajdar Mausoleum (N.311)
Lower Govhar Agha Mosque (N.345)
Vagif Mausoleum (N.367)
Panah Ali Khan Mausoleum (N.4027)
Mosque (N.4046)
Giyasly Mosque (N.4052)
Dashkasan Mosque (N.4172)
Suleymanly Mosque (N.4174)
Dadali Mosque (N.4214)
Qajar Mosque (N.4216)
Merdinli Mosque (N.4217)
Mosque (N.4221)
Gejagozlu Mosque (N.4223)
Karakhanbeyli Mosque (N.4240)
Boyunakyar Mausoleum (N.4710)
Mirlar Mosque (N.4712)
Mamar Mosque (N.4713)
Mosque (N.4716)
Pichanis Mosque (N.4736)
Chukhur Mahalla Mosque (N.5068)
Khoja Marjanli Mosque (N.5137)
Zangilan Mosque (N.5287)
Malatkeshin Mosque (N.5288)
Girag Mushlan Mosque (N.5289)
Cemetery (N.5750)
Cemetery (N.5791)
Mosque (NA.01)
Shafibeyli Mosque (NA.05)
Babayli Mosque (NA.06)

Genlik Mosque (NA.07)
Udgun Mosque (NA.08)
Yusifjanly Mosque (NA.10)
Gulably Mosque (NA.12)
Shikhabaly Mosque (NA.13)
Merzili Mosque (NA.14)
Khanazur Mausoleum (NA.15)
Razdara Mosque (NA.16)
Bashlibel Mosque (NA.17)
Imarat Cemetery (NA.25)

Destroyed Sites

Mausoleum (N.4044)
Bashsyz Mosque (N.4045)
Mausoleum (N.4056)
Mausoleum (N.4057)
Ughurlu Bey Mausoleum (N.4058)
Papy Mosque (N.4171)
Haji Alakbar Mosque (N.4208)
Pirahmadli Mosque (N.4239)
Sary Ashyg Mausoleum (N.4726)
Mardinli Mosque (N.5077)
Haji Yusifli Mosque (N.5089)
Julfalar Mosque (N.5092)
Kocharli Mosque (N.5145)
Rzaqulu Bey Mausoleum (NA.02)
Mausoleum (NA.26)
Garaaghach Cemetery (NA.27)

Renovated Sites

Taza Mahalla Mosque (N.347)
Saatli Mosque (N.355)

Restored Sites

Upper Govhar Agha Mosque (N.344)

Indeterminate Sites

Damirchilar Mausoleum No.1 (N.308)
Mausoleum (N.4043)
Malibeyli Mosque (N.5056)
Cemetery (N.5795)
Ashyg Cemetery (N.5923)
Cemetery (NA.18)
Cemetery (NA.19)

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It is important to acknowledge that the investigation of the erasure of Armenian cultural heritage in Nakhchivan, Azerbaijan, would have been impossible without the extensive investigative record provided by Argam Ayyvazyan. His intrepid field research during the 1970s and 1980s provided the evidentiary foundation for geolocating sites that no longer existed at the time of our research. We are grateful for his support and permission to use his invaluable photographic archive. Our work would also be impossible without our partner organizations in Yerevan: Monument Watch and Research on Armenian Architecture. These research teams have shared their deep knowledge of the region and its historic monuments. We also extend our thanks to Robert Kotaska in the Cornell Map Library and Robert Davis, the Librarian for Slavic and East European Studies, for their assistance in acquiring Soviet topographic maps.

The work reported in this volume has benefited enormously from a group of interlocutors who together are developing the fundamental analytical tools deployed in heritage forensics. Eyal Weizman provided critical feedback on our research, along with intellectual inspiration. Giancarlo Fiorella and Charley Maher from Bellingcat gave us the opportunity to share our work with their community of OSINT researchers and learn from their own investigations. Lynn Meskell has been a key sounding board for many of the arguments and ideas that we pulled out of our investigations, giving us much needed insight into the world of heritage diplomacy, just as Andrea Cayley has done with respect to international law. In addition, academic audiences at Harvard University, the University of Chicago, the University of Southern California, Columbia University, and Stanford University all provided useful feedback on early versions of the work reported here. We are also very fortunate to have generous and insightful colleagues in the departments where we work. At Cornell, we benefited from opportunities to share our work in the Departments of Anthropology and Near Eastern Studies as well as the Cornell Institute of Archaeology and Material Studies (CIAMS). Our thanks especially to the participants in the conference “Unearthing/Unseeing: Archaeology, Heritage, and Forensics in the Shadow of State Violence” held in November 2024 at Cornell University. The presentations and conversations that circulated around themes of heritage destruction and state violence were truly inspiring. We are also grateful for the generative conversations with and productive feedback from several close interlocutors, especially Raffi Khatchadourian and Simon Maghakyan. To date, regrettably, CHW has not had opportunities to engage in sustained, constructive dialogue with Azerbaijani scholars, making us particularly appreciative of a few valued conversations with individuals who shall remain anonymous to protect their safety. It is our hope that in the coming years we will be able to gratefully acknowledge the assistance of researchers and activists from Azerbaijan in the mutual work of preserving cultural remains and working against cultural erasure.

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Lastly, we wish to thank our families for putting up with us as our attentions were pulled toward a consuming research practice that is as painful as it is painstaking, requiring pixelic attention to detail while bearing witness, through its scarred landscapes, to the incalculable human cost of enmity and war.

Notes

INTRODUCTION

1. Gfeller and Eisenberg 2016.
2. Meskell 2018.
3. Bevan 2016.
4. Frulli 2020: 103; Pollard 2023. For a recent historical overview on the law of armed conflict as applied to cultural heritage, see Gerstenblith 2024.
5. UNESCO 1954.
6. United Nations 1993. See Frulli (2020, 106) on the legacy of the ICTY in subsequent legislation.
7. ICC 2021, 1. The ICC cites especially 8(2)(b)(ix) and 8(2)(e)(4).
8. See Blake 2015; O’Keefe 2020.
9. Michal Smetana and Jan Ludvik (2019, 4) define a frozen conflict as “a protracted, post-war conflict process, characterized by the absence of stable peace between the opposing sides. In frozen conflicts, core issues between the opposing sides remain unresolved, the dispute is in the forefront of mutual relations, and there is a looming threat of the renewal of violence. The conflict also remains highly salient in the domestic discourses of both policy makers and the general population.”
10. Grenville and Wasserstein 2001.
11. Fazal 2013.
12. The Algiers Agreement (2000), the Ohrid Agreement (2001), Accra Comprehensive Peace Agreement (2003), the Naivasha Agreement (2005), Tripoli Agreement (2006), and the Darfur Agreement (2020).
13. Klosek et al.’s (2021) Frozen Conflict Database lists twenty-three ongoing conflicts as of 2011. That number has only grown in the ensuing decade, according to information compiled by the Uppsala Conflict Data Program: <https://ucdp.uu.se/>.
14. For discussions of Nagorno-Karabakh’s status as a frozen conflict, see for example Bláhová 2019; Broers 2015, 2021, 11; Cornell 2017; de Waal 2003, 9; Popa 2022.
15. Cornell 2017, 2.
16. Broers 2021, 11.
17. The US has yet to fully declassify satellite imagery from the KH-11 or Vega imaging fleets, both of which were operative in the 1990s, but the government selectively declassified certain images in connection with the Srebrenica massacre and the trials at the ICTY (Hasian 2016; Herscher 2014; Parks 2001).
18. Broers 2021.
19. For historical accounts of the Nagorno-Karabakh conflict, see, for example, de Waal 2003, Cheterian 2011, Broers 2015, 2021.
20. Broers 2021, 122.
21. Kucera, Mejlumyan, and Natiqqizi 2022.
22. de Waal 2024. On August 8, 2025, the White House announced the signing of a joint declaration between Armenia and Azerbaijan that would secure a more durable peace between the two parties. The centerpiece of the agreement is a deal on a US administered transit corridor between Azerbaijan and the exclave of Nakhchivan. The so-called

Trump Route for International Peace and Prosperity, or TRIPP, allows Armenia to retain sovereignty over its critical southern border with Iran while giving Azerbaijan direct access to the long-isolated province of Nakhchivan. Nevertheless, the declaration does not resolve several critical points of disagreement and so its status as a framework for a comprehensive peace remains unclear (source: <https://eurasianet.org/trump-brokers-potentially-game-changing-deal-with-armenia-azerbaijan>). Cultural heritage, including access to sites of ongoing religious practice, is not mentioned in the so-called Washington Accords.

23. Horák and Hoch 2023, 28.

24. Horák and Hoch 2023, 28.

25. Horák and Hoch 2023, 35.

26. Lafrenz Samuels 2015.

27. Alderman 2008, 197.

28. Broers 2020; Broers and Toal 2013; Ghulyan 2021.

29. The Soviet autonomous republic was called Нахичеванская Автономная Советская Социалистическая Республика. Currently, the favored spelling in Armenian is Nakhichevan, but, notably, historic Armenian variants of the toponym (e.g. Naxčwan, Naxčawan, etc.) did not include the *i* in the second syllable (Hewsen 1992, 189).

30. Recognizing that the term “Nagorno-Karabakh” is a truncated form of the Russian adjective Нагорно-Карабахская (Республика) and that Nagorny Karabakh has come to be preferred in some Anglophone scholarship, we nevertheless employ the more commonly used form for the sake of broad legibility (Dorfmann-Lazarev 2024, fn. 95).

31. Newson and Young 2017.

32. See Ghulyan et al. 2025; Khatchadourian et al. 2021, 2023; Lindsay et al. 2021, 2022, 2023; Smith et al. 2021, 2023.

33. CHW’s long form reports on our historical investigations can be found on our website. “Silent Erasure: A Satellite Investigation of the Destruction of Armenian Cultural Heritage in Nakhchivan, Azerbaijan” was released in the autumn of 2022 (Khatchadourian et al. 2022). “Between the Wars: A Satellite Investigation of the Treatment of Azerbaijani Cultural Heritage in the Unrecognized Republic of Nagorno-Karabakh, 1994–2020” was released in the spring of 2023 (Ghulyan et al. 2023).

34. Van de Auwera 2015. Armenia joined the International Committee of the Blue Shield only in 2024. As of this writing, a national committee does not exist in Azerbaijan.

35. Chechi and Romani 2024.

36. See chapter 1, footnote 113, and chapter 2, footnote 97.

37. Joy 2020.

38. Sekula 1993.

39. e.g., Kurgan 2013.

40. Viejo Rose 2023.

41. Weizman 2017, 68.

42. Clack and Dunkley 2023; Connelly and Weiss 2020; Daly and Chan 2015; Kila and Zeidler 2013.

43. Baumann 2023; Lowenthal 1998; Smith 2004.

44. Anderson 1983.

45. As defined in the Faro Convention, the Council of Europe’s 2005 *Framework Convention on the Value of Cultural Heritage for Society*.

46. Weizman 2017, 78.

47. On the relationship between cultural heritage and human rights, see, for example, Francioni 2008, Blake 2011, Vrdoljak 2011, Donders 2020, Lenzerini 2024.

48. Sargsyan and Shirinian 2024.

49. On a framework for the motivations behind cultural heritage destruction during armed conflict, of which “conflict goals” is one type, see Brosché et al. 2017.

50. Bevan 2016; Gilbert 2006; Ruser et al. 2020.

51. Lixinski and Zhu 2024.

1. SILENT ERASURE

1. Smith 2022.

2. On Armenian-Azerbaijani coexistence in neighboring Soviet Armenia, see Kharyan and Hakobyan 2019.

3. Broers 2021; Cheterian 2008; De Waal 2003, 285.

4. Dorfmann-Lazarev 2024, 253.

5. Kavkazskii Kalendar’ 1917; Walker 1991, 65.

6. Hovannisian 1982, 107.

7. Sources differ on the population of Nakhichevan during the early Soviet period. Ronald Suny (1993, 188) suggests that Armenians totaled 15 percent of the region’s population, or 15,600 people, while the 1926 census of the USSR indicates that 11 percent of the population was classified as Armenian (*Vsesoyuznaya Perepis’ Naseleniya 1926 Goda*). The Armenians of Nakhichevan may have been driven out by the same discriminatory policies that Setrak Sarkisov, the acting president of the Executive Committee of Ganja, had complained to Moscow about in August 1923 (Dorfmann-Lazarev 2024, 269). Sarkisov noted that Azerbaijan’s Soviet authorities gave Turkophone peasants favorable agricultural land (relegating Armenians and Russians to unproductive mountains), allowed Muslims preferential access to water, and denied funding to Armenian villages. He reported that in Ganja, Armenian schools were closed.

8. Dorfmann-Lazarev 2024, 270.

9. Ayvazyan 2024.

10. Suny 1993, 188. See Cheterian (2008, 91) for slightly different figures for the rate of demographic decline.

11. Donabédian 2024a, 68.

12. Donabédian 2024a, 75.

13. Donabédian 2024a, 70, 73.

14. Donabédian 2024a, 69.

15. Donabédian 2024a, 66–7.

16. Donabédian 2024a, 68, 70; Donabédian 2024b, 95–101.

17. Donabédian 2024a, 67, 73, 88.

18. Donabédian 2024a, 87.

19. Petrosyan 2001, 2015.

20. Ayvazyan 2007.

21. Ayvazyan 1996.

22. Antonyan 2021, 369–372.

23. Suny 1993, 5–6.

24. Fuller and Weizman 2021, 113.

25. Meskell 2025, 184.

26. Kathem 2024, 185.

27. Fuller and Weizman 2021, 116.

28. Kopeček 2016; Sultanova 2013.

29. Thatcher 2023.

30. Fuller and Weizman 2021, 121.

31. Chapple 2020.

32. All sites mentioned in this chapter are followed by an ID number in parentheses. In the e-book, the IDs contain hyperlinks that lead to the corresponding online ArcGIS StoryMaps. Links to the StoryMaps can also be found in Appendix 1.

33. Haghazarian and Wickmann 2002.

34. Maghakyan and Pickman 2019.

35. Burtin 2014; Maghakyan and Pickman 2019.

36. Aylisli first published his telegram to Haydar Aliyev in a 2011 Russian-language book that was printed in only fifty copies (Maghakyan and Pickman 2019). He referred to this telegram again in a 2018 compilation of essays called *Farewell, Aylis* (Aylisli 2018, 289). There he also noted a meeting with Vasif Talibov in which he “openly expressed . . . that I thought the mass destruction of Armenian monuments was a great shame of our nation.”

37. Fuller and Weizman 2021.

38. Sim 2006.

39. ICOMOS 2008, 37–38.

40. Abbasov et al. 2006, Castle 2006.

41. “U.S. Envoy Barred From Armenian Cemetery In Azerbaijan” 2011.

42. Fuller and Weizman 2021, 118.

43. AAAS 2010. The AAAS’s analysis of Old Jugha was one of the earliest uses of satellite technology to document the destruction of cultural heritage.

44. Maghakyan and Pickman 2019.

45. Maghakyan 2021.

46. Donabédian 2024b, 89–94.

47. Abbasov et al. 2006; Azertac 2006; Today.Az 2006.

48. Azertac news, April 13, 2006, “President Ilham Aliyev visits Sheki.” Also quoted in Maghakyan and Pickman 2019.

49. De Waal 2019, 109.

50. Maghakyan 2021.

51. Kathem 2024, 186.

52. Fuller and Weizman 2021, 121.

53. Khatchadourian et al. 2022.

54. Resolution No. 140 of the Council of Ministers of Azerbaijan Soviet Socialist Republic “On approval of the lists of cultural and archeological monuments to be protected by the state” dated April 2, 1968. These five churches were located in the Ordubad, Nakhchivan, and Julfa regions. On our analysis of the number of churches and monasteries still standing in the late Soviet period, see chapter 3.

55. Resolution No. 145 of the Council of the Ministers of AzSSR dated April 27, 1988; Resolution No. 132 of the Cabinet of Ministers of the Republic of Azerbaijan dated August 2, 2001. The eight sites on the 1988 list are in the districts of Julfa, Shahbuz, and Nakhchivan. The twelve sites on the 2001 inventory are in Julfa, Ordubad, Shahbuz, and Babek.

56. The sites on the 1968 list were located in the Hadrut, Martakert, and Stepanakert districts, while those on the 2001 list were in the Hadrut, Martakert, and Shusha districts. By 1988, the Stepanakert district no longer existed as such.

57. It is also worth noting that Azerbaijani authorities did not have access to Nagorno-Karabakh when the 2001 list was compiled, and therefore must have relied on publications in order to identify and register the additional sites.

58. Aslanian and Tonoyan n.d.; Crombach 2023; Dorfmann-Lazarev 2024; Goff 2020; Hewsens 1982; Yilmaz 2013.

59. Rosenberg 2024, 203.

60. Dorfmann-Lazarev 2024, 284; Rosenberg 2024.

61. Gippert and Dum-Tragut 2023; Vacca 2017.

62. Aslanian and Tonoyan n.d.

63. See note 58 and Shulze (2018).

64. Dorfmann-Lazarev 2024, 238.

65. Scant traces of Armenian affiliation appear on the 1988 list. In Nakhichevan, one site is named simply “vank,” the Armenian word for monastery (#2857). The list for Nagorno-Karabakh mentions the Khatrvank “temple” (#2928), Amaras Monastery (#2952), Gazanchetsots church (#3016), and “Devichii” Monastery, a Russian translation of the Armenian “Kusanats” (#2969).

66. The prevalence of the unmodified term “temple” without the Albanian ethnonym may also suggest that the imperative of appropriation to the Caucasian Albania narrative had not filtered down to the lowest levels of the bureaucracy. Alternatively, by the time the list was compiled, “temple” may have stood in as the unmarked category for “Albanian temple.” In using the term “temple,” Azerbaijani practitioners may have been influenced by Russian terminology, in which the words for church (цeркoвь) and temple (храм) are largely interchangeable, but the term “temple” is not used to describe Armenian churches and thus this word choice aided in the bureaucratic obfuscation of reality.

67. One telling example entailed awkward renaming: list-makers dubbed the fortress in the Berdashen/Garakand village of Martuni/Khojavend “Albanberd,” or “Albanian fortress,” a name that fuses the Azerbaijani rendering of the word “Albanian” with the Armenian word for fortress, or berd. The official then mistakenly designated it a church.

68. Throughout the 1980s and 1990s, Azerbaijani scholars altered new editions and translations of primary historical sources written in Armenian, German, and Persian and dating to the fifteenth, eighteenth, and nineteenth centuries. They expunged references to the word “Armenian” that appeared in the original texts and earlier Soviet translations, sometimes substituting “Armenian” with “Albanian” (Bournoutian 1993). This deliberate tampering with historical sources demonstrates that the semantic erasure of Armenian presence was a calculated and pervasive strategy employed by academic and governmental institutions.

69. In the 1968 list, the five monuments are named “temple,” “monastery,” and “church,” while the sites on the 1988 are named “church,” “Albanian temple,” and “monastery.”

70. Anecdotally, a start date for the program of erasure in 1997 also accords with an encounter Argam Ayvazyan had with a childhood acquaintance from Nakhchivan in an Istanbul bus station in 1998 or 1999, during which he was informed that the destruction of Armenian monuments had recently commenced (personal communication with Khatchadourian and Smith, July 29, 2022).

71. See satellite coverage chronology chart, figure 3.2 in chapter 3.

72. We withhold locational information concerning these two sites in order to protect the last remaining physical vestiges of Armenian existence in Nakhchivan. They include a small cemetery and a chapel that appears on the historical satellite image to be already in a ruinous state in the late Soviet years, and thus may not have been recognized as Armenian places of worship and burial when the policy of destruction was enacted. We also refrain from disclosing the geographic coordinates for seventeen sites whose condition we were not able to assess with the available satellite imagery in order to protect them from harm in the unlikely event that any of these “indeterminate” sites remain intact (see chapter 3).

73. Ayvazyan 1986, 80.

74. Ayvazian 1990, 72–73; Ayvazyan 1986, 81.

75. Ayvazian 1990, 25; Ayvazyan 1986, 54.

76. Ayvazian 1990, 92–94; Ayvazyan 1986, 111; Ayvazyan 1987, 88.

77. Ayvazian 1990, 16; Ayvazyan 1984, 2; Donabédian 2024b, 89–94.

78. Ayvazian 1990, 52; Ayvazyan 1986, 43–44.

79. First reported by Maghakyan 2022. See also “Allahshukur Mosque Inaugurated in Nakhchivan Autonomous Republic” 2019.

80. Ayvazyan 1986, 114.

81. Smith et al. 2022.

82. According to Article 7 of the Law on Historical and Cultural Monuments, the function of determining the significance level of monuments is assigned to the Cabinet of Ministers in accordance with the judgment of Azerbaijan's National Academy of Sciences.

83. According to Article 6 of the Law on Historical and Cultural Monuments, the task of compiling the state registry falls to the Ministry of Culture and Tourism.

84. Aslanian and Tonoyan n.d. This is also an official government position. After denying the existence of Armenian cultural monuments in Nakhchivan, the 2006 statement released by Azerbaijan's embassy in Georgia went on to state: "As to stone crosses existing on the territory of Chuga (sic) cemetery of Julfa region, their origin dates back to time of Albanian state, where Christianity was the state religion, and it [the cemetery] belongs to Albans—one of the ancestors of Azerbaijanis. This cemetery is a cultural heritage of Azerbaijan and is under protection of the State" (De Waal 2019, 109).

85. Cuneo and Danti 2019; Eloundou Assomo 2022; Walasek 2015.

86. Gilbert 2006.

87. On the Armenian Genocide, see Balakian 2013; Bevan 2016; Hovanissian 1999. On Palestinian villages after 1948, see Khalidi 1992, Shai 2006. On Greek Cypriot monuments in northern Cyprus after 1974, see Chotzakoglou 2008; Constantinou et al. 2012; Hardy 2014; Jansen 2005.

88. Ruser et al. 2020, 3.

89. Harmanşah 2015.

90. Gilbert 2006.

91. Bachman 2019; Balakian 2013; Novic 2016.

92. Brammertz et al. 2016; Powderly 2022.

93. Judgment in the Case the Prosecutor v. Pavle Strugar: <https://www.icty.org/en/sid/8655>.

94. "Where there is physical or biological destruction there are often simultaneous attacks on the cultural and religious property and symbols of the targeted group as well, attacks which may legitimately be considered as evidence of an intent to physically destroy the group" (ICTY 2001 The Prosecutor v. Radislav Krstic—Case No. IT-98-33-T).

95. Walasek 2020, 229.

96. Bilsky and Klagsbrun (2018, 378) have noted an ambiguity in Lemkin's own account of cultural genocide pointing out that sometimes "he refers to it as a potential step towards genocide, sometimes as an aspect of the crime of genocide (one of its techniques) and, yet, at other times as representing the unique aim of the crime—to destroy the group's essence."

97. Powderly 2022.

98. According to the Foundation for Jewish Heritage, of the approximately 17,000 synagogues in Europe before the war, 3,318 (or 19 percent) survived as intact structures, and as of 2022, less than a quarter of those still hosted religious services (Mail and Levin n.d.). The Australian Strategic Policy Institute issued a 2020 report based on satellite imagery analysis that estimates: "approximately 16,000 mosques in Xinjiang (65% of the total) have been destroyed or damaged as a result of government policies, mostly since 2017. An estimated 8,500 have been demolished outright, and, for the most part, the land on which those razed mosques once sat remains vacant. A further 30 percent of important Islamic sacred sites (shrines, cemeteries and pilgrimage routes, including many protected under Chinese law) have been demolished across Xinjiang, mostly since 2017, and an additional 28 percent have been damaged or altered in some way" (Ruser et al. 2020, 3).

99. See chapter 2 on Israel and Cyprus.

100. Strikingly similar tactics were used in at least one instance in Bosnia, where the removal of cultural heritage was a key plank in Bosnian-Serb efforts to create a fictional,

mono-ethnic past. The Serb mayor of the once majority Muslim town of Zvornik asserted in 1993 that “there were never any mosques in Zvornik” (Walasek 2015, 57).

101. Khatchadourian et al. 2022; *pace* Maghakiyan and Pickman 2019.

102. Bachman 2019; Novic 2016.

103. Lenzerini 2020, 79.

104. UNESCO 2003.

105. Chechi and Romani 2024, 499; Lenzerini 2020, 79; Lixinski 2024.

106. Lixinski 2024, 71.

107. European Parliament 2006.

108. Chechi and Romani 2024, 498.

109. Brammertz et al. 2016.

110. Lixinski 2024, 71.

111. ICC 2021.

112. Chechi and Romani 2024, 494–495.

113. See <https://www.mfa.am/en/international-organisations/17>. At its 16th General Assembly in 2008, ICOMOS—the advisory body to the UNESCO World Heritage Committee—took a limited step by adopting a resolution containing these provisions: “[ICOMOS] Draws the attention of the Azerbaijani authorities, as a State Party to the Convention on the Protection of World Cultural and Natural Heritage, to the destruction of the Jugha cemetery and to transmit to them the concern of the international community of conservation experts;” and “Asks the Azerbaijani authorities to facilitate the access of an expert delegation from UNESCO and/or ICOMOS in order to study the site and inform the international community of the results.” The expert delegation never took place.

114. European Stability Initiative 2012.

115. Chapple 2020.

116. Rubin 2021.

117. Fitz Gibbon 2019.

118. <https://www.unesco.org/en/articles/republic-azerbaijan-donates-us-5-million-unesco>.

119. Weizman 2017, 69.

120. Weizman 2017, 69.

121. Kalman 2017.

122. Moffett, Viejo Rose, and Hickey 2020.

123. Petrosyan 2020.

124. Fuller and Weizman 2021, 113.

2. HERITAGE MINING

1. Barker 2018; Casana and Laugier 2017; Cuneo and Danti 2019; Elia 2009; Gerstenblith 2020; Kersel 2006.

2. Mackenzie 2005; Mackenzie et al. 2020.

3. For the full report, see Ghulyan et al. 2023 and the accompanying online ArcGIS StoryMap, which can be accessed from the CHW website, <https://caucasusheritage.cornell.edu/>.

4. Higuera 2018.

5. Higuera 2018.

6. On Azerbaijani ethnogenesis, see, for example, Crombach 2023, Dorfmann-Lazarev 2024, Goff 2020, Schaffer 2002, Shulze 2018, and Yilmaz 2013.

7. In a letter to the UN General Assembly and Security Council in 2003, the government of Azerbaijan claimed the plunder and sale of artifacts in “auctions and shops throughout the world” (United Nations General Assembly and Security Council 2003,

section IV). In 2008, Azerbaijan cited specific instances of statues nearly sold as scrap metal in Georgia and a silver handbag from the Lachin Museum sold at Sotheby's (United Nations General Assembly and Security Council 2008, p. 4). CHW has been unable to confirm these claims.

8. Broers 2021; Cheterian 2008; De Waal 2003.
9. Broers 2021.
10. Broers 2021, 123.
11. Dadashev and Useinov 1947; Shcheblykin 1947, 159–160.
12. Dadashev and Useinov 1947; Useinov et al. 1963, 101–104.
13. Bretanitskii and Veimarn 1976; Bretanitskii et al. 1942; Useinov et al. 1963, 153–156.
14. Avalov 1977, 99–100.
15. Avalov 1977, 60–62; Garabaghli 2019; Qarabağlı 1995.
16. Weizman 2017.
17. Coward 2008.
18. Supplement No. 1 to decision No. 132 of the Cabinet of Ministers of the Republic of Azerbaijan dating to August 2, 2001.
19. Throughout this discussion, sites are identified by both the names and their numbers in the CHW database. The imagery and other available data for each site can be examined at the links provided (in the ebook), in the online StoryMap Platform that can be accessed from the CHW website, and in our full report (Ghulyan et al. 2023). For a list of all 109 sites, see Appendix 2.
20. Witt 1992.
21. Rowell 1993.
22. Gray 1993.
23. This figure of forty-three major damage sites includes the thirty-nine sites that remained in the severely damaged condition until the 2020 war, as well as four sites that were subsequently destroyed, years after they were damaged.
24. Less than one year after the 1994 ceasefire, on March 14, 1995, the NKR government passed Decision No. 24 on the Introduction of Land Tax, its Calculation and Payment Order, the earliest document that bore upon the confiscation of abandoned property. According to the decision, “the plots of land abandoned by households or the population in the territory of the NKR are considered state reserve lands and are distributed by the NKR government on the recommendation of the NKR Ministry of Agriculture and Food.” On April 26, 1996, NKR passed the law on the Privatization of the State and Public Housing Fund, Article 28 of which stipulated that houses not privatized within two years would be considered state housing. Neither document includes cultural properties within its remit.
25. Broers 2021, fn. 29, 336; see also Broers and Toal 2013.
26. Broers 2021, 253.
27. Khatchadourian 2022.
28. Khatchadourian 2022, 324.
29. Khatchadourian 2022, 333.
30. Broers 2021, 254.
31. Yet they may differ with respect to funding the war effort. Brosché et al. (2017) indicate wartime financing as one of the economic incentives of antiquities looting, yet there is no parallel evidence for the heritage mining that took place in Nagorno-Karabakh.
32. Included in this category of already damaged but unchanged sites are the Yenik-end Tomb (N.393), Sharifan Mausoleum and Tomb (N.394, N.1824), Shyklar Mausoleum (N.4166), Garghabazar Mausoleum (N.4213), two mausoleums in Shusha (N.5042, NA.20), Mir Mehdi Khazani Mausoleum (NA.04), a tomb in Aghdam (NA.30), the Boyahmadli Mosque (N.4054), and the Garygyshlag Mosque (N.4733).

33. See also the Chalabilar (N.4170), Haji Giyaseddin (N.4212), Sardarli (N.4231), Garadaghly (N.4237), Dondarly (N.4704), Yusifbeyli (N.4709), and Khalaj (N.4714) mosques.

34. The same pattern of metal roof removal that exposed earthen domes is also visible at the Aghdam (N.202), Upper Govhar Agha (N.344), Juma (N.4220), Gochahmadli (N.4233), Abdal (NA.09), and probably Saatli (N.355) mosques. In the case of the Jijimli Mosque (NA.03), removal of the metal roof exposed a flat earthen roof.

35. A similar pattern can be seen at the Shykhlar (N.4166), Dagh Tumas (N.4169), Yukhary Seyidahmadli (N.4226), and Mir Mehdi Khazani (NA.04) mausoleums.

36. These include four mausoleums in Aghdam (NA.26, N.4044, N.4056, N.4057, N.4058), Sary Ashyg Mausoleum in Lachin (N.4726), and Rzaqulu Bey Mausoleum in Khojavend (NA.02). The Garaaghach Cemetery in Aghdam (NA.27) was burned down.

37. Site numbers N.4726, NA.02, NA.26.

38. Site numbers N.4056, N.4057, N.4058.

39. Broers 2021, 98.

40. Van der Auwera 2015, 55.

41. The remaining definitive cases are N.202, N.4709, N.4713 and, likely, N.4712. A photograph of the Gochahmadli Mosque (N.4233) suggests it may also have been used as an animal shelter.

42. Mozaffari and Akbar 2024.

43. Mozaffari and Akbar 2024.

44. Horák and Hoch 2023, 35; Mozaffari and Akbar 2024.

45. Tevzadze et al. 2022.

46. Khalidi 1992.

47. Al-Barsh 2024; Al-Houdalieh 2024; Bellingcat 2024; Erden et al. 2024; Iwaisi et al. 2025; Taha 2024; UNESCO 2025. See also International Court of Justice Summary of the Order of 26 January 2024, Document Number 192-20240126-SUM-01-00-EN: <https://www.icj-cij.org/node/203454>.

48. Benvenisti 2002, 165–9; Kadman 2015.

49. Benvenisti 2002, 166; Kadman 2015, 15.

50. Benvenisti 2002, 166.

51. Benvenisti 2002, 166.

52. Benvenisti 2002, 168; Shai 2006.

53. Benvenisti 2002, 168.

54. Khalidi 1992.

55. Benvenisti 2002, 289.

56. Forensic Architecture 2015, 2022a, 2025.

57. Jensehaugen 2017; Navaro-Yashin 2012.

58. Jansen 2005, 18.

59. Navaro-Yashin 2012, 152–157.

60. Navaro-Yashin 2012, 152–153.

61. Hardy 2014, 83; Jansen 2005.

62. Hardy 2014, 83; Jansen 2005.

63. Jansen 2005.

64. Jansen 2005, 27.

65. There were attempts at documentation before the opening of the checkpoint. Knapp and Antoniadou (1998, fig. 1.3, 1.4, 1.5) summarize the figures compiled by the Ministry of Foreign Affairs, Republic of Cyprus. They also note that UNESCO seems to have commissioned a report in the 1970s, but then removed materials from the lengthy version and distanced itself from the shortened text published in 1976. This resulted in the loss of valuable information concerning the scale of the impacts, and a lost opportunity to put pressure on Turkey (1998, 35).

66. Fielding 1976; Cyprus Press Office 1993.
67. Hardy 2014, 83, 96; Şevketoğlu et al. 2015.
68. Chotzakoglou 2008.
69. Hardy 2014, 87.
70. Constantinou et al. 2012, 179.
71. Chotzakoglou 2008, 50; Constantinou et al. 2012, 181–183; Güney and Yüceer 2021.
72. Constantinou et al. 2012, 180.
73. Constantinou et al. 2012; Constantinou and Hatay 2010; Mesaritou 2024; Pasamitros 2024.
74. Navaro-Yashin 2012, 12.
75. TRNC Presidency 2006.
76. Constantinou and Hatay 2010.
77. Hardy 2014, 82.
78. Constantinou and Hatay 2010, 1614.
79. See footnote 7 and Blumel 2020.
80. Bar 2018.
81. See Jensehaugen 2017.
82. Benvenisti 2002; Navaro-Yashin 2012.
83. Broers and Toal 2013, 26.
84. Broers 2021, 271–272.
85. Broers 2021.
86. Broers 2021, 272, 274.
87. Broers 2021.
88. See the work of Heritage for Peace.
89. De Cesari 2019.
90. De Cesari 2019, 196–199.
91. See footnote 47.
92. Kassinis 2015; Reid 2021.
93. Reid 2021.
94. Goryunova and Wei 2021.
95. Dikomitis 2012, 102–111.
96. Horák and Hoch 2023, 35; Azertac 2021; TurazTV 2021.
97. e.g., UN General Assembly & Security Council 2003, 2008, 2016, 2017a, 2017b, 2019, 2020, 2021, 2022.
98. UN General Assembly & Security Council 2017a, section E; UN General Assembly & Security Council 2020, section 6.
99. UNESCO 2005, 7.
100. Case 47319/20. ECHR Press release dated 04.02.2021, “Receipt of applications in two inter-State cases related to the conflict in Nagorno-Karabakh,” 1.
101. Application of the International Convention on the Elimination of All Forms of Racial Discrimination, *Azerbaijan v. Armenia*, 23 September 2021, 84.
102. Judgment, 12 November 2024, Application of the International Convention on the Elimination of All Forms of Racial Discrimination (*Azerbaijan v. Armenia*).
103. Ordu.Az 2024.
104. The numbers of sites are also inflated. One report states that “hundreds of ancient mausoleums and fortresses have been destroyed” (UN General Assembly & Security Council 2003, 6); another contends that “more than 900 graveyards were destroyed and vandalized” (UN General Assembly & Security Council 2001, 2/23).
105. UN General Assembly & Security Council 2022; cf. “During Occupation Armenia Destroyed 65 of 67 Mosques in Azerbaijan and Kept Pigs There—President Ilham Aliyev” 2022.

106. The Haji Gyaseddin Mosque (N.4212) was claimed to be destroyed in a May 2022 communiqué to the UN (UN General Assembly & Security Council 2022, images 29–30), but even the photographs provided, as well as our satellite imagery, show that the structure is in sound condition. The Dondarly Mosque (N.4704) is described in that same report as “partially destroyed,” but satellite imagery shows no structural changes.

107. UN General Assembly & Security Council 2022, 3/32.

108. On the markets of the antiquities trade, see Kersel 2006.

109. Kalman 2017.

3. TECHNIQUES, TECHNOLOGIES, THRESHOLDS

1. Evidence of heritage plundering played a particular role in the prosecution of Alfred Rosenberg, Reich Minister for the Occupied Eastern Territories. At trial, Rosenberg was prosecuted for multiple crimes against humanity and war crimes both for his role in the Nazi persecution and extermination of Jews in Eastern Europe and for the plundering of cultural property from Jewish individuals, communities, and institutions. The prosecution in the case *ICT v. Alfred Rosenberg* presented testimonies, documents, and other evidence that illustrated Rosenberg’s active role in implementing Nazi policies aimed at stripping occupied territories of their cultural heritage, facilitating the systematic plundering of art and cultural artifacts (Office of US Chief of Counsel for the Prosecution of Axis Criminality n.d.).

2. Frulli 2020. The 1972 World Heritage Convention was not envisioned as an instrument of international law. It was the ICTY that brought the treaty into legal force when it pointed to Dubrovnik’s status as a site inscribed on the World Heritage List as evidence of its protected status and hence enabled prosecutions for the 1991 bombardment of the Old Town. The same logic led to the rapid inscription of Mostar’s Stari Most in 2005.

3. UNESCO 1991.

4. Riedlmayer 2008, 149.

5. Riedlmayer 2008, 150–51.

6. Walasek 2015, 59. See also the transcript of Riedlmayer’s testimony here: <https://www.icty.org/x/cases/karadzic/trans/en/111209IT.htm>.

7. Hritz 2008; Stone 2008; Stone 2015; Van Ess et al. 2006. See also Parcak 2010.

8. e.g., Campbell 2013; Casana 2015; De Vido 2018; Kila 2012; Kila and Ziedler 2013; Mackenzie 2005; Rush 2023; Viejo Rose 2022.

9. Bassett et al. 2022; Bewley et al. 2016; Casana and Panahipour 2014; Cunliffe 2017; Danti et al. 2017; Hammer et al. 2018; Stein 2015. The American Society of Overseas Research was formerly known as the American Schools of Oriental Research.

10. e.g., Bennett et al. 2014; Casana 2014; Cerra et al. 2016; Lauricella et al. 2017; Luo et al. 2018, 2019; Mickel 2020; Opitz and Herrmann 2018. The emerging constellation of academic heritage monitoring projects is generally sustained by financial and logistical support from national governments, international heritage organizations (e.g., UNESCO, Blue Shield, and ICOMOS), and private foundations (such as Arcadia Fund and ALIPH Foundation).

11. Living heritage tends to be more closely associated with what UNESCO calls “intangible heritage,” but in addition to describing “the practices, representations, expressions, knowledge, skills” of a cultural group, it also embraces “the instruments, objects, artefacts and *cultural spaces* associated therewith” (UNESCO 2022, 3).

12. Weizman 2017, 13ff.

13. Kopeček 2016; Sultanova 2013.

14. Ayvazian 1990; Ayvazyan 1984, 1986.

15. Ayvazyan 2024; Dorfmann-Lazarev 2024, 254.

16. Ayvazian 1990; Ayvazyan 1986.

17. HEXAGON imagery was downloaded from the United States Geological Survey (USGS) EarthExplorer website and georeferenced in ArcGIS Pro using ESRI's satellite base layer imagery.

18. Hammer et al. 2022.

19. Our report contains a directory of these thirty sites in the hope that researchers in the future might be able to determine their coordinates (Ghulyan et al. 2023, 42–47).

20. Finer resolutions of less than 0.3m have been limited more by political restrictions on public access than technological barriers (Weizman 2017, 29).

21. Weizman 2017.

22. e.g., Lindsay and Mkrtchyan 2023.

23. CHW does not provide details on at-risk sites assessed as indeterminate in order to protect them from potential targeting.

24. Meskell 2016.

25. Litfin 2002, 67.

26. Fuller and Weizman 2021, 34.

27. Fuller and Weizman 2021, 19.

28. Fuller and Weizman 2021, 195.

29. Ministry of Culture of the Republic of Azerbaijan 2024.

30. Karabakh Center n.d.

31. Fuller and Weizman 2021, 12.

32. Ghulyan et al. 2023; Khatchadourian et al. 2022.

33. Howland et al. 2020.

34. Di Chiro 2018.

35. Links to the map tours can be found in the appendices.

4. COUNTER-FORENSICS ON THE CULTURAL FRONT

1. Graham et al. 2007; Jasani and Sakata 1987; cf. Foucault 1979.

2. Litfin 2002, 70.

3. Koettl 2022.

4. Scott 1998. See also, for example, Ceyhan 2012; González 2022; Harris 2006.

5. Parks 2018, 2.

6. Parks 2018, 125.

7. Morris 2008; see also Hasian 2016 and Herscher 2014.

8. Litfin 2002.

9. Parks 2018, 136.

10. Hasian 2016; Herscher 2014; Parks 2001.

11. Herscher 2014, 477.

12. Parks 2001, 604.

13. Hasian 2016; Herscher 2014.

14. Sekula 1993.

15. Keenan 2014.

16. Keenan 2014, 71.

17. Weizman 2017, 64.

18. Lafrenz Samuels 2015, 4.

19. Ashworth and Graham 2005, 7.

20. Pollock and Bernbeck 2018, 104.

21. Smith 2022; Khatchadourian in press.

22. "Unearthing, Unseeing: Archaeology, Heritage, and Forensics in the Shadow of State Violence," a conference held at Cornell University, November 1–2, 2024.

23. e.g. Hamilakis 2003.

24. al-Quntar and Daniels 2016.
25. Needless to say, the forms of on-the-ground training and assistance that Salam al-Quntar and Brian Daniels call for in connection with Syria are not possible in Azerbaijan, where Armenians and Armenian heritage professionals have been forced to flee, and where the state rejects the very existence of Armenian cultural heritage in need of protection and preservation.
26. Greenberg and Hamilakis 2022.
27. Brusius and Rico 2023.
28. Bellingcat 2019, 2022, 2024; Forensic Architecture 2015, 2022a, 2022b, 2025.
29. Principle #1 in the Society for American Archaeology's (2024) "Principles of Archaeological Ethics" is stewardship.
30. Litfin 2002, 68.
31. Herscher 2014, 495.
32. Mathiesen 1997.
33. See, for example, Tariverdieva 2024.
34. Elshadov 2024; cf. Turan News Agency 2023.
35. UNESCO n.d. See also Brown et al. 2019.
36. UNESCO 2015.
37. ICC 2021, 7.
38. Cunliffe 2024.
39. Rico 2015, 150.
40. Broers 2021.
41. Hasian 2016; Hirscher 2014.
42. Smith 2006.
43. On the Soviet conception of heritage, see Deschepper 2019. The differences between Western and (post-)Socialist authorized heritage discourses is beyond the scope of the present volume but well worth future articulation.
44. Smith 2006, 31.
45. Rico 2014, 158.
46. Rico 2015, 151.
47. Viejo Rose 2022, 46.
48. Viejo Rose 2022, 37.
49. On the use of open-source satellite imagery for detecting heritage impacts, see Bewley 2017, Bewley et al. 2016, and Contreras and Brodie 2010.
50. Ghosh et al. 2011; Hobson 2019; Lindsay and Mkrtchyan 2023.
51. AAAS 2015.
52. On wartime damage, Khatchadourian et al. 2021, 27–28. On destruction, Lindsay et al. 2024, 25–26. On appropriation, official visits, and reconstruction, see "Azərbaycandakı Xristian Dini İcmalarının Rəhbərləri Şuşada Rus Pravoslav Kilsəsində Birgə dua Mərasimində İştirak Ediblər" 2021. This church is known colloquially by Armenians as Kanach Zham.
53. Caucasus Heritage Watch 2023; Khatchadourian et al. 2023, 35–36.
54. Khatchadourian et al. 2023, 17–18, 25–26.
55. Khatchadourian et al. 2021, 31–32; Khatchadourian et al. 2023, 21–22; Lindsay et al. 2024, 27–28.
56. Lindsay et al. 2021, 37–38, 47–48.
57. Litfin 2002, 82.
58. As of this writing, we have produced eight regular monitoring reports, which can be accessed through the CHW website.
59. Khatchadourian et al. 2021, 21–22.
60. ICTY 2001; Hasian 2016; Parks 2001.
61. ICC 2019, Rule 63.

62. Rychlak and Taylor 2022, 354.
63. Harris et al. 2018.
64. United Nations 1965.
65. Herman 2022b, 74.
66. Between 1984 and 2012, the Committee of the CERD decided just twenty-seven complaints on the merits and found violations of the Convention in only eleven of them (United Nations 2012, 2). Most of the complaints brought to the CERD committee are raised by individuals and relate to various forms of discrimination in housing, education, or employment. But in 2008 Georgia filed a landmark case at the ICJ against the Russian Federation alleging violations of the CERD arising from the conflicts over South Ossetia and Abkhazia. Although in 2011 the ICJ ruled that it lacked jurisdiction in *Georgia v. Russian Federation*, since that time there have been four additional cases at the World Court alleging violations of the CERD: *Qatar v. United Arab Emirates* (2018–2021), *Ukraine v. Russian Federation* (2017–ongoing), *Armenia v. Azerbaijan* (2021–ongoing), and *Azerbaijan v. Armenia* (2021–ongoing).
67. Kirchmair 2022, 565. See also Herman 2022a, 2022b.
68. Herman 2022b, 72–3.
69. Roscini 2016, 544.
70. ICJ 2023: 2. Application of the CERD (*Armenia v. Azerbaijan*), Provisional Measures Order, para. 92.
71. Herman 2022a, 2022b.
72. De Waal 2025.
73. Weizman 2017, 69.
74. ICJ 2021; Herman 2022a, 2022b.
75. Kirchmair 2022, 573.
76. On CHW’s public impacts, see https://caucasusheritage.cornell.edu/?page_id=1865.
77. Lmahamad 2021.
78. Civillini 2024.
79. United Nations Environment Programme 2022.
80. Natiqqizi 2021.

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