The River is for Washing Carpets

by
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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Contemporary peacebuilding, notably as it is practiced in Afghanistan, consistently fails to address local needs in favour of international priorities for global security. Despite the significant presence of foreign agencies and aid mechanisms in the country, peace in Afghanistan remains elusive. Any semblance of peace achieved is neither durable, nor sustainable, particularly because of international ignorance of on-the-ground environmental and social realities, with specific reference to natural resource management and gender dynamics. These failures are localised in Bamyan, a small valley in Afghanistan's Central Highlands, most well known for its historic Buddhist complex, circa 6th century. An anomaly, Bamyan is a pocket of peace in an otherwise turbulent country, a direct result of global interest (and therein foreign engagement) in the preservation of eight archaeological sites in the valley. Yet the valley's 'World Heritage' designation (2003) has ultimately prescribed a development policy that emphasises heritage conservation over local socio-economic livelihoods. In so doing, the people of Bamyan are still today incredibly vulnerable, subject to insecurity in their water resource base, which is further aggravated by a changing climate and transition to urbanity.

Critiquing present models of peacebuilding, this thesis is an advocate for the agency of design in fragile states. Specifically, the thesis suggests that the intersection of architecture, infrastructure, and ecology creates a framework for sustainable development that is grounded in local conditions and livelihoods. Herein, peacebuilding becomes a bottom-up, pro-active process, engaging with, and responding to, the needs of local people as a means of building a paradigm of self-sufficiency. That is, the thesis strives for 'positive' peace,[1] with the intention of cultivating relationships of solidarity

1 In peace theory developed by Johan Galtung, 'positive' peace looks to prevent structural violence, as opposed to 'negative' peace which is regarded simply as the absence of direct violence.

between and among communities. In Bamyan, opportunity for this is found through shared spaces for water. Water has important ecological and cultural implications. Rehabilitation of water infrastructure is necessary to restore the valley's denuded landscape. Ritual importance of water additionally provides occasion for community gathering and social encounter, both for men and for women. Women especially, are integral to the peace process as their presence, in Afghan society, enables the 'family space,' a safe, gender-neutral, and culturally appropriate space for informal, public community gathering.

Accordingly, the thesis proposes a network of decentralised physical, ecological, and social infrastructures throughout the local watershed of Bamyan that seek to build enduring social and environmental resilience. Integration of vernacular and modern technologies capitalises on local knowledge and historical models of behaviour. Participation of the community in the building process moreover strengthens social relations, producing a shared sense of ownership in the peace process. This is explored through detailed design of one node in the network, a washing house along Bamyan River, which connects water and women as mechanisms for enduring peace, uncovering the potential of shared spaces for water to mobilise community solidarity, empower cultural identity, and build human dignity. Coupling ecological and cultural systems draws on the existing and the essential, and the thesis thus conceives a practice of design that can appropriately engage in, and foster, sustainable peace in fragile states.

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Introduction

Peace, as it pertains to international relations in fragile states, is most commonly understood as the antithesis of war or conflict. In peace theory, this is the empirically measurable 'negative' peace, the absence of direct violence. It is distinct from 'positive' peace which pro-actively targets the prevention of structural violence with the desire to create an environment supportive of self-sufficiency through inclusive integration of civil society.[1] To this end, this thesis posits that 'positive' peace is both a process and an outcome, operating beyond the realm of international politics, to engage specifically with the social, environmental, and economic needs of local communities. Explicit emphasis is given to local conditions and livelihoods, wherein interventions for peace are contextually appropriate, with the intent of securing peace that is durable and sustainable. Necessarily, 'positive' peace relies on cultivating relationships of solidarity, between and among communities, that recognise cultural and ecological interdependencies.

Access to water is integral in achieving lasting peace. In the aftermath of conflict, water is vital not only to sustain human life, but also because it plays a critical role in restoring economic livelihoods and alleviating poverty over the long-term.[2] Appropriately harnessing and investing in natural water assets directly responds to immediate and continuing needs of a conflict-

1 Johan Galtung, "An Editorial," *Journal of Peace Research* 1, no. 1 (1964): 2. Johan Galtung pioneered the discipline of peace and conflict studies. Among other things, he is well-recognised for his influential work on positive and negative peace, structural violence, conflict resolution, and peacebuilding.

2 Mikhail Gorbachev, "Foreword," in *Water and Post-Conflict Peacebuilding*, ed. Erika Weinthal et al. (New York: Earthscan, 2013), xiii. Water resources and their infrastructure are strategically targeted during conflict, resulting in widespread collateral damage. Their management during this time is also heavily compromised. Following conflict, restoring water services and infrastructure is crucial to the transition to peace. Beyond access to water for domestic purposes, water is inextricably linked to economy; water resources improve productive capacity of workers and production processes.

Figure 0.01
[Previous] Band-e Amir, a series of natural lakes formed by mineral deposition, is Afghanistan's first national park, a site of pilgrimage and weekly picnicking for families.

affected population, and increases prospects of 'positive' peace by generating employment opportunities and revenue, especially at the household and community level. Security in the water resource base promotes self-sufficiency of local populations and supports ecosystem health. This is particularly important when landscapes have been shattered by conflict, face pressures of shifting populations, and are threatened by looming impacts of climate change. Herein, the thesis conceives water as an agent of enduring peace. Rehabilitation of water infrastructure, through an integration of vernacular, ecological, and modern technologies, becomes a means of rebuilding environmental and social resilience.[3]

Especially for women, water constitutes an important social network. Infrastructural nodes of water storage and water access have historically been points of social encounter for communities, the site for household activities such as cleaning and water collection. In fragile states where women's public lives have a history of confinement, water-related activities form the premise for women's social interactions. Moreover, the presence of women enables the 'family space,' a safe, gender-neutral, and culturally appropriate space for informal, public community gathering. Such shared spaces provide a platform for 'positive' peace; their familiarity inspires participation, dialogue, and decision-making, and empowers a sense of united cultural identity. The thesis thus advocates the presence of women as underlying mediators of holistic peace (fig. 0.02).[4]

3 David Jensen and Steve Lonergan, "Placing Environmental and Natural Resource Risks, Impacts, and Opportunities on the post-conflict peacebuilding agenda," in *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding,* ed. David Jensen and Steve Lonergan (New York: Earthscan, 2012), 1. The most immediate need following conflict is infrastructure; "in conflict-sensitive environments, the condition of infrastructure is often a barometer of whether a society will slip further into violence or make a peaceful transition out of the conflict cycle."

4 Betty Reardon, *Women and Peace: Feminist Visions of Global Security,* (New York: State University of New York Press, 1993), 26. There is an intrinsic link between women and the 'positive' peace process. Specifically, the feminist approach to peace, which recognises the place of women in the peace process, advocates for a holistic approach to peacebuilding. This approach is rooted in notions of synergy (relationships and networks of culture and ecology), as well as sustainability.

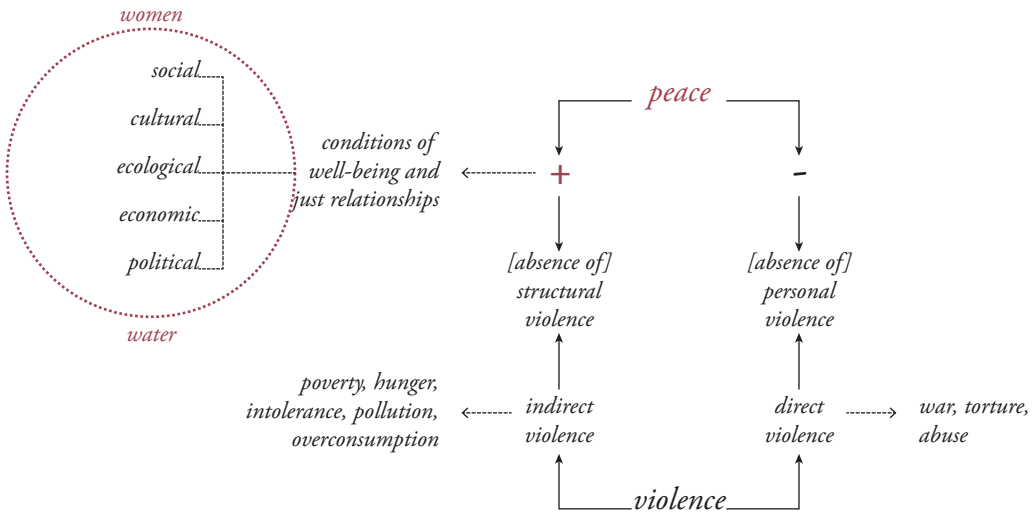


Figure 0.02
Defining peace.

Part One sets the premise for the thesis by elucidating contemporary (neoliberal) practices of peacebuilding and the reciprocal relationship this has with foreign aid. Examination of the peacebuilding agenda in context of Afghanistan emphasises the project's shortcomings, noting specifically the distinction between local and international desires for peace. The skewed priorities of international intervention in Afghanistan are made evident in Part Two, which opens the site of the thesis: Bamyan is a small, rapidly-urbanising valley in the Central Highlands of Afghanistan, known best for its historic archaeological sites which have been the major drivers for international peacebuilding action there. Chronicled in three sections, Peace, Water, Women, Part Two evaluates the implications of foreign-imposed peacebuilding in Bamyan. The narrative draws attention particularly to the cultural and ecological consequences surrounding water resource management in the Bamyan valley watershed, highlighting the intersection between peace, water, and women in Bamyan.

On these parameters, Part Three of the thesis suggests a practice of design that appropriately negotiates between formal and informal, rural and urban, tradition and modernity, global and local. Emerging from an energetic engagement with site, the thesis proposes a network of decentralised, community-based interventions that, through the marriage of ecology, infrastructure, and architecture, seek to cultivate enduring social and environmental resilience. This is strengthened by integration of vernacular and modern technologies, as well as by participation of local communities, explored in greater detail through design of one component in the network, a washing house along Bamyan River. Herein, water and women are connected as mechanisms for 'positive' peace, unveiling the potential of shared spaces for water to mobilise community solidarity, empower cultural identity, and build human dignity. In so doing, the thesis ultimately points toward a methodology for appropriately addressing root causes of insecurity; by drawing on existing ecological conditions and essential social mechanisms, the thesis is an advocate for the agency of design to foster sustainability and self-sufficiency in fragile states.





Part One

An understanding of contemporary peacebuilding practice, notably liberal peacebuilding, its relationship with state-building, and its connection to foreign aid, contextualises the issues surrounding international intervention in Afghanistan. Mapping this engagement in the country establishes a macro-scale analysis of peacebuilding's failures: the international agenda for global security is prioritised over local needs and long-term sustainability with serious consequences for socio-economic livelihoods and national solidarity, perpetuated by reinforced dependency on aid and disregard of gender dynamics in the country.

Figure 1.01
[Previous] Remnants of Dar-ul Aman, the former presidential palace in Kabul, Afghanistan.

Peacebuilding

Peacebuilding in conflict-prone and post-conflict societies aspires to prevent the re-emergence or escalation of violent conflict by establishing a durable and self-sustaining peace.[1] The term emerged through the seminal work of Johan Galtung who advocated that sustainable, 'positive' peace could be achieved through the creation of structures that would both address the root causes of violent conflict, and support local capacities for peace management and conflict resolution.[2] Originally theorised as a grass-root, bottom-up process seeking local consensus within a social-justice framework, peacebuilding today represents a convergence between discourses of peace research, conflict resolution, conflict management, development, and liberalisation.[3] Peace interventions have evolved from peacekeeping (conflict mediation) to peacemaking (conflict resolution), and in the post-Cold War period, to the transformational promise of Liberal Peacebuilding which seeks to reform the relationship between the individual, the market, and the state in the hopes of permanently eradicating sources of conflicts.[4] Liberal peace, or 'peace-as-governance,' as the theoretical basis for liberal peacebuilding, suggests that liberally-constituted societies will likely be more peaceful than illiberal states.[5] Accordingly, contemporary peacebuilding has expanded to cover a

1 Edward Newman, Roland Paris and Oliver P. Richmond, *New Perspectives on Liberal Peacebuilding* (Tokyo; New York: United Nations University Press, 2009), 3.

2 Johan Galtung, "Three Approaches to Peace: Peacekeeping, Peacemaking, and Peacebuilding," in *Peace, War and Defense: Essays in Peace Research*, ed. Johan Galtung (Copenhagen: Ejlers, 1976), 298.

3 Oliver P. Richmond, *Failed Statebuilding: Intervention and the Dynamics of Peace Formation* (New Haven; London: Yale University Press, 2014), 105.

4 Toby Dodge, "Intervention and Dreams of Exogenous Statebuilding: The Application of Liberal Peacebuilding in Afghanistan and Iraq," *Review of International Studies* 39, no. 5 (2013), 1193.

5 Newman, Paris and Richmond, *New Perspectives on Liberal Peacebuilding,* 11.

wide range of multidimensional tasks inclusive of the disarming of warring factions as well as the rebuilding of political, economic, judicial, and civil society institutions under principles of security, development, humanitarian assistance, governance, and the rule of law.

Liberal Peacebuilding

Liberal peacebuilding finds its premise in four tenets of neoliberal ideology, the individual, the market, the role of the state, and democracy, which are used to identify problems and propose solutions to stabilise post-conflict societies.[6] Societal transformation, as the goal of the liberal peacebuilding project, places the individual and individual liberty appropriately at the centre of the neoliberal discourse. The market is made necessary as the primary realm in which individuals may interact for their mutual benefit, and the main threat arises from the unregulated power of the state, which can be mitigated by democratic governance. These relationships prescribe the policies of liberal peacebuilding and its inherent ties to the 'human security' doctrine as indicated in the United Nations' publications *An Agenda for Peace* by Boutros Boutros-Ghali in 1992, the 1994 *Human Development Report*, Kofi Annan's *Brahimi Report* of 2002, and the United States' *National Security Strategy* of 2002.[7] The latter specifically falls in line with 'democratic peacebuilding,' the international variant of liberal peacebuilding, which posits that truly democratically governed countries do not go to war with one another.[8] Weak and failing states are thus brought to the forefront of contemporary peacebuilding discourse: "as far as it involves (re)building state institutions in failed or conflict states, [peacebuilding] is viewed by powerful developed states as a strategic imperative for international action," translating state-building as an imperative corollary of peacebuilding in the international agenda for global security.[9]

6 Dodge, *Intervention and Dreams of Exogenous Statebuilding,* 1189.

7 Chuck Thiessen, *Local Ownership of Peacebuilding in Afghanistan: Shouldering Responsibility for Sustainable Peace and Development* (Lanham Maryland: Lexington Books, 2014), 13. The human security doctrine places emphasis on individual security over state security. It obligates external states to intervene in the internal affairs of another state out of concern for the security of its population, and thus lies at the heart of the liberal peacebuilding project.

8 Newman, Paris and Richmond, *New Perspectives on Liberal Peacebuilding,* 11.

9 Ibid., 10.

Peacebuilding and State-building

Associating peacebuilding with nation-building raises fundamental controversies however, especially regarding most empirical and theoretical definitions of the birth of a nation.[10] This also reflects a tension between state-building's top-down approaches whose primary agenda is achieving security and stability through a system of governance, and peacebuilding's bottom-up initiatives that seek to address the source of conflict and facilitate reconciliation between warring factions. Security-based schemes additionally typically remain ignorant of social and cultural practices on the ground. In this light, liberal peacebuilding is easily correlated to colonialism or liberal imperialism:

> …the concept of liberal peacebuilding and the manner in which it is promoted in fragile and divided societies are problematic. The tenets of liberal peacebuilding – liberal democracy, liberal human rights, market values, the integration of societies into globalisation, and the centralised secular state – are not necessarily universal (or universally applicable) values. Moreover, the liberal peace and its neo-liberal economic dimensions, which have displaced older liberal ideas about welfare, are not necessarily appropriate for conflicted or divided societies. Indeed, democracy and the market are arguably adversarial or even conflictual forces – taken for granted in stable western democracies, but not necessarily suitable for volatile societies that do not enjoy stable institutions.[11]

Imposition of neoliberal values mandates the state as the basic institutional block of peacebuilding, and in so doing, equates the local with the national.[12] This is further aggravated by the current distinction in liberal peacebuilding between 'internationals' and 'locals' within which "lies a danger of romanticising the local and validating the international without connection or communication between the two."[13] The process begins to resemble a system of governance rather than a reconciliatory process. Particularly, when the state in question is weak or failing, the implication is that liberal peace becomes extremely intrusive, most commonly transferred by force, coercion, conditionality, or dependency, and its legitimacy is undermined by lack of

10 Ibid., 30.

11 Ibid., 12.

12 Richmond, *Failed Statebuilding,* 107.

13 Newman, Paris and Richmond, *New Perspectives on Liberal Peacebuilding,* 14.

consent from the grassroots.[14] Institution building at the state level, held together by external actors, is prioritised over local day-to-day well-being, cultural identity, and social cohesion, therein contradicting core concepts of human security. The essential mechanism of a liberal social contract, intrinsic to liberal peacebuilding theory, is thus absent or cemented in an imported value system that ignores welfare and local sensitivities.[15]

The Aid Complex

The foreign aid system was initially directed to address these discrepancies.[16] A counterpart of the liberal peacebuilding project, aid in international relations is understood as a voluntary transfer of resources from a donor to a recipient. Actors include governments, non-governmental organisations (NGOs), and international organisations, and aid can serve multiple functions of diplomacy (inclusive of military, security, and political interests), development, commercial, and humanitarian relief.[17] Premised in the neoliberal notion of economic development however, the nature of the donor-recipient relationship tends to disrupt any altruistic intentions. Foreign aid is entirely dependent upon the resources of the donor and is accordingly attached to conditionalities prescribed by the donor, enforcing a patron-client relationship. Aid priorities are therefore informed by donor objectives and aid today is envisioned as a large-scale exercise in utopian master planning.[18] Paralleling liberal peacebuilding, this means that "[aid bureaucracies] opt for universality rather than specificity, for worldwide 'best practices' rather than what works in each locale."[19]

This is evident even in the more recent practice of 'developmental projects' that respond to a specific sectoral need, typically through the provision of infrastructure. Projects tend to follow outdated, standardised hard-infrastructure solutions that are irresponsive to local conditions, failing to recognise any adverse social and environmental effects, especially regarding

14 Ibid., 56.

15 Ibid., 68. Liberal peace aspires towards a Lockean social contract in which governance is exchanged for physical, material, social, and cultural security and freedoms. In practice, however, the outcome has been, at best, the creation of governance institutions that focus on securing the state without addressing citizen welfare.

16 William Easterly, *The White Man's Burden* (New York: Penguin Books, 2006), 24.

17 Carol Lancaster, *Foreign Aid: Diplomacy, Development, Domestic Politics* (Chicago: University of Chicago Press, 2007), 9.

18 Easterly, *The White Man's Burden,* 199.

19 Ibid., 198.

the management of natural resources.[20] Resources such as land and water, underpin livelihoods in fragile states, and have a complex, multidimensional relationship with conflict; they are a "silent casualty," of conflict, can contribute to the outbreak of conflict, may finance or sustain a conflict, or can undermine peacebuilding processes by value of their exploitation.[21] When little thought is given to existing conditions of natural resources in a conflict-affected state, development interventions increase lines of dissonance, fracture, and tension between communities. Climate change threats, already tangible in many fragile states, intensify strains on natural resources, heightening local vulnerabilities and aggravating insecurity.

An arduous web of funding relationships between donors, aid agencies, and private contractors further produces incomplete or unsustainable results. Inappropriate aid projects thus distort local perceptions of international interventions, and distance local people from the peacebuilding agenda. Lack of accountability, poor management, minimal feedback, and little to no coordination among aid agencies compounds the failure of foreign aid.[22] So much so that aid has, in many places, undermined or fragmented a recipient state's capacity to perform essential functions.[23] In so doing, the very core of the liberal peacebuilding agenda is undermined, perpetuating insecurity and unrest. Effectively, both foreign aid and the liberal peacebuilding project as they exist today, are ontologically incoherent and inherently contradictory. Engaged in a cyclical narrative of failure, where any 'positive peace' outcomes are severely destabilised, peacebuilding and aid processes must be redesigned to serve communities in a manner that fosters a real sense of security and safety, characterised by long-term sustainability and local self-sufficiency.

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20 Ashraf Ghani and Clare Lockhart, *Fixing Failed States: A Framework for Rebuilding a Fractured World* (New York: Oxford University Press, 2009), 97. Most engineering plans for development projects use the same blueprints for infrastructure from the 1950s with little consideration given to technological innovations, local knowledge, or ecosystem impacts.

21 Oli Brown and Erin Blankenship, *Natural Resource Management and Peacebuilding in Afghanistan*, (Nairobi: United Nations Environment Programme, 2013), 8.

22 Easterly, *The White Man's Burden,* 16.

23 Ghani and Lockhart, *Fixing Failed States*, 111.

Cartographies of Failure

In March 2001, Taisir Alluni, an Al-Jazeera journalist captured footage of the destruction of two colossal Buddhas in Bamyan (fig. 1.02). Their obliteration came after the intensification of United Nations sanctions against Afghanistan: "The Taliban thought the world had completely abandoned them. They were spitting in the face of a world that did not give a damn about their country, [a world] that was more interested in stone sculptures than the thousands of Afghan children who were facing starvation in the winter of 2000/2001."[24] The provocative act was a dramatic shift in policy (hardly six months earlier, one-eyed Taliban leader Mullah Omar had issued a clear decree refusing the destruction of the statues) and ultimately reflected the indispensable influence of militant Sunni Islamist group Al-Qaeda on Taliban leadership.[25] Under this influence, six months later, on the morning of September 11, 2001 (9/11), Al-Qaeda jihadists hijacked four commercial airliners in an apocalyptic act that would become the most devastating terrorist attack in American history (fig. 1.03).[26]

Destruction of the Bamyan Buddhas, the events of 9/11, and the subsequent United States-led 'War on Terror' solidified the position of Muslims in the official Western imagination, and secured yet another narrative of foreign intervention – this time, one of liberal peacebuilding

24 Llewelyn Morgan, *The Buddhas of Bamiyan* (London: Profile Books, 2012), 3.

25 Ibid., 21. An iconoclastic act of this nature is characteristic of the hardline Wahhabi branch of Islam espoused by Al-Qaeda, who were significantly influencing the decision-making of Taliban leadership. What had once been viewed as the Stonehenge of Afghanistan quickly became a means of provoking the international community; the West had made no attempt to understand the Islamic world in its full, rich complexity, and this was the payback.

26 The four attacks of September 11, 2001 killed 2,996 people, injured over 6,000 others, and caused an estimated financial loss of over $3 trillion.



Figure 1.02
Destruction of the Bamyan Buddhas, March 21, 2001.



Figure 1.03
Facade remains of the Twin Towers following the attacks of September 11, 2001.

– in Afghanistan's (fig. 1.04) already tumultuous history.[27] Peacebuilding initiatives in Afghanistan in fact preceded the events of 9/11. The United Nations (UN) and other aid agencies were active almost two decades prior to provide relief during Soviet intervention and later, to promote peace and diplomacy during Afghanistan's civil war. Initially focused on community-based initiatives for peace, the extreme practices of the fundamentalist Taliban regime resulted in foreign implementation of *The Strategic Framework Agreement for Afghanistan* (1998) which, coupled with tight UN sanctions (1999-2000), effectively linked aid and peacebuilding to forceful action.[28] The post-9/11 peacebuilding venture emerged from this foundation, and the grand transformative project of the *Bonn Agreement* (2001) to recreate the State of Afghanistan stipulated that securing Afghanistan from the Taliban was a necessary step towards building peace.

Mapping International Engagement in Afghanistan

When applied, however, the peacebuilding project in Afghanistan "recreated the state's despotic power but singularly failed to reconstruct [the country's] infrastructural capacity or positively change the state's relations with its own societies," emphasising integral flaws of liberal peacebuilding's so-called 'universal' template.[29] The United States-led attempt to "project strategic power with military force," coupled with the United Nations' longstanding efforts to "create a less violent world," implemented an aid and development program intrinsically tied to the discourse on security, forcing contradictory services of peace and violence to work together.[30] Peacebuilding interventions were thus decidedly not neutral. Correspondingly, use of humanitarian rhetoric

27 Afghanistan's history is steeped in centuries of conflict closely narrated by the presence of foreign powers. Its location, at the crux of the ancient Silk Road, has made the country an important battleground for strategic wars, and the fragmented nature of a multiplicity of ethnic groups has culminated in numerous internal struggles: 700 B.C.E. onwards, Afghanistan has endured Persian conquests, Greek and Mongol invasions, Great Game power struggles between Britain and Russia (1838-1919), Soviet intervention and the corresponding largely United-States fueled Mujahedeen resistance (1979-1989), civil war (1989-1996), fundamentalist Taliban regime (1996-2001) and the United-States-led War on Terror's Afghanistan War (2001-present).

28 Astri Suhrke, "Waging War and Building Peace in Afghanistan," *International Peacekeeping* 19, no. 4 (2012), 480.

29 Dodge, *Intervention and Dreams of Exogenous Statebuilding,* 1192.

30 Suhrke, *Waging War and Building Peace in Afghanistan,* 478. The peacebuilding project legitimised and therein sustained political support for military operations. However, the violence that soon spiraled into war very obviously undermined the peacebuilding agenda.

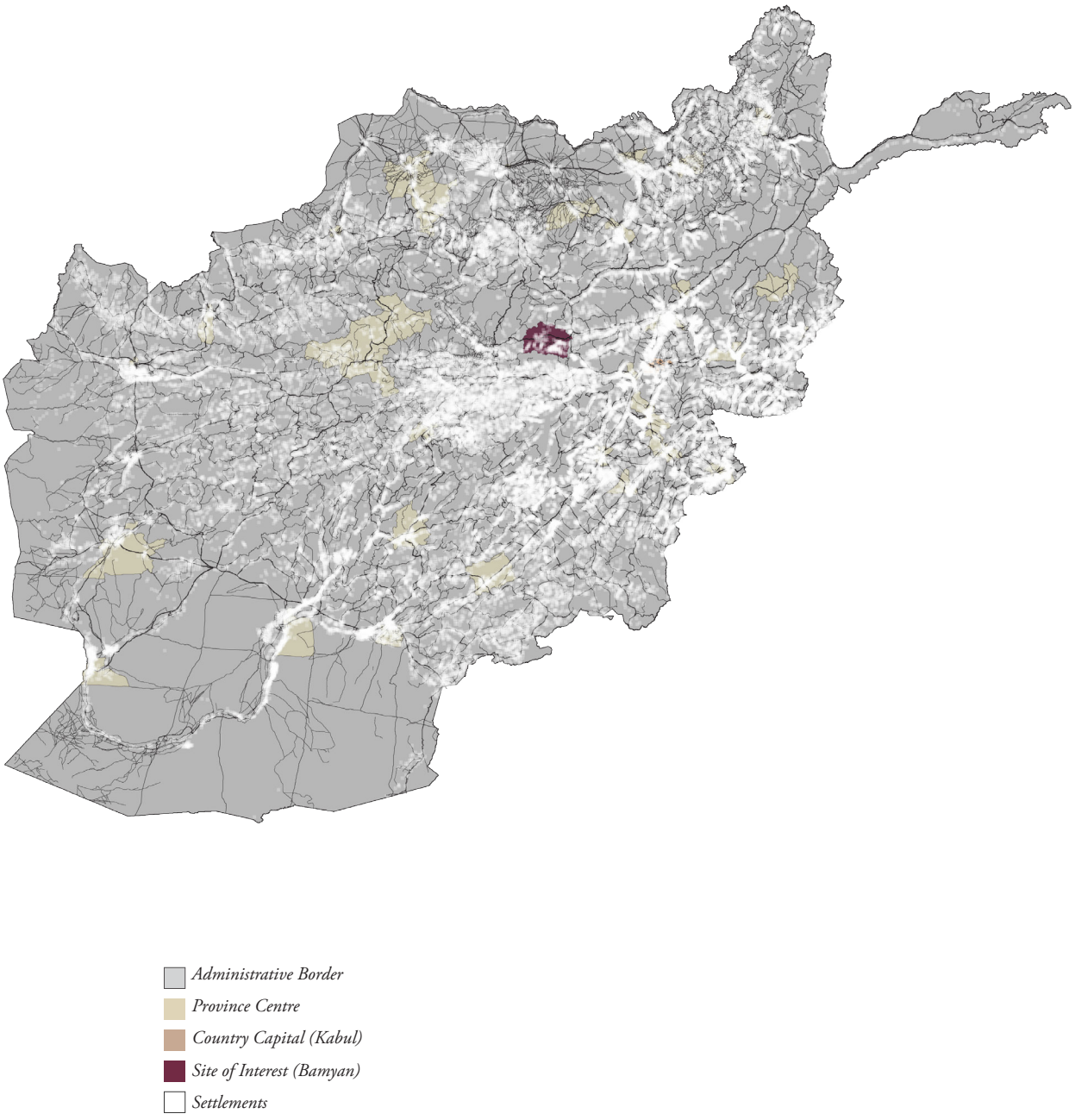


Figure 1.04
Administrative map of Afghanistan, 1:8,000,000.

to justify war perpetuated a deadly confusion between aid organisations and political-military institutions, particularly as NGOs and UN agencies abandoned their prototypical 'independent aid' model to align their priorities with the newly established Afghan government and its Western Allies, who were still at war with the Taliban.[31]

Under the *Accelerating Success* agenda devised in 2003 which recanted the pre-invasion light-footprint policies of the United States, interventions by the NATO-led International Security Assistance Force (ISAF) were designed principally to create highly-centralised state institutions in Kabul.[32] Establishing this monopoly of a legitimate central force expanded ISAF beyond Kabul; by mid-decade, ISAF forces were deployed throughout the country in both combat operations and development projects (fig. 1.05). Provincial Reconstruction Teams (PRTs) emerged then from the amalgamation of military and aid functions as interim civil-military institutions designated to improve stability, build capacity, and reinforce the nation's legitimacy.[33]

In the early 2000s, international forces were warmly welcomed. A growing international military presence (fig. 1.06), however, ultimately only served to escalate the conflict and heighten insurgent actions throughout the country. Especially to rural Afghans, "ISAF appeared as an occupation force that supported self-serving elites and fueled a costly war that claimed civilian lives and destroyed property," made evident by the skewed priorities of the international community in favour of winning the war.[34] The *Winning Hearts and Mind* (WHAM) doctrine is reflective of this, with donors increasingly shifting their resources to larger 'signature projects' perceived as more capable of strengthening local favour and more closely linked to counter-insurgency activities.[35] Quick in impact, these projects are firmly grounded in the international community's belief in the indivisibility of development and security. As such, the bulk of these projects are concentrated in the south and east of Afghanistan, fostering resentment in neglected regions of North and Central Afghanistan, arguably the areas of least insurgency (fig. 1.07), greatest

31 Linda Polman, *The Crisis Caravan: What's Wrong with Humanitarian Aid?* (New York: Picador, 2010), 145.

32 Dodge, *Intervention and Dreams of Exogenous Statebuilding,* 1204.

33 Stephen Hoadley, "The New Zealand PRT Experience in Bamyan Province: Assessing Political Legitimacy and Operational Achievements," in *Statebuilding in Afghanistan: Multinational Contributions to Reconstruction*, eds. Nik Hynek and Péter Marton (Milton Park, Abingdon, Oxon, England; New York: Routledge, 2012), 139.

34 Suhrke, *Waging War and Building Peace in Afghanistan,* 485.

35 Jonathan Goodhand and Mark Sedra, "Who Owns the Peace? Aid, Reconstruction, and Peacebuilding in Afghanistan," *Disasters* 34 (2010), s89.

poverty (fig. 1.08), and most receptive to development aid (fig. 1.09).[36]

Short-term security concerns have clearly taken precedence over long term peacebuilding aims, noting that the implementation of Quick Impact Projects (QIP), as the name suggests, do not address local concerns for long-term sustainability, durability, or resilience. That is, even where there is significant international presence, little concern is given to the management of natural resources which predictably impact socio-economic livelihoods (fig. 1.10, fig. 1.11).[37] Ongoing conflict has significantly incapacitated Afghanistan's natural environment, and water resources are extremely contentious; water allocation is the second-most commonly cited cause of tension, exacerbated by devastation of traditional social and physical infrastructures over many decades of war.[38] In response, international presence has supported the construction of dams, notably in the south and east of Afghanistan. While the intention is to stabilise water supplies and provide a source of electricity, there is little understanding of existing hydrology and minimal voice of local communities. The large-scale, hard-infrastructure nature of dam projects thus frequently have adverse social and environmental impacts, leading to local and regional conflict, and increased disillusionment of international presence.[39]

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36 Ibid., s94. The 2008 report by the Agency Coordinating Body for Afghan Relief (ACBAR), "Falling Short: Aid Effectiveness in Afghanistan," indicated that the budget allocated to southern provinces was three to four times higher than provinces in the Central Highlands of Afghanistan. Reconstruction work in southern and eastern provinces continues despite the Taliban's daily destruction of these initiatives. By destroying ongoing reconstruction work, it is the Taliban's motive to terrorize ordinary citizens and demonstrate the internationally-backed central Afghan government's inability to protect them. The Taliban specifically target Afghan civilians who co-operate with foreigners, likening them to the international armed forces.

37 Naysan Adlparvar, "When Glass Breaks, it becomes Sharper: Deconstructing Ethnicity in the Bamyan Valley, Afghanistan" (PhD diss., University of Sussex, 2014), 9. International pressure to rapidly disburse large allocations of aid has resulted in interventions being premised on quick assessments by foreign consultants who have been in the country for only a few weeks with little understanding of Afghanistan's cultural, ecological, or political realities.

38 Oli Brown and Erin Blankenship, *Natural Resource Management and Peacebuilding in Afghanistan*, (Nairobi: United Nations Environment Programme, 2013), 20. Even after post-conflict recovery efforts began in Afghanistan, violent disputes over water continued to increase as thirty years of war had left water sources co-opted, stolen, or contaminated.

39 Jessica Troell and Erika Weinthal, "Shoring up Peace: Water and Post-Conflict Peacebuilding," in *Water and Post-Conflict Peacebuilding*, ed. Erika Weinthal et al. (New York: Earthscan, 2013), 13. Dams necessitate large tracts of (often valuable agricultural) land and require population resettlement. Further, dams affect aquatic ecosystems and damage the resource base that supports local livelihoods. The Dahla Dam in Kandahar, for example, which has had over $100 million invested by the Canadian and United States governments, is still unable to reach its desired communities; forty percent of the dam remains filled with silt, resulting in water insecurity for the half-million people who inhabit the arid province.

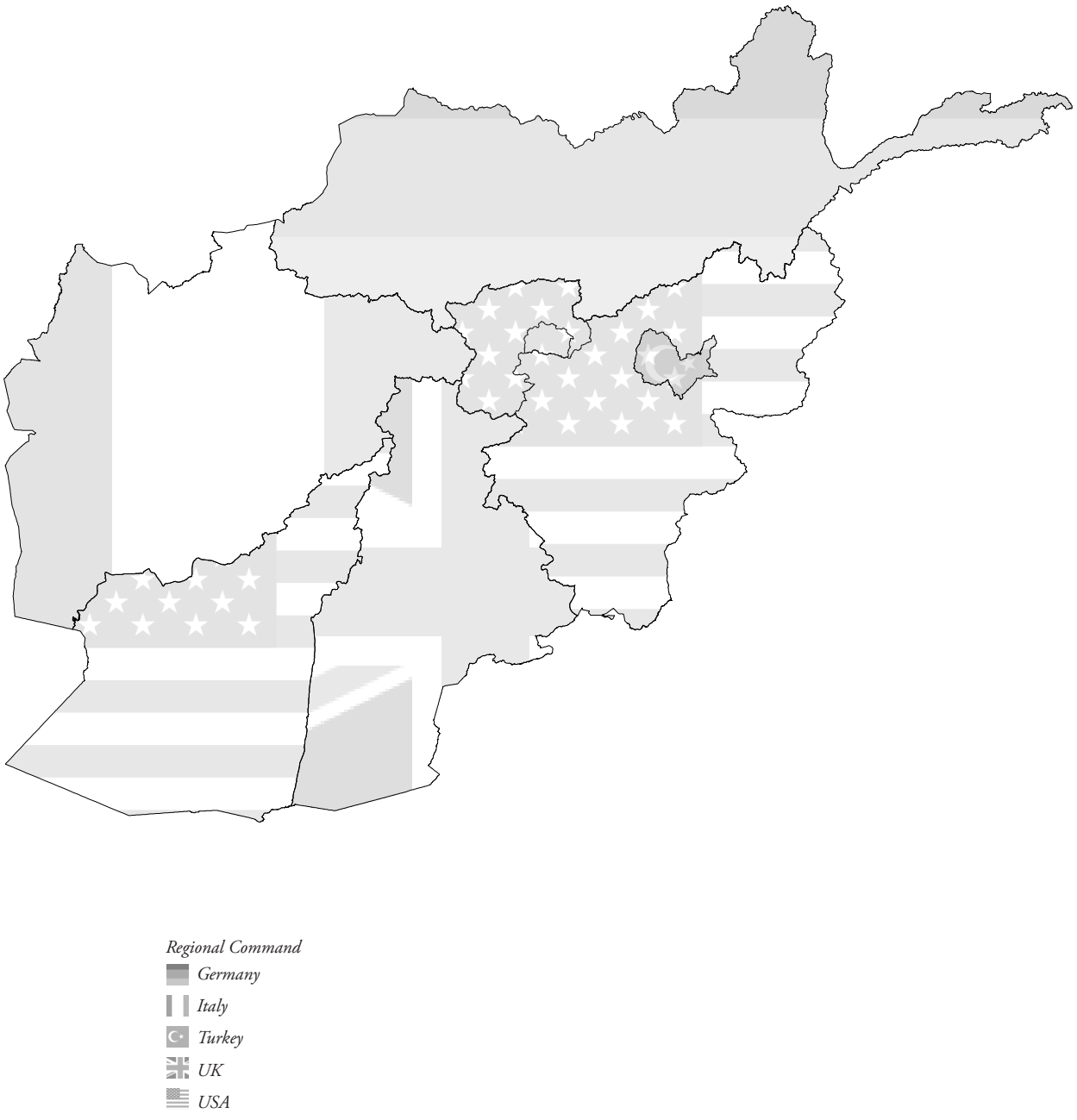


Figure 1.05
ISAF regional command structures coordinate all regional civil-military activities conducted by Provincial Reconstruction Teams. 1:8,000,000.

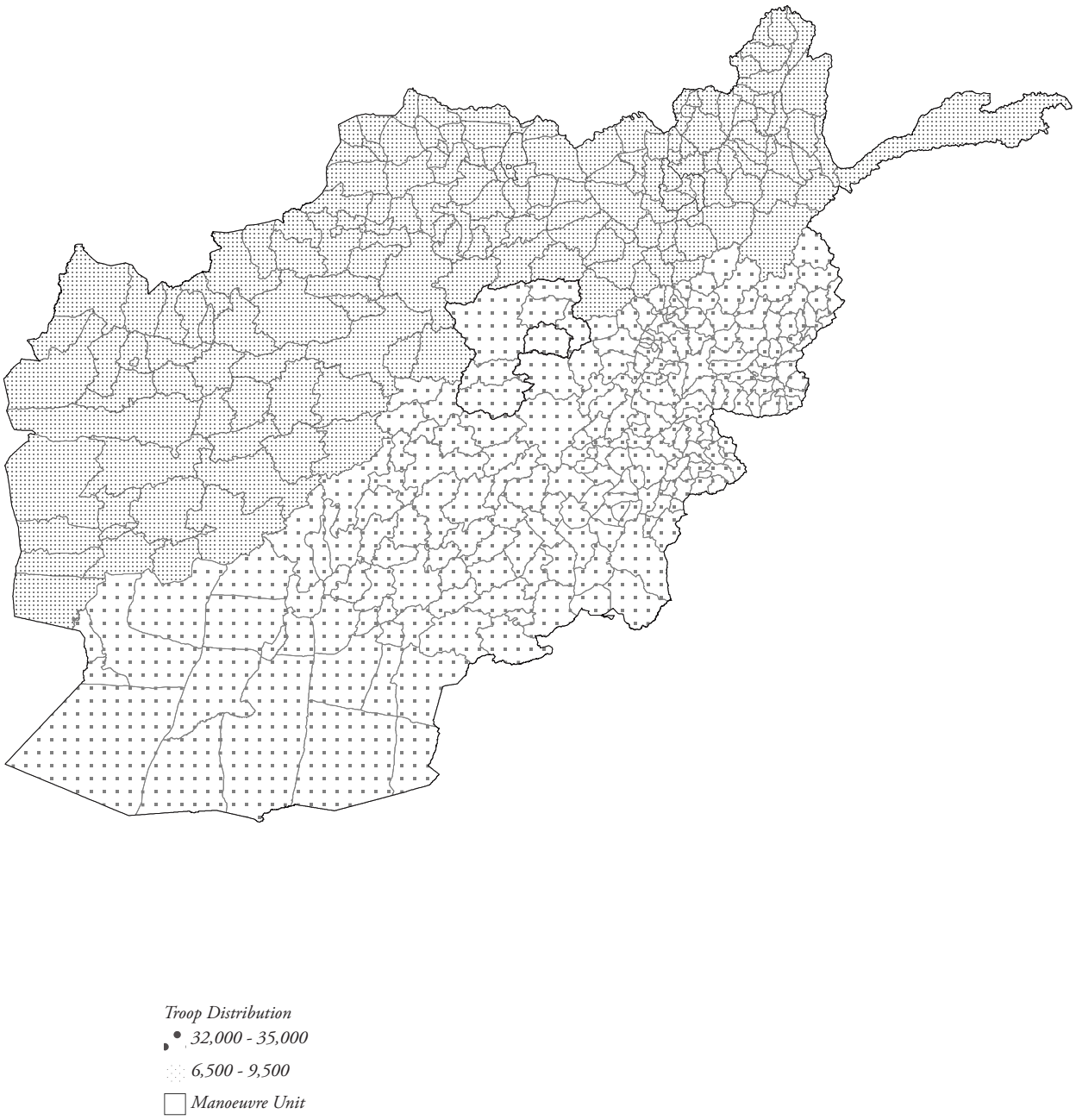


Figure 1.06
Proportional distribution of foreign troops in Afghanistan, c. 2010. 1:8,000,000.

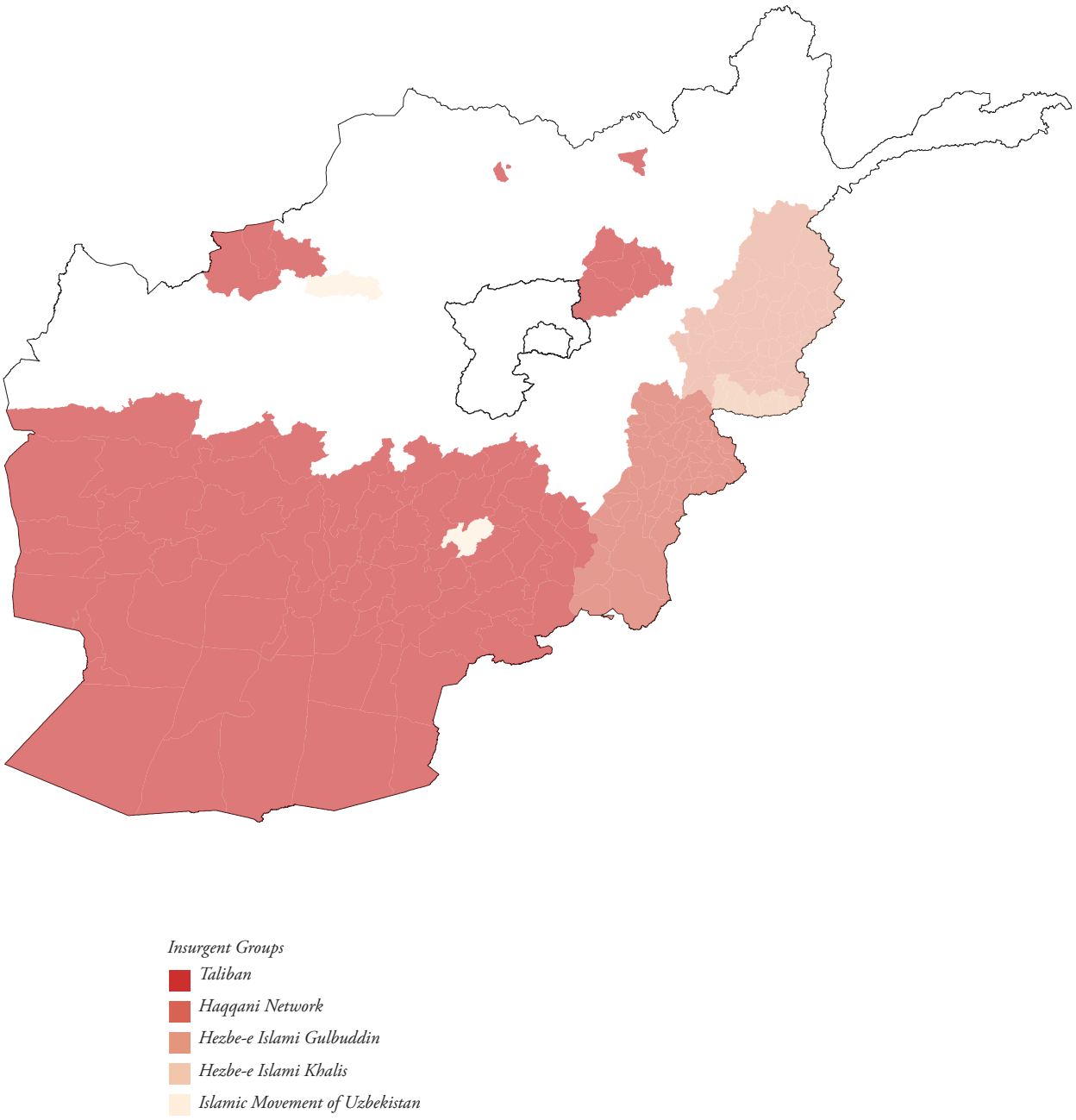


Figure 1.07
Active insurgent groups in Afghanistan c. 2010. ISIS has also been gaining ground in parts of southern, eastern, and north-eastern Afghanistan. 1:8,000,000.

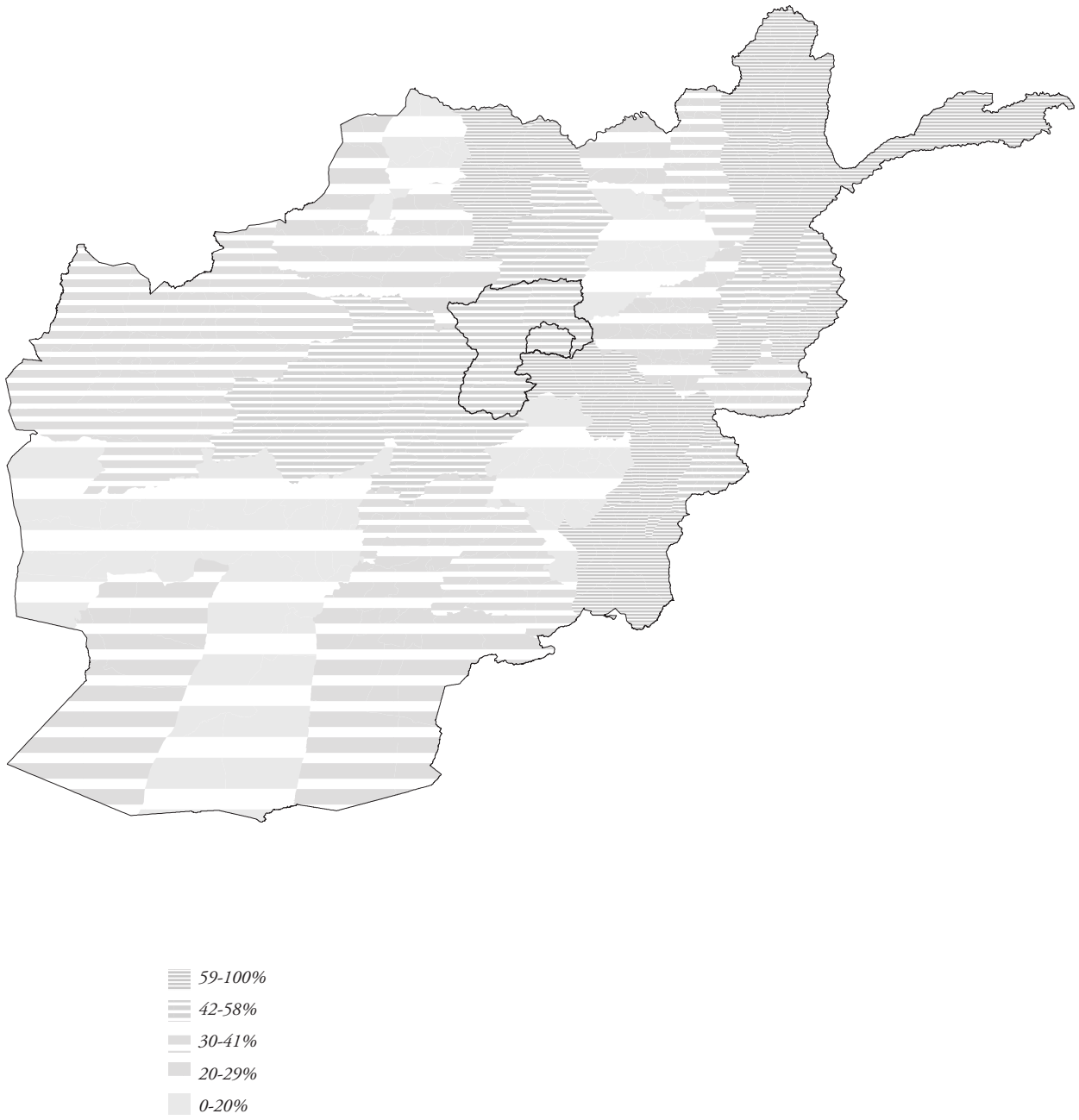


Figure 1.08
Poverty levels as a percentage of population in Afghanistan c. 2008. 1:8,000,000.

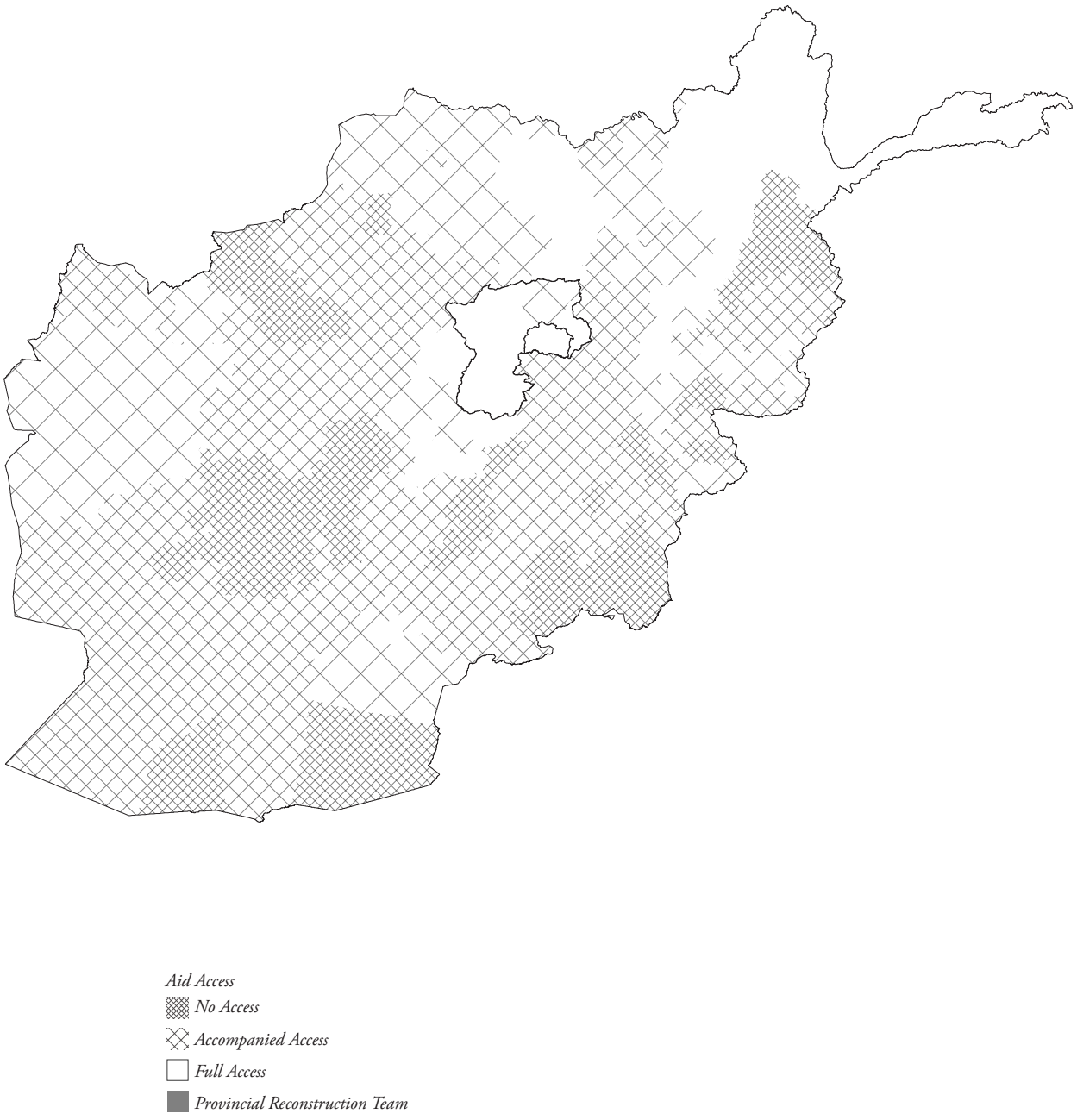


Figure 1.09
Areas open to aid access in Afghanistan c. 2015. 1:8,000,000.

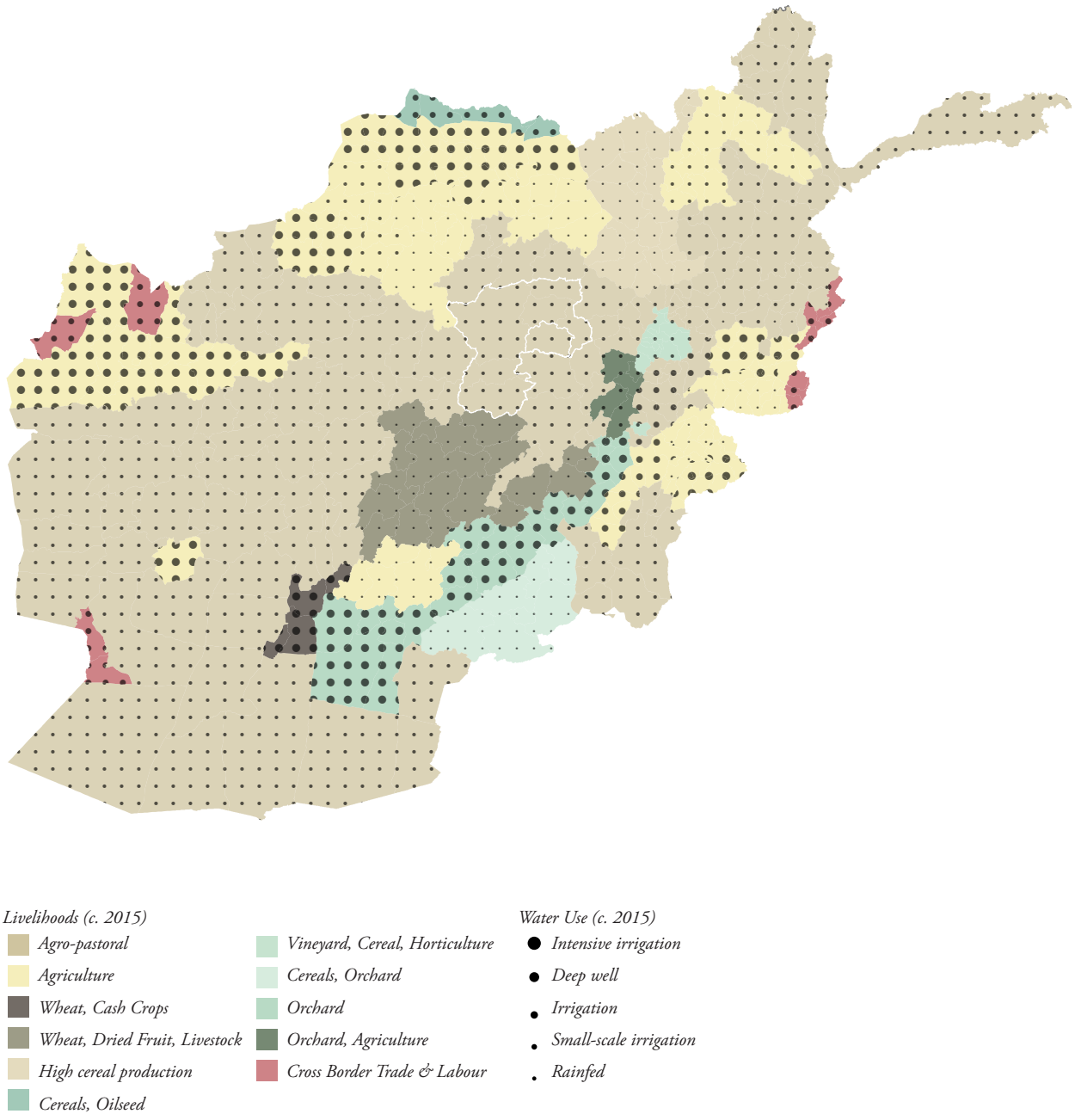


Figure 1.10
Livelihoods in Afghanistan are typically agrarian based, reliant on water availability.
1:8,000,000.

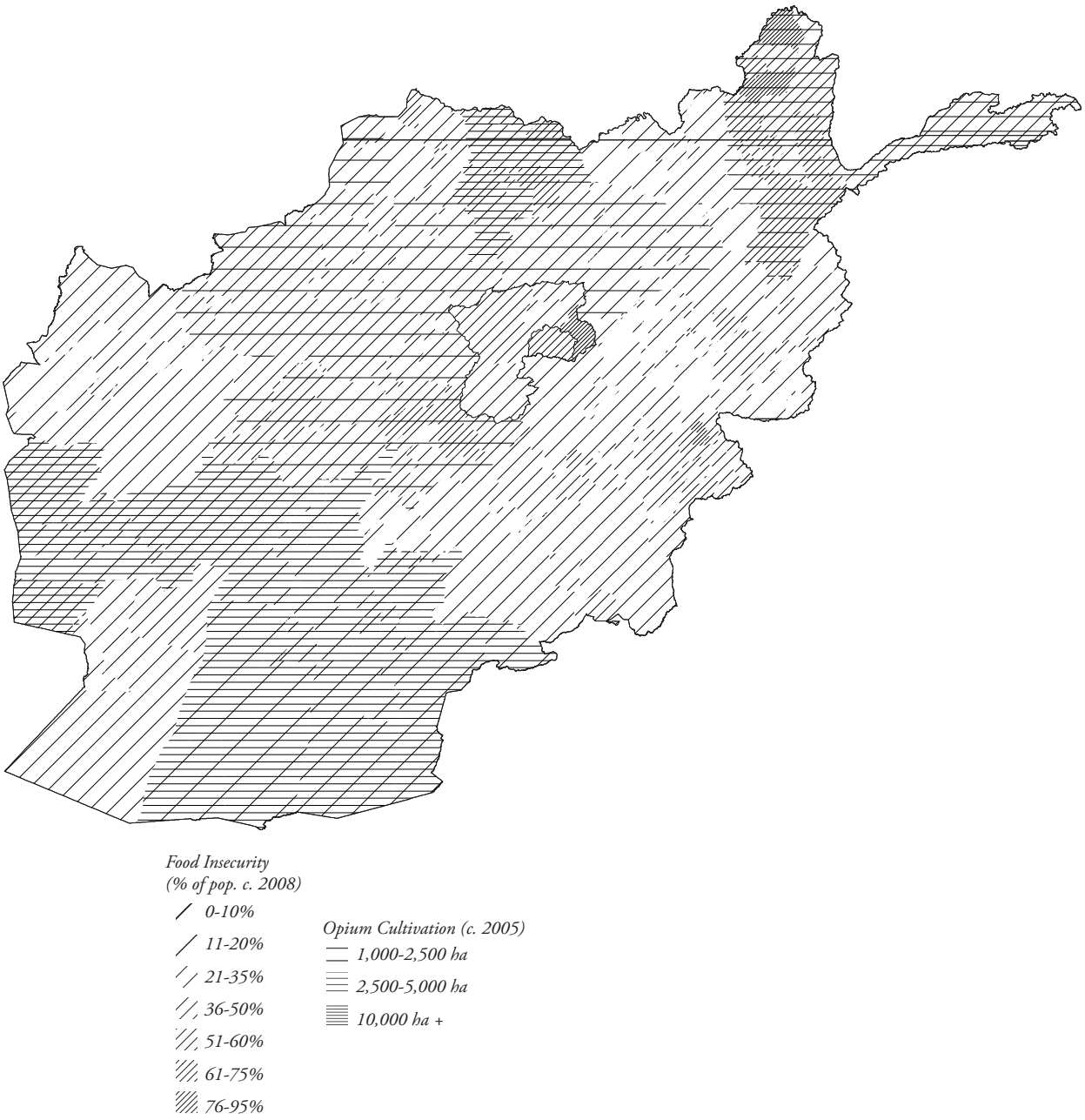


Figure 1.11
Difficult environmental conditions, exacerbated by drought have increased food insecurity and opium cultivation. 1:8,000,000.

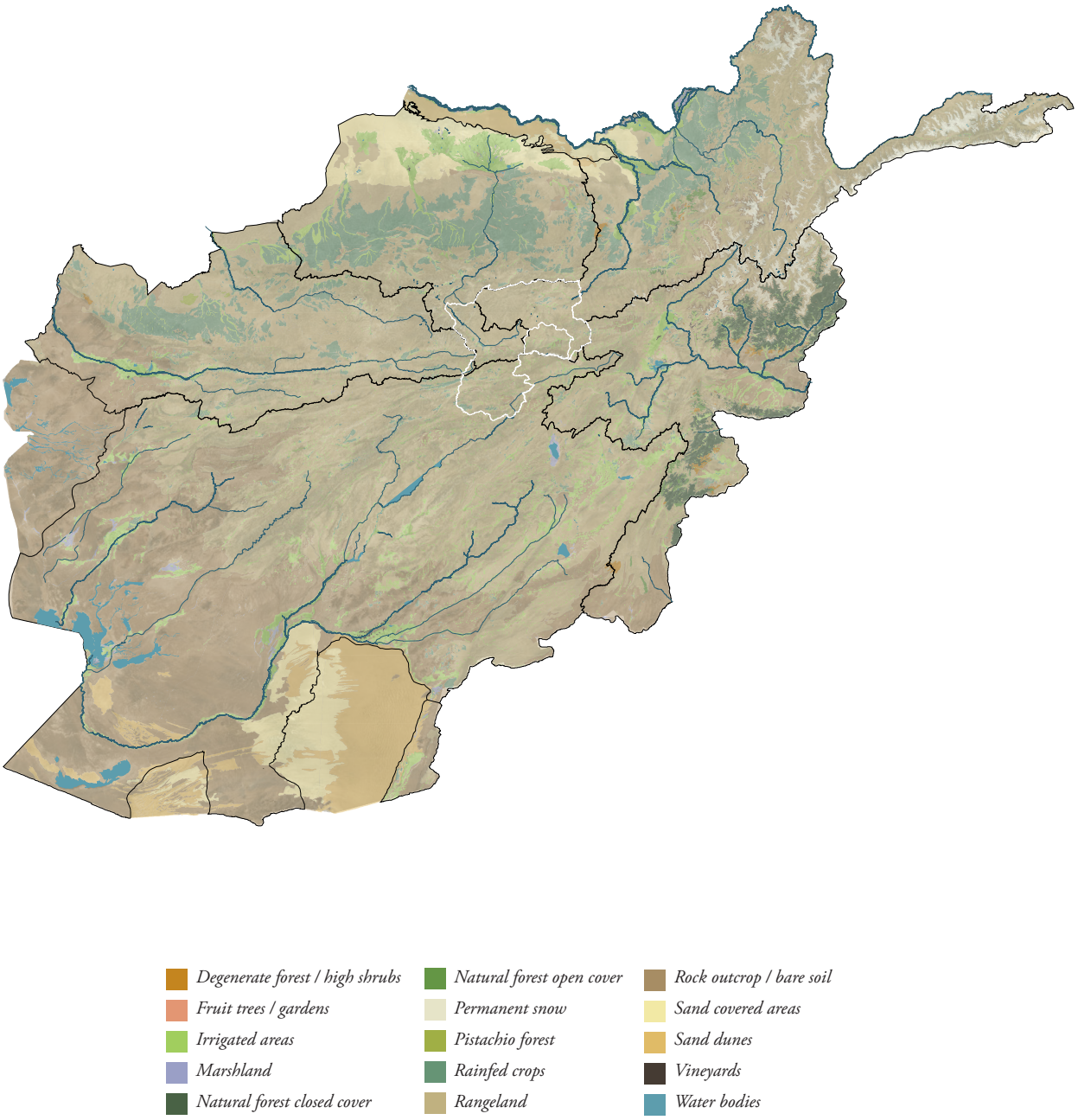


Figure 1.12
Landcover of Afghanistan is largely dominated by rangeland and areas of bare soil and rock outcrop. The rugged terrain hinders easy access to many parts of the country. 1:8,000,000.

Disproportionate allocation of aid has also aggravated ethnic divisions in the country. Minority ethnic groups such as the Tajiks, Uzbeks, and Hazaras, who have historically struggled with Pashtun social and political dominance and who have largely been excluded from national identity-building processes in the past, are now being ignored by the international community as well.[40] Concentration of economic growth in urban areas, principally Kabul, has further separated rural Afghans from the international development agenda.[41] Outside of Kabul, the state is still generally viewed as external to society, and local allegiances remain intensely focused at the community level. Particularly, rural populations are wary of shedding traditional political processes in the face of inadequate central government reach, and the constant threat of insurgency. As insecurity heightens, educated and influential Afghans are increasingly driven to more secure urban centres, further reducing rural capacity and regional-rural solidarity. Inhospitable geography (fig. 1.12) also limits the reach of central authority structures and isolates development mechanisms. This is incredibly problematic when 73 percent of Afghanistan's 32.5 million population resides in rural areas (fig. 1.13). Motives of the liberal peacebuilding project have thus primarily served to exacerbate the fragility of the nation: civil institutions are absent from the clear majority of Afghan people's everyday lives, and Afghanistan is today a rentier state where 97 percent of the country's gross domestic product comes from international donor-related activity (fig. 1.14).[42]

40 Thiessen, *Local Ownership of Peacebuilding in Afghanistan,* 53. Historic exclusion of minority groups has culminated in significant ethnic violence. Ignorance of ethnic, cultural and social realities by the international community continues to prevent sustainable national solidarity.

41 Goodhand and Sedra, *Who Owns the Peace?* s94.

42 Dodge, *Intervention and Dreams of Exogenous Statebuilding,* 1208.

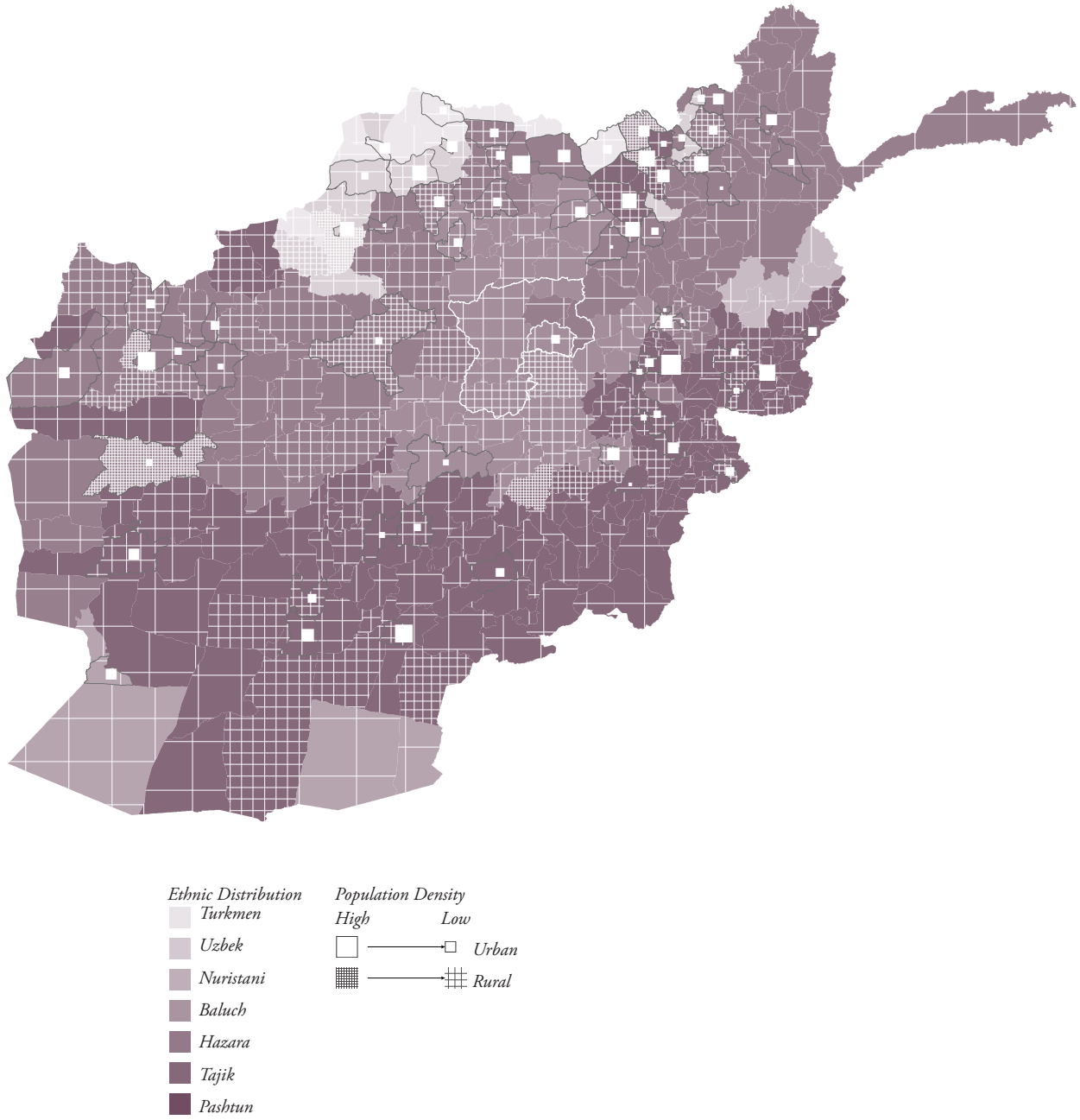
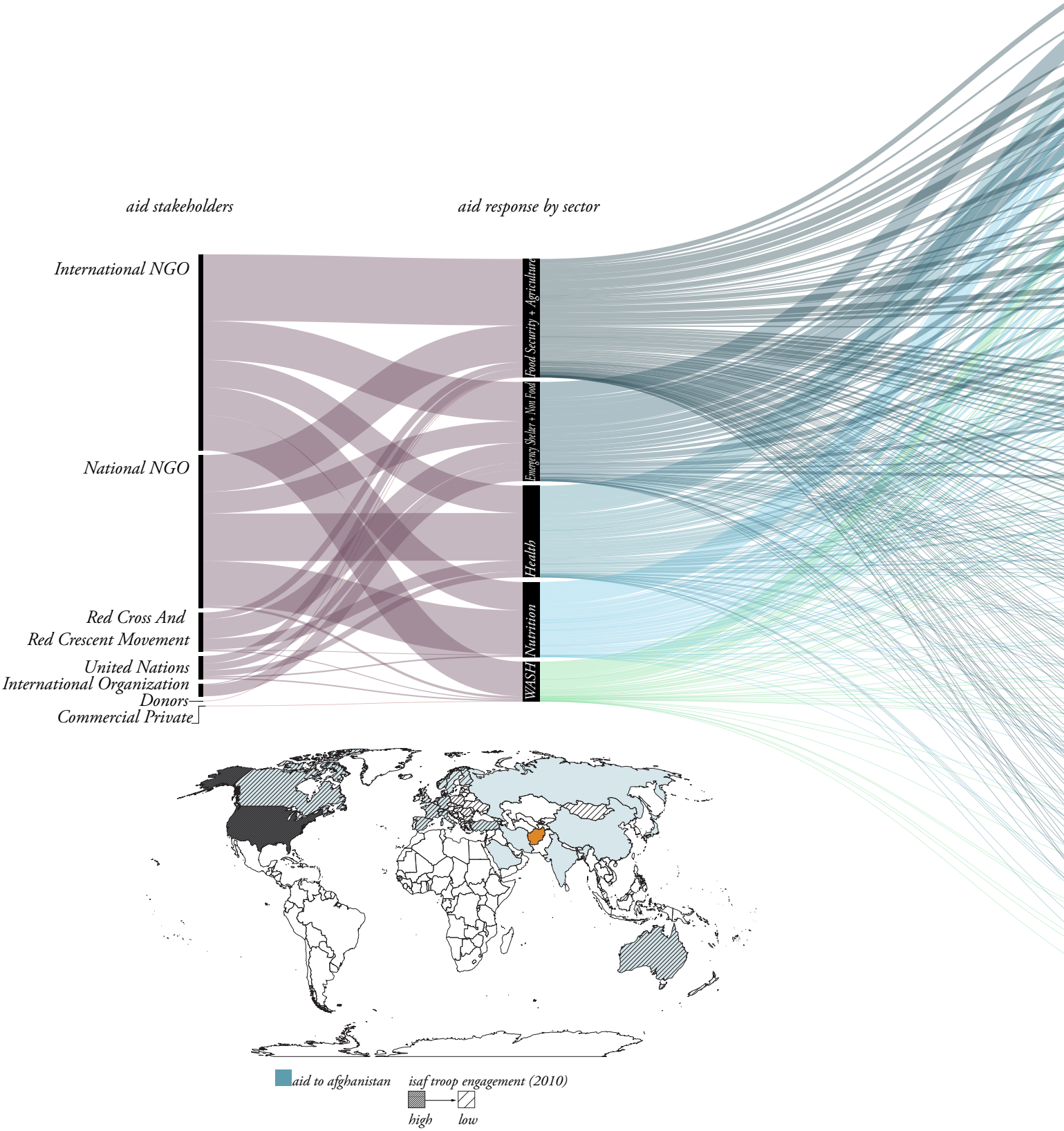


Figure 1.13
Ethnic distribution (c. 2009) and population density (c. 2015) in Afghanistan. 1:8,000,000.


aid stakeholders
aid response by sector
International NGO
National NGO
Red Cross And
Red Crescent Movement
United Nations
International Organization
Donors
Commercial Private
Food Security + Agriculture
Emergency Shelter + Non Food
Health
Nutrition
WASH
aid to afghanistan
isaf troop engagement (2010)
high
low

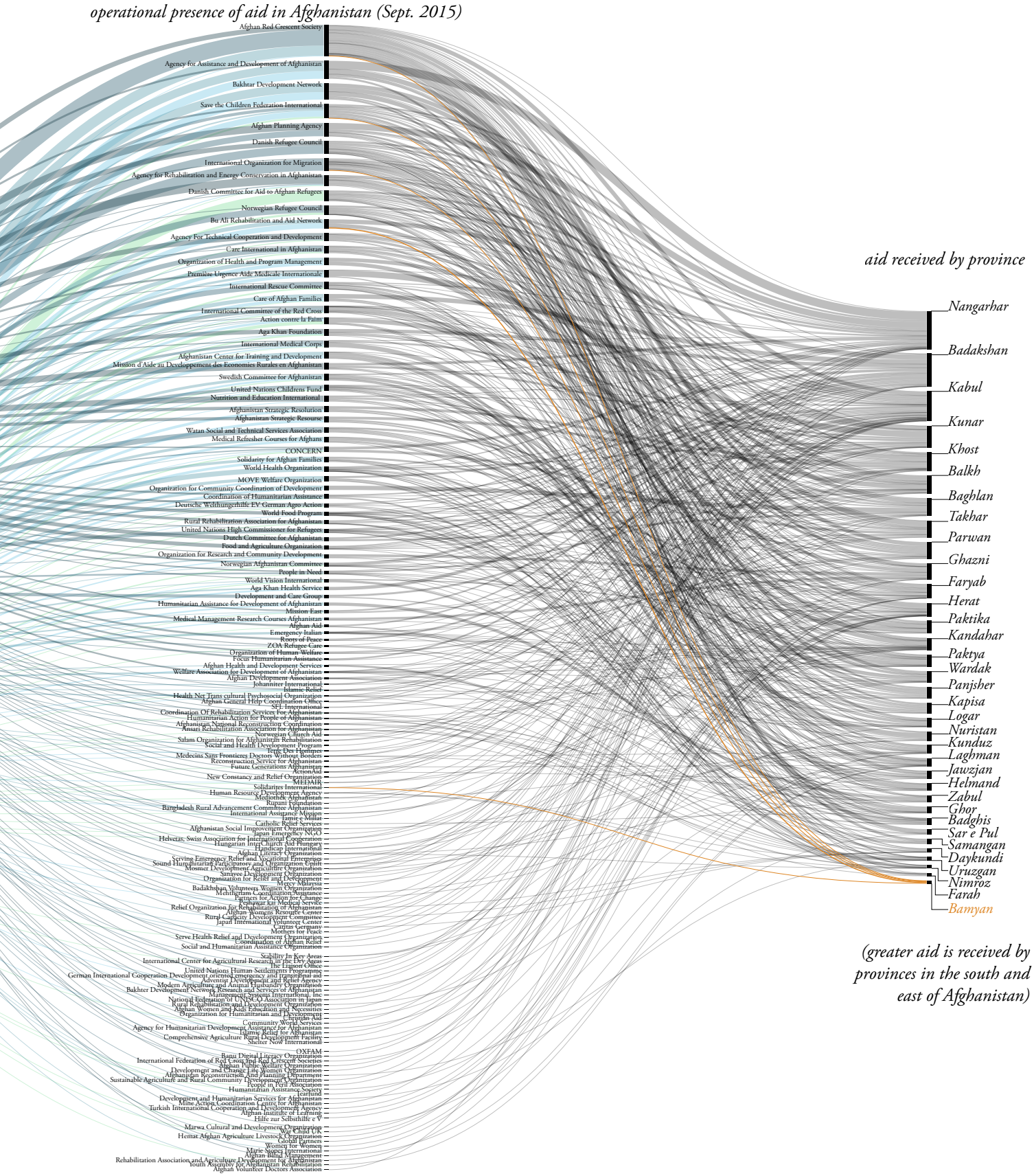


Figure 1.14
Aid in Afghanistan; organisations with operational presence c. September 2015.

Economic power, wielded by the donor community, has additionally distorted local economies and structurally increased local dependency on international aid.[43] State institutions set up by the joint security and peacebuilding initiative are undermined by the aid system: "the thousands of small projects designed to aid a particular school, village, or district, end up recruiting the very teachers, administrators, and doctors they are designed to support, to work instead as secretaries and drivers for international staff," especially as these positions are considerably more lucrative than working for state institutions.[44] Further, larger development projects such as road construction are almost entirely carried out by foreign rather than local companies, and any investments are therefore returned to donor countries rather than injected into local Afghan economies.[45] When coupled with poor financial transparency practices, aid agencies are locally characterised as "cows that drink their own milk," indicative of the corruption clearly visible to local communities.[46] Clare Lockhart, advisor to the United Nations in Afghanistan from 2001 to 2005, describes one example:

> In the summer of 2002, a remote village in Bamyan province was designated to receive $150 million to rebuild houses. The money was first received by an agency in Geneva who took twenty percent, and subcontracted the work to another agency in Washington, D.C. That agency also kept twenty percent and again passed on the work to another organisation which kept another twenty percent; and this happened again when the money arrived in Kabul. The remaining money was sufficient only for a consignment of wooden beams bought from neighbouring Iran, and shipped to Bamyan by a transport company owned by a provincial governor at five times the regular cost. When at last, the beams arrived in the village, they turned out to be too large and heavy for the mud walls, so they were chopped up and used for firewood.[47]

43 Thiessen, *Local Ownership of Peacebuilding in Afghanistan,* 82.

44 Ghani and Lockhart, *Fixing Failed States,* 98. The average monthly salary of an Afghan national working for the government is typically three to ten times less than an Afghan national doing the same work for the United Nations or an international NGO. Moreover, salaried jobs with an NGO or the United Nations can support entire families.

45 Christina Lenart, "Interview: Planned Uncertainty," in *Venturing Permanence: The ETH House of Science in Bamiyan*, ed. Ivica Brnic et al. (Zurich: gta Verlag, 2012), 25.

46 Goodhand and Sedra, *Who Owns the Peace?* s94.

47 Claire Lockhart, "The Failed State We're In," *Prospect Magazine* (2008).



Figure 1.15
The 'donor landscape' in Afghanistan.

Continued failure to deliver or only partially deliver on promises has compromised local perception of aid and peacebuilding in Afghanistan. The method of implementation has further undercut the espoused commitment to local ownership. As the Kabuli saying goes, "first there was communism, then Talibanism, and now there is NGOism."[48] This is visible throughout the Afghan landscape where "hundreds or even thousands of signs feature the logos of donor countries and organisations, forever reminding the inhabitants of their perpetual dependence," (fig. 1.15).[49] Additionally, with the rise in insecurity, the foreign community is retaining greater levels of ownership, acting in isolation and therein largely unilaterally with limited consultation from local Afghans.[50] In many instances, policies are entirely written by foreigners but given an "Afghan face," when presented to the public.[51]

Gender Dynamics

Distance between the 'local' and the 'international' severely compromises peacebuilding initiatives in Afghanistan. This is most evident in the discourse surrounding Afghan women. Since 2001, the rhetoric of women's rights has justified the international military campaign in Afghanistan, invoking specifically the poor status of women during the Taliban regime as a humanitarian crisis.[52] Notably, the events of 9/11 renewed interest in Steve McCurry's 'Afghan Girl,' the 1984 photograph of Sharbat Gula (fig. 1.16), to popularise the plight of Afghan women in the official Western imagination; "the portrait has functioned as the First World's Third World 'Mona Lisa,' – an exotic 'other' onto whom the discourse of international human rights has been placed."[53] Afghan society is assumed to be dysfunctional, and the Islamic world is made the enemy of development. Aid in Afghanistan has

48 Polman, *The Crisis Caravan*, 148.

49 Ghani and Lockhart, *Fixing Failed States*, 99.

50 Thiessen, *Local Ownership of Peacebuilding in Afghanistan*, 74. Deteriorating security in the country has created exclusive international 'bubbles' increasing the social distance between local communities and foreign workers.

51 Ibid., 84.

52 Rosemarie Skaine, *Women of Afghanistan in the Post-Taliban Era: How Lives Have Changed and Where They Stand Today* (North Carolina: McFarland & Company Inc, 2008), 46. International outrage of women's rights only took place during the Taliban period. Prior to this, women in Afghanistan were largely ignored, despite the suffering they had endured since the 19th century.

53 Wendy S. Hesford and Wendy Kozol, *Just Advocacy? Women's Human Rights, Transnational Feminisms, and the Politics of Representation* (New Brunswick: Rutgers University Press, 2005), 1.



Figure 1.16
Steve McCurry's "Afghan Girl," featured on the June 1985 cover of National Geographic Magazine.

correspondingly been feminised, and foreign notions of gender have been projected into Afghan society, frequently prioritising opportunities for women and ignoring men. Mariyam, an Afghan woman interviewed in 2005 narrates:

> Today, Afghan men are not given chances…. If there were opportunities for men to work, and for men and women to work together, things would change. But I do not know what opportunities men have…. Women are the center of interest for everyone…. Everyday in this organisation some people come, some journalists come, and they want us to tell them that our lives are better…that we are happy. They think we are stupid. And when they go away, we laugh because we have nothing else we can do. The world is watching, and this is what they want to see."[54]

International presence defines women's rights and imposes a gender construct that is foreign to Afghan culture. Thus, aid interventions fail to address root causes of women's subordination as the mainstream liberal peace approach is not based on the daily realities of women's lives.[55] Unaware of the contemporary dynamics of Afghan society: "it is neither possible nor appropriate to refer only to 'Afghan women' since their plight is usually inextricably linked with that of their families."[56] In so doing, Afghan men are excluded from the development agenda, and gender is perceived not as a desire for equality, but rather as men's subordination to women, which further reinforces binary divisions between men and women.[57]

This stems from the international community's failure to recognise gender dynamics and the importance of the family structure in the context of

54 Lina Abirafeh, "Afghanistan Gozargah: Discourses on Gender-Focused Aid in the Aftermath of Conflict," (PhD diss., London School of Economics and Political Science, 2008), 289. At the time of the interview, Mariyam was a 35-year-old woman employed by a foreign NGO. Her income supported her two young children and husband who, unable to find opportunity for work, had turned to drugs.

55 Ibid., 105. Rather than their equitable inclusion in the peace process, women are made the target of peacebuilding activities in Afghanistan, used to justify foreign intervention in the country.

56 Ibid., 32.

57 Lina Abirafeh, "An Opportunity Lost? Engaging Men in Gendered Interventions: Voices from Afghanistan," *Journal of Peacebuilding and Development* 3 (2007), 83. Largely, the issue is not that men are opposed to changes. Rather, that no one has asked them what they want. Women, too, would like to see equal opportunities for male employment: "we don't want men to be unemployed and without dignity. Their dignity will also bring us more freedom."

both Islam and Afghan society, which has, in turn, heightened local tensions.[58] Specifically, "the neglect of men in aid interventions has contributed to a resurgence of violence both at the household level against women, and at the national level against the international community," breaking any sense of familial solidarity.[59] Ignorance of cultural norms reduces both men and women's sense of identity, leading to their marginalisation and disenfranchisement.[60] Moreover, emphasis on women's engagement in the workforce is challenged by the country's economic and infrastructural vulnerability: women who work outside the home must balance this with their domestic work of cooking and cleaning which is made much more laborious by lack of access to electricity and running water within the home.[61] Although aid interventions have made women considerably more visible in the social, economic, and political environments of parts of Afghanistan, the disregard of tradition and social custom by aid agencies has undermined local, community-based capacity. Uneven and unequal development thus actively prevents any sustainable attainment of long-term 'positive' peace for the country.

The case of Afghanistan brings to light the corrosive implications of the liberal peacebuilding project. Failing to create a local middle-class, foster sentiments of national unity, or put into place effective local democratic leaders, "peacebuilding [in Afghanistan] remains an extremely internationalised affair," that has only further divided the Afghan population.[62] Aid and development interventions, in their separation from local need and ignorance of societal custom, further corroborate the failures of foreign presence in Afghanistan. Desires for global security, woven into peacebuilding and development processes, means that liberation in Afghanistan has effectively become domination.[63] Any semblance of peace achieved is neither durable nor sustainable; tendency towards state building, quick-impact projects in favour of international priorities, and poor international aid mechanisms, have resulted in a distinct lack of respect for indigenous practices and identity, and the people of Afghanistan are increasingly disengaged and disenchanted.

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58 Ibid., 85. Loss of community is directly equated with loss of self; the breaking of the family structure collapses important senses of community cohesion and solidarity.

59 Ibid., 82.

60 Ibid., 83. The importance of the family as an institution of Afghan society means that most women in Afghanistan do not wish to be isolated from their families and lose their family integrity.

61 Skaine, *Women of Afghanistan in the Post-Taliban Era*, 93.

62 Goodhand and Sedra, *Who Owns the Peace?* s83

63 Richmond, *Failed Statebuilding,* 98





Part Two

Dominated by extreme mountain ranges and narrow valleys, settlements in the Central Highlands of Afghanistan are sparse, concentrated around thin flowing bodies of water supporting meager high-alpine agriculture economies (fig. 2.02). This rough, rugged landscape comprises most of landlocked Afghanistan's topography and is the primary water source for many of the country's rivers.[1] At its centre, cradled between the snow-capped Hindu Kush and Koh-e Baba mountain ranges, Bamyan valley opens wide. Aptly named 'the place of shining light,' Bamyan in summer is luminous and lush. Carpeted in small 0.2 hectare plots of agricultural land, *jerib*, varying hues of green denote fields of wheat, barley, beans, and potatoes.[2] Strategically positioned at a nexus of routes along the Silk Road,[3] Bamyan has historically been an agricultural and commercial centre, owing its existence to comparatively easy

1 UNEP, *Factsheet Bamyan: Building Community-Based Resilience to Climate Change and Natural Disasters.* (Kabul: United Nations Environment Programme, 2016). Over 80% of Afghanistan's water resources find their origin in the mountain ranges of the Central Highlands; their high altitudes function as natural water storage in the form of snow, supporting perennial water flow for the country's five major rivers.

2 Ministry of Rural Rehabilitation and Development, "Provincial Profile for: Bamyan," in *Regional Rural Economic Regeneration Strategies*. http://afghanag.ucdavis.edu/country-info/Province-agriculture-profiles/bamyan. Wheat, barley, beans, and potatoes are the most common crops grown in Bamyan. Other vegetable and fodder crops, such as alfalfa, are also grown. Prevalence of potato fields throughout the province, and their success since the 1970s as a cash crop in and outside of Afghanistan, has made them the 'white gold' of Bamyan.

3 The Silk Road was an ancient network of trade routes central to cultural interaction, as well as political and economic relations between civilisations of China, the Indian subcontinent, Persia, Europe, Africa, and Arabia. In Afghanistan, the Silk Road went from Badakhshan to Kunduz, then to Bamyan, where it branched either to Ghazni and the Khost Pass, or moved through Kapisa, Kabul, Laghman, and the Khyber Pass. An important commercial centre, Bamyan held a strategic position on the Silk Road between India and Inner Asia that provided economic stability lasting through Islamisation, until the Mongol Invasion of 1221, after which human occupation in Bamyan became predominantly agricultural.

Figure 2.01
[Previous] Bamyan valley looking west, niche of *Salsol* in the background.

access to water resources that sustain both human life, and support traditional agro-pastoral livelihoods.

Bamyan is most well-known for its Buddhist complex, circa 6th century, which gives Afghanistan an identity outside of the contemporary narrative of conflict and violence.[4] Thousands of caves are carved into the valley's northern sandstone cliff-face surrounding the remnant niches of three colossal Buddha statues: *Salsol*, the male, once stood fifty-five metres tall (fig. 2.03), *Shahmama*, the female, at thirty-eight metres, and seated between them, a third, smaller Buddha, considered to be their child. The Buddha cliffs are a strong, monumental datum; even empty, the niches have a commandeering presence, generating a visual and physical orientation in the valley:

> Around a bend of road, the valley opens wide amid shining fields of wheat, and past copses of willow and poplar, the cliff-face city reveals itself. There are hundreds of caves along the mile-long façade, a latticework of temples, galleries, and monastic residences eroded to resemble swiss cheese. At the centre of the complex, set half a mile apart, are the huge empty alcoves, cast in deep shadow by the dazzling mountain light, like arched doorways into the heart of the mountains.[5]

Throughout the 19th and 20th centuries, the complex generated significant tourist traffic and was a site of great archaeological interest for European communities. Taliban destruction of the Buddhas (fig. 2.04) in March 2001 accordingly fueled substantial foreign aid and investment to Bamyan. Even though the region poses minimal threat to the agenda for global security (located as it is in the centre of the country), in the international community's interests of conserving what remains of the monuments, Bamyan continues to be privy to considerable development activity. Herein, the failures of Afghanistan's peacebuilding project are localised: Bamyan valley's 'World Heritage' designation (2003) has prescribed a development policy that

4 Deborah Klimburg-Salter, "The Kingdom of Bamiyan: Buddhist Art and Culture of the Hindu Kush" (PhD diss., Istituto Universitario Orientale, 1989), 24. Bamyan was first established as an urban Buddhist centre under the Kushan empire in the 2nd and 3rd centuries. The original Buddhist complex, completed in the 6th century, consisted of six Buddhas carved in deep relief, surrounded by small rock-cut chapels, linked together by precarious stone and wood staircases and walkways running along the cliff-face. During the Buddhist empire, the three larger Buddha statues were the focus of important public and private ritual. Following Islamisation, the complex was regarded as a marvel of the infinitely creative power of God working through the human hand.

5 Matthew Power, "The Lost Buddhas of Bamiyan," Harper's Magazine 310, no. 1858 (2005), 72.



Figure 2.02
First views, flying over Afghanistan.

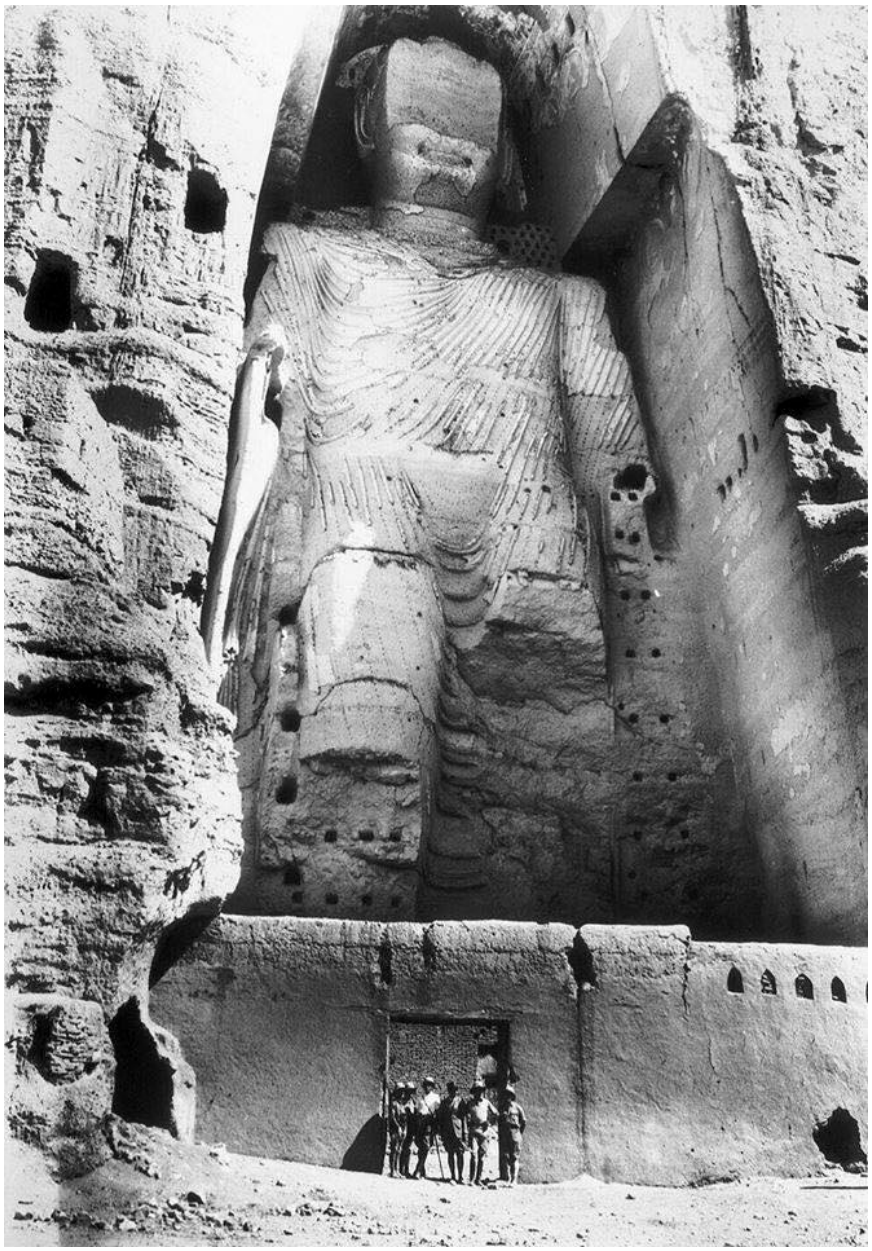


Figure 2.03
Salsol prior to destruction c. 1960.



Figure 2.04
Salsol post-destruction with protective scaffolding, 2016.

values heritage conservation over local socio-economic livelihoods. Notably, inadequate and inappropriate development of water infrastructure, especially as Bamyan transitions to an important urban centre in the province, threatens the valley's limited water resources, provoking traditional rural lifestyles, and beginning to question water allocations for food, economy, and people. Moreover, insensitivity to, and ignorance of, existing cultural and spatial relations in the proposed development scheme exacerbates local tensions and jeopardises community cohesion.

This is detailed in the subsequent study of Bamyan. In three parts, Peace, Water, Women, the narrative builds a comprehensive site analysis identifying the implications of peacebuilding in Bamyan, specifically with regard to the consequences, ecological and cultural, for water resources in the valley. 'Peace' describes peacebuilding in Bamyan, provides context as to the valley's transition from rural to urban and the ensuing growth of Bamyan bazaar, and herein draws attention to the contrast between international priorities and local needs, made manifest through lack of consideration of water resource management in the 'Bamiyan Cultural Master Plan.' This sets the premise for 'Water' which outlines the hydrological conditions of the valley and local water supplies, as well as existing and new developments for water infrastructure. Where 'Water' thus points out the ecological consequences of liberal peacebuilding in Bamyan, 'Women' highlights the cultural consequences. By understanding the role of water in Islam, as well as traditional settlement patterns, and local tensions in Bamyan, 'Women' critiques the proposed master plan for its imposition of foreign notions of urban planning which are in complete opposition to the concept of the Afghan family space. Cumulatively, Part Two localises the failures of Afghanistan's peacebuilding project in Bamyan, and distills existing conditions and essential mechanisms that offer opportunity for sustainable and enduring peace.



Figure 2.05
From the eye of *Shahmama*, the female Buddha, looking south to Bamyan valley, and in the distance, the Koh-e Baba mountains.

Peace

The New Zealand Provincial Reconstruction Team (PRT) established their sizeable presence in Bamyan city in 2003. The valley's isolation in the Central Highlands obliged the PRT to plan for self-sufficiency, made necessary also because, unlike other areas of foreign presence in Afghanistan, the PRT in Bamyan could not associate with the Afghan National Army or ISAF forces due to these groups' prior misbehaviour and ethnic animosities towards the largely Hazara population.[6] In further contradiction to typical liberal peacebuilding strategy, the New Zealand PRT prioritised engagement with the host authorities and communities, working alongside the local population and minimising control of development actions.[7] This engendered local trust, which in turn assisted democratisation processes. A decade of PRT activity in Bamyan allowed for numerous international organisations to provide additional aid to Bamyan's impoverished population such that, as of 2012, Bamyan was the "second largest recipient of development funds on a per

6 Hoadley, *The New Zealand PRT Experience in Bamyan Province*, 143. Bamyan Province hosts the largest settlement of Hazara people in Afghanistan. Hazaras constitute the third largest ethnic group in Afghanistan and are descendants of Mongols, which has stoked considerable prejudice against them. The Hazara phenotype (broad face, narrow eyes, flat nose, minimal facial hair) emerged to signify racial and socio-economic inferiority in the Afghan context. Moreover, they are a minority Shia population in a Sunni Muslim dominated country and consequently have experienced persecution throughout history. During various Afghan governments (i.e. King Amanullah Khan; Mohammed Zahir Shah), Hazara people were deprived of their basic human rights, and were subject to ethnic and linguistic discrimination. Most recently, the Taliban and Al-Qaeda committed massacres against them, scorching Bamyan city to the ground in 2001. Hazara people are therefore considerably more receptive to the presence and actions of foreign intervention.

7 Ibid., 148.

capita basis."[8] Correspondingly, Bamyan University[9] and Bamyan hospital[10] were both reopened in 2004, and have expanded since to become important institutions in the city.

Nevertheless, the same factors that continue to limit success of the peacebuilding agenda in the country at large have created distinct problems for sustainable long-term growth of Bamyan. Many development projects continue to be quick-impact, following outdated, standardised, hard-infrastructure solutions with adverse social and environmental effects. They are also typically tied to governance objectives that will diminish hostilities toward the central Afghan government based in Kabul. The international agenda, moreover, prioritises preservation of the archaeological remains of Bamyan valley; since their destruction, the Buddhas of Bamyan have become a central focus of global discourse around heritage and conflict. Yet the implications of this for sustainable livelihood of local populations is largely neglected.

Thus, even fourteen years after extensive foreign engagement, the people of Bamyan are still incredibly vulnerable, particularly because of insecurity in their natural resource base. Desertification of the land, caused by destruction of water infrastructure and prolonged drought during the many decades of conflict in the 20th century, remains an important problem for a population that has historically engaged in a severely climatically-limited agro-pastoral livelihood. Climate change events, already visible in the Central Highlands landscape, only serve to heighten these insecurities. Especially for marginalised and disadvantaged peoples, environmental degradation and scarcity means a greater chance for becoming further impoverished and increased vulnerability.[11]

8 Ibid., 145.

9 Situated near the Buddha cliffs, the original campus of Bamyan University was founded in 1996 with the support of the Hazara political party, Hezb-e Wahdat. During Taliban control of the city, the University was used as a military fort, and was destroyed by U.S. airstrikes in 2001. Under the American and New Zealand PRT, the university was reopened in 2004. A new campus with additional faculties was built more recently on the opposite side of the valley. Today, Bamyan University consists of four faculties (Education, Agriculture, Geosciences, and Social Sciences and Economics) with over 3,700 male and 900 female students enrolled from across the country.

10 The Aga Khan Health Services (AKHS) began operating Bamyan Hospital in 2004. A new, state-of-the-art facility was opened in April 2017 west of Bamyan city centre to expand service capacity to residents of neighbouring provinces as well.

11 Richard Matthew and Anne Hammill, "Peacebuilding and Adaptation to Climate Change," in *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding*, ed. David Jensen and Steve Lonergan (New York: Earthscan, 2012), 268.

Rural-Urban Transition

Pressures on the natural resource base, principally availability of land and access to water, are intensified by a growing returning population who seek the unparalleled stability and security offered by such substantial international presence. Between 2003 and 2015, the population of Bamyan increased nine-fold (fig. 2.06, fig. 2.07).[12] Necessarily, Bamyan is rapidly transitioning from rural to urban, a change supported by the growing population who aspire to Western visions of urbanity and modernity. Desire to modernise is additionally directly associated with the international development approach rooted in liberal and democratic state parameters, where foreign-imposed development, propagated as a linear series of changes, is intimately linked to the modern industrialisation process.[13] The people of Bamyan have thus been highly supportive of the country's transition to democracy, and are keen to embrace modern development opportunities notwithstanding the limited longevity of foreign development projects.

In part, the desire to urbanise stems from local association of rural life with the traditionalist ideology of the Taliban whose urban planning practice of doing nothing was an active policy against Western secularism.[14] Especially for the more progressive Hazara people, who have traditionally valued education and links to the modern world, urbanity is welcomed. With limited arable land in the city, local populations are choosing to invest in what are considered more urban activities such as owning a shop in Bamyan bazaar, or working for civil society institutions, acting within their desire to "engage with international development processes and modernisation," over rural activity.[15] Meager income from intermittent work at the bazaar provides greater short-term profit gains than traditional livelihoods of subsistence agriculture and animal husbandry.

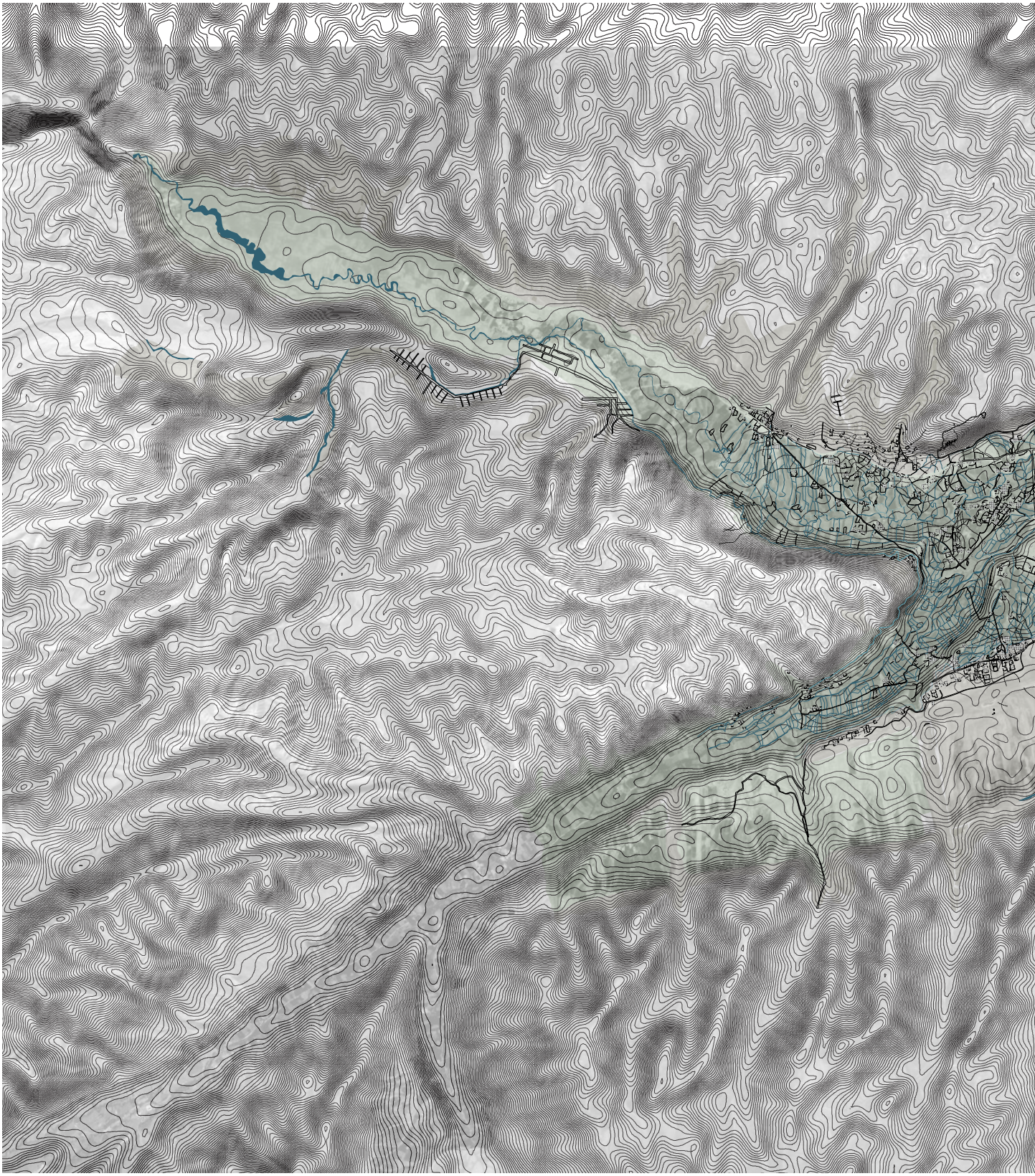
Urban investments, moreover, appear in the local conscience to be less fragile, observing that people who owned shops prior to the civil war were more quickly able to make a living after the conflict because they were not

12 UN-Habitat, *The State of Afghan Cities,* v.1 (Kabul: UN-Habitat, 2015), 30. By 2012, per UNHCR data, more than 8000 refugees had returned to Bamyan district.

13 UNESCO, *The Cultural Dimension of Development: Towards a Practical Approach* (Paris: UNESCO, 1995), 11.

14 Ernst Gruber and Michael Klein, "Kabul – An Archaeology of Modernization," in *Venturing Permanence: The ETH House of Science in Bamiyan*, ed. Ivica Brnic et al. (Zurich: gta Verlag, 2012), 121.

15 Thiessen, *Local Ownership of Peacebuilding in Afghanistan*, 32.



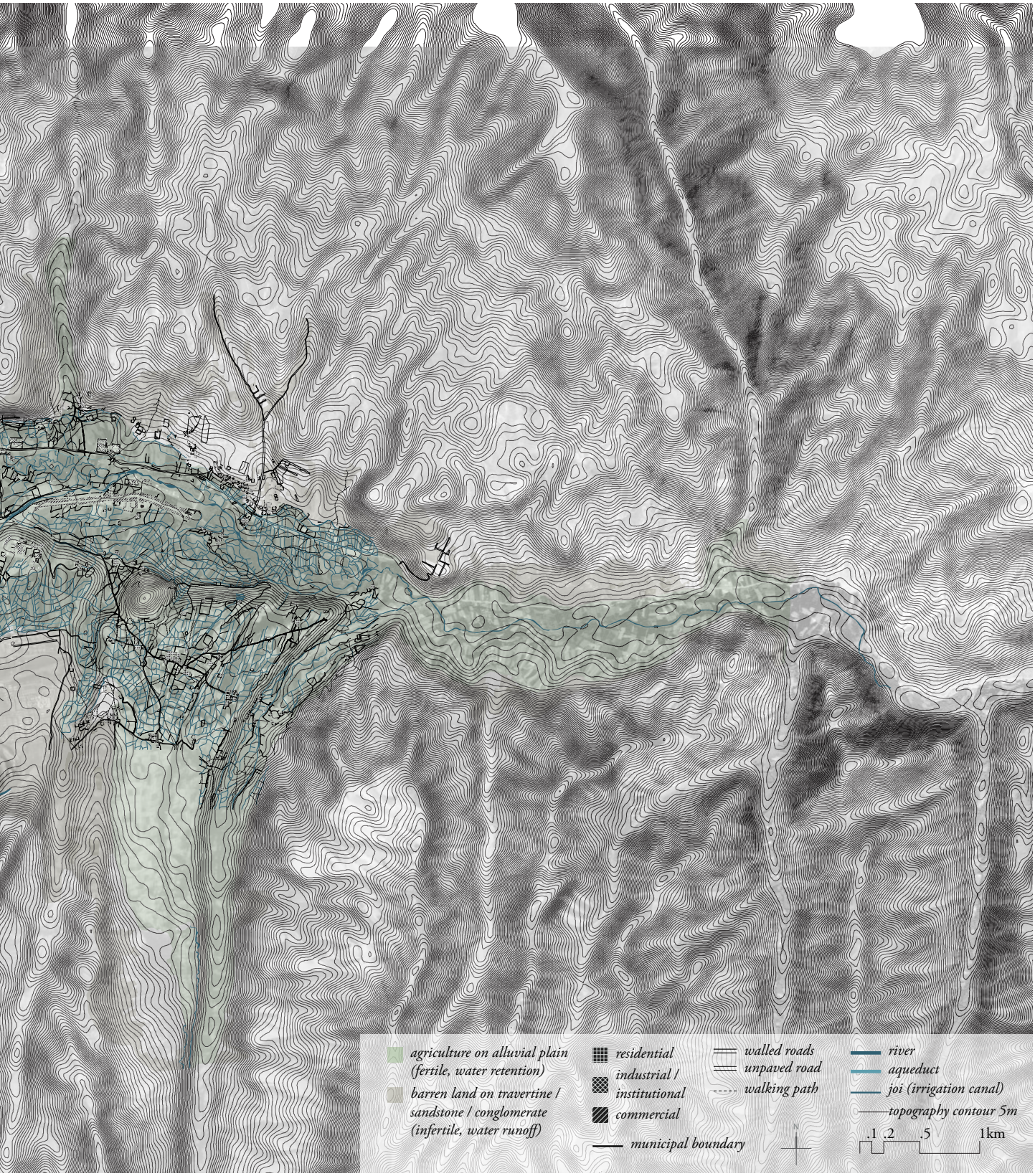
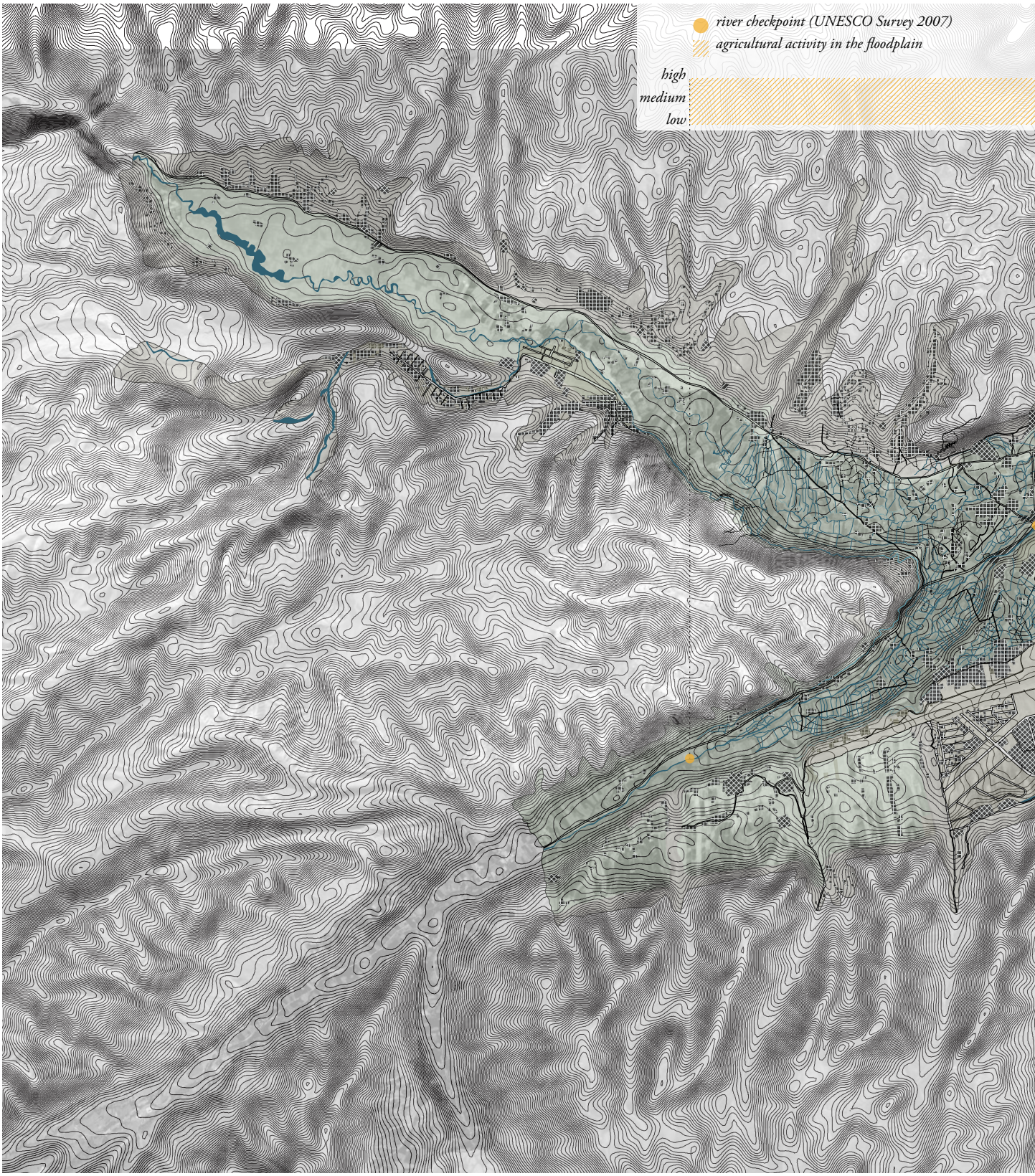


Figure 2.06
Bamyan valley, pre-urbanisation.


river checkpoint (UNESCO Survey 2007)
agricultural activity in the floodplain
high
medium
low

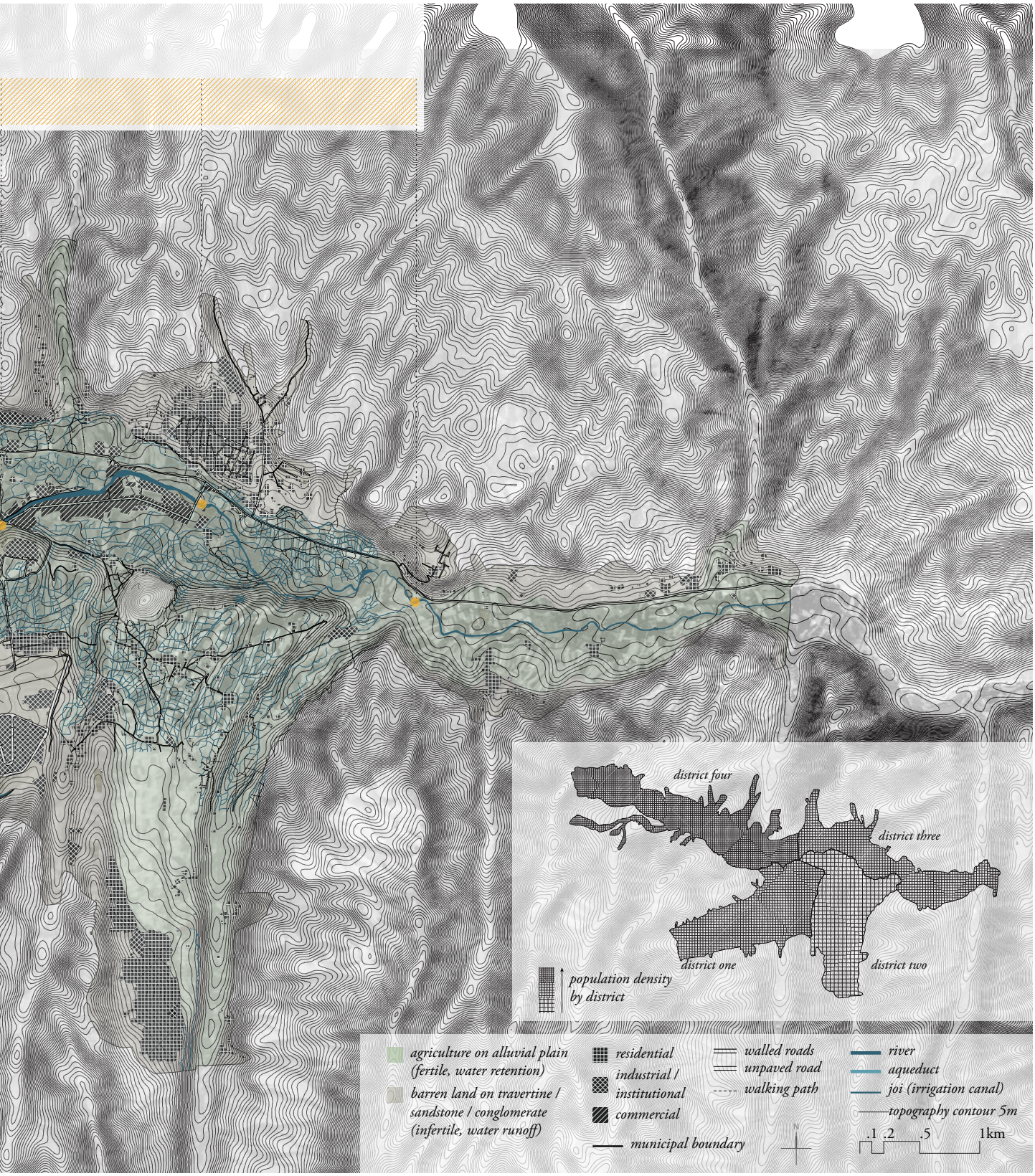


Figure 2.07
Urban development in Bamyan c. 2015.

reliant on a diminished natural resource base.[16] Particularly when newcomers, comprised almost completely of internally displaced peoples (IDPs), have neither land to farm nor means to build a livelihood, income from the bazaar or employment with international agencies becomes the primary and often more lucrative means of sustenance.[17] Limited agricultural land places considerable pressure on the economy of Bamyan bazaar and increasingly, agricultural land is being appropriated into industrial, institutional, and commercial uses (fig. 2.08). As of 2015, only fifty-four percent of Bamyan's total land area was being used for agriculture; surface water occupied one percent, barren land occupied twenty-seven percent, and built-up areas encompassed the remainder.[18]

Bamyan Bazaar

Resultantly, Bamyan bazaar has become the steadily increasing heartbeat of the province (fig. 2.09, fig. 2.10). A thriving hub of activity, the bazaar is the economic centre of the province, serving the greater Bamyan district with goods sourced locally, nationally, and internationally.[19] The formal built structures of the bazaar sprawl over a kilometre from east to west along the southern edge of Bamyan River in the heart of the valley.[20] Most resemble simple cupboards, opened from the street with just enough space to accommodate the shop owner and his merchandise. Shops are no more than two storeys

16 Claire Mariani, *Linking Relief, Rehabilitation and Development Programme (LRRD) in Afghanistan: Is Building a City an Appropriate Response to Development Issues in Bamiyan?* Groupe Urgence Rehabilitation Developpement (2006), 9. These actions and thinking also reinforce local fear of Taliban return; agriculture is much more quickly destroyed, and requires significantly more time to be rehabilitated.

17 Ibid., 7. NGOs and UN Agencies represent an enormous percentage of employers; their initial presence in Bamyan demanded a local labour force of drivers, guides, interpreters, and field workers. In 2005, this was the second biggest job market in Bamyan province.

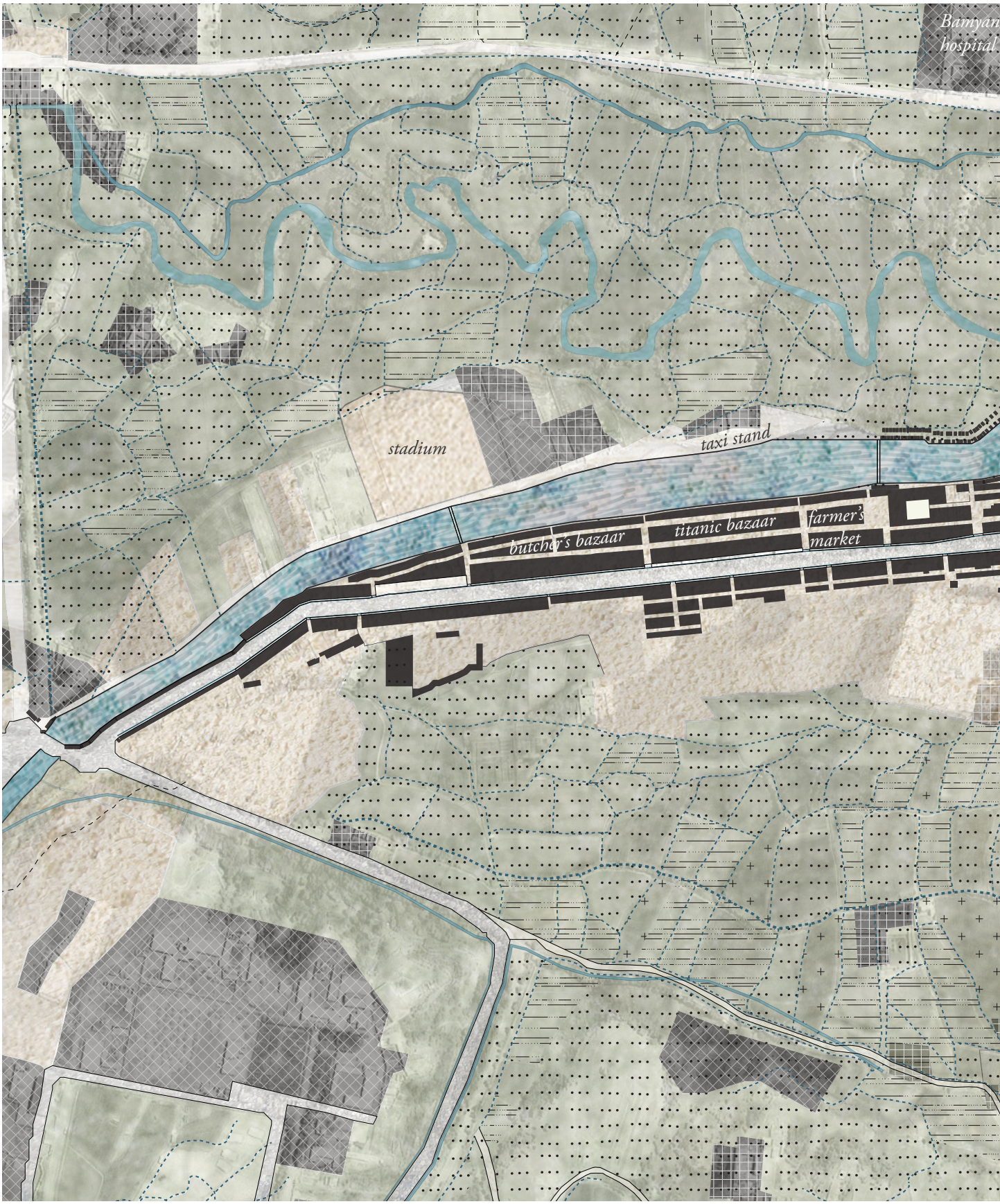
18 UN-Habitat, *The State of Afghan Cities,* v.2 (Kabul: UN-Habitat, 2015), 10.

19 Dominik Roll, "Present Urban Development in the Bamiyan Valley," in *Bamiyan Masterplan Campaign*, UNESCO et al. (Germany: RWTH Aachen University, 2005), 91. In 2005, sixty percent of shops were linked to various trade, including food and non-food items, thirty percent were craft-based, five percent were NGOs or other public agencies, and the remaining five percent was health and hospitality.

20 Adlparvar, "When Glass Breaks," 104. The historic Bamyan bazaar was located immediately in front of the Buddha niches. Preceding and during the civil war, this was the site of significant confrontation between rival ethnic factions. Dominant presence of the Hazara political party, Hezb-e Wahdat, shifted economic organisation in the valley, establishing the bazaar at its present location in the late 1990's. This also resulted in an ethnic shift from predominantly Tajik ownership to Hazara ownership of bazaar land plots.



Figure 2.08
View of Bamyan looking north towards the Hindu Kush mountains encapsulates the valley's transition from rural to urban.


Bamyan
hospital
stadium
taxi stand
butcher's bazaar
titanic bazaar
farmer's
market

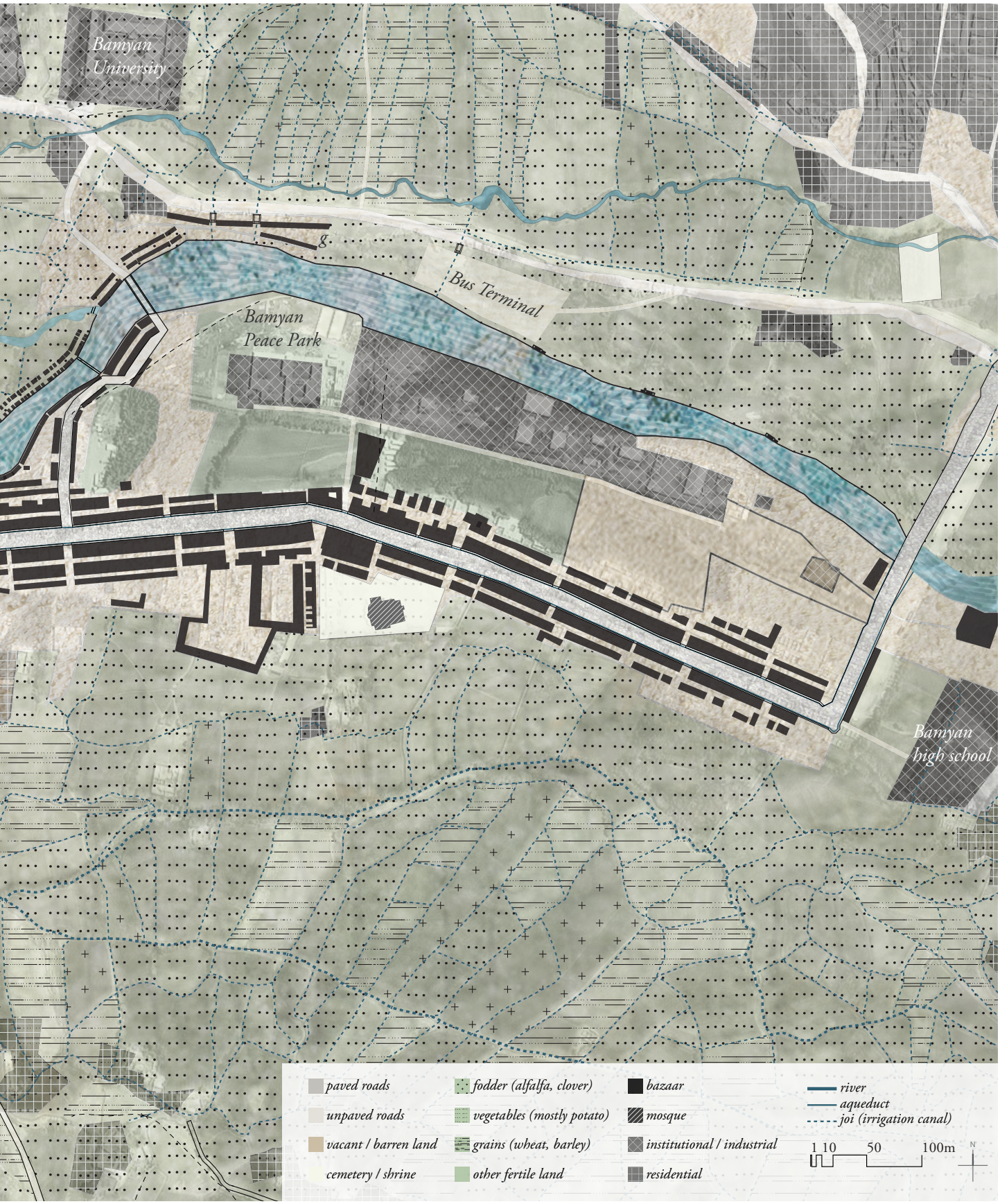


Figure 2.09
Plan of Bamyan bazaar.



west entrance to Bamyan bazaar, looking north-east.

the main street is a thoroughfare, paved wide to support vehicular traffic.



vegetable vendor at the farmer's market.



butcher's bazaar.

saray, *smaller market spaces in secondary and tertiary streets*



driving through Bamyan bazaar.



typical mud-brick and concrete two-storey buildings.



mobile vegetable cart.



in the summer, melons from Kandahar are in season, stripes of light and dark green giving luminous colour to dusty flatbeds.

bazaar stalls










'historic' facade

the imposed 'historic' facade produces a better pedestrian experience.

bicycles are becoming a common form of transportation.

gutter water additionally allows growth of trees, most commonly poplar.

on hot, dry days, shopkeepers will frequently splash gutter water onto the street, keeping dust particles close to the ground, away from open goods. air pollution from dust is a common issue in Afghanistan, becoming more prevalent with increased vehicular use.

metal awnings are fabricated in the metal-works bazaar.



merchandise spills out from shops onto the concrete-tiled pedestrian walkway.



water flowing through a trench system separates street from sidewalk.



gutters are frequently clogged with garbage. here a tap runs freely, providing a water access point in the bazaar.



entrance gates to building compounds are commonly manufactured in the metal-works bazaar.

Figure 2.10
Bamyan bazaar.

in height, restricted by development guidelines from the former provincial governor in accordance with heritage preservation priorities. Growth of the bazaar thus occurs in a horizontal direction, filtering radially outwards east-west from mud-brick and concrete buildings, to ramshackle huts and wooden carts, to shipping containers and the flatbeds of large trucks.

The main street of the bazaar is a thoroughfare, paved wide to support two lanes of vehicular traffic in either direction, further animated by mobile carts and kiosks. By road, this is the primary point of entry into Bamyan city, and the bazaar bustles with commotion of people and jostling of vehicles, a distinctly urbanising cacophony in an otherwise rural province. Concrete-tiled pedestrian walkways, two-metres in width, run the length of the main road, shaded by metal and wood arched awnings that lend a consistent 'historical' façade to the bazaar. Merchants place goods out along both sides of the walkway, their dusty wood and glass storefronts piled high with an incredible variety of merchandise. As is common throughout much of Afghanistan, walkways are separated from the street by open gutters or trenches of water, enabling growth of trees and small plants through the dusted asphalt. Frequently, men draw buckets of water from the gutter and splash them haphazardly onto the street, both to cool the street, and to keep dust and dirt on the ground. Garbage is commonly found in these gutters, often causing a backlog and overflow of wastewater onto the street.

Secondary and tertiary streets in the bazaar are scaled to the pedestrian, rows of shops grouped by type to form smaller market spaces, *saray*, such as the butcher's bazaar and farmer's market. The second storey of many of these building offer rooms for rent to male students attending Bamyan University. On the opposite side of Bamyan River, temporary stalls are set up as an informal continuation of the bazaar, framing the road north toward the old Bamyan hospital and University complexes. An arm branches off to form the metal-works bazaar, which sits next to the bus terminal, a levelly unpaved field lined with buses and small minivans that travel both within and outside the province. Where the bazaar separates from immediate adjacency to Bamyan River, land is predominantly under industrial or institutional use, private walled-off program accessible only to employees of those sectors. Aggregation of these multiple programs renders Bamyan bazaar the main public space of the valley, centring and linking various parts of the city together.

International Priorities

Aspirations towards urbanism are not well received by international organisations, however: the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) perceives the expansion of Bamyan's urban centre as a direct threat to the cultural preservation of the valley.[21] As it was the Buddhas' destruction that drew global attention to Bamyan, so too it is their archaeological safeguarding, in the name of 'World Heritage' that drives the agenda for foreign intervention in the valley. Designated with 'World Heritage' status in 2003, it is the conservation and preservation of eight sites in and around Bamyan, the 'Cultural Landscape and Archaeological Remains of the Bamiyan Valley,' that prioritise development initiatives (fig. 2.11).[22] This is evidenced in the 2005 'Bamiyan Cultural Master Plan' (BCMP) which speaks to short-term immediate action for management of cultural and archaeological areas with little regard for long-term socio-economic development. As a result, the plan identifies real gaps between community needs and choices made by authorities, catering almost exclusively to available investment capacities and overlooking the infrastructural needs of vulnerable populations.[23]

Granted UNESCO's agenda for culture as an essential component of socio-economic development varies from liberal peacebuilding's market and institution-driven development process, it nonetheless tends to ascribe local culture and heritage with its own foreign value systems.[24] Decision-making about the future of any heritage sites in Bamyan remains in the domain of the international community and the national Afghan government, with very little transparency to local peoples about the preservation work. [25] This translates to the people of Bamyan being excluded from development initiatives, and without right of access to their own cultural heritage, further perpetuating distance between local and international. Moreover, where local people assign greater value to intangible forms of cultural heritage such

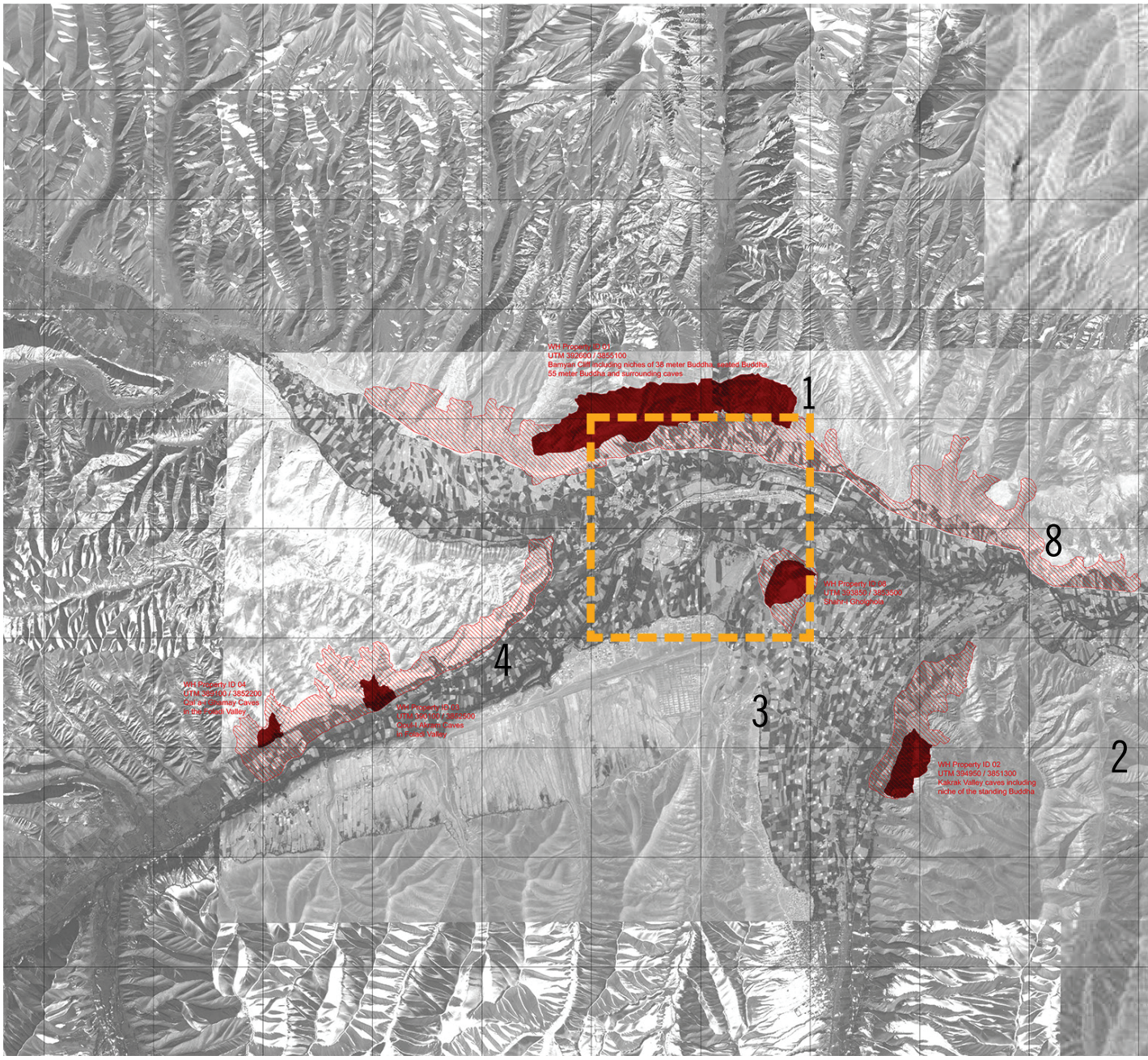
21 Mariani, *Linking Relief, Rehabilitation and Development*, 39.

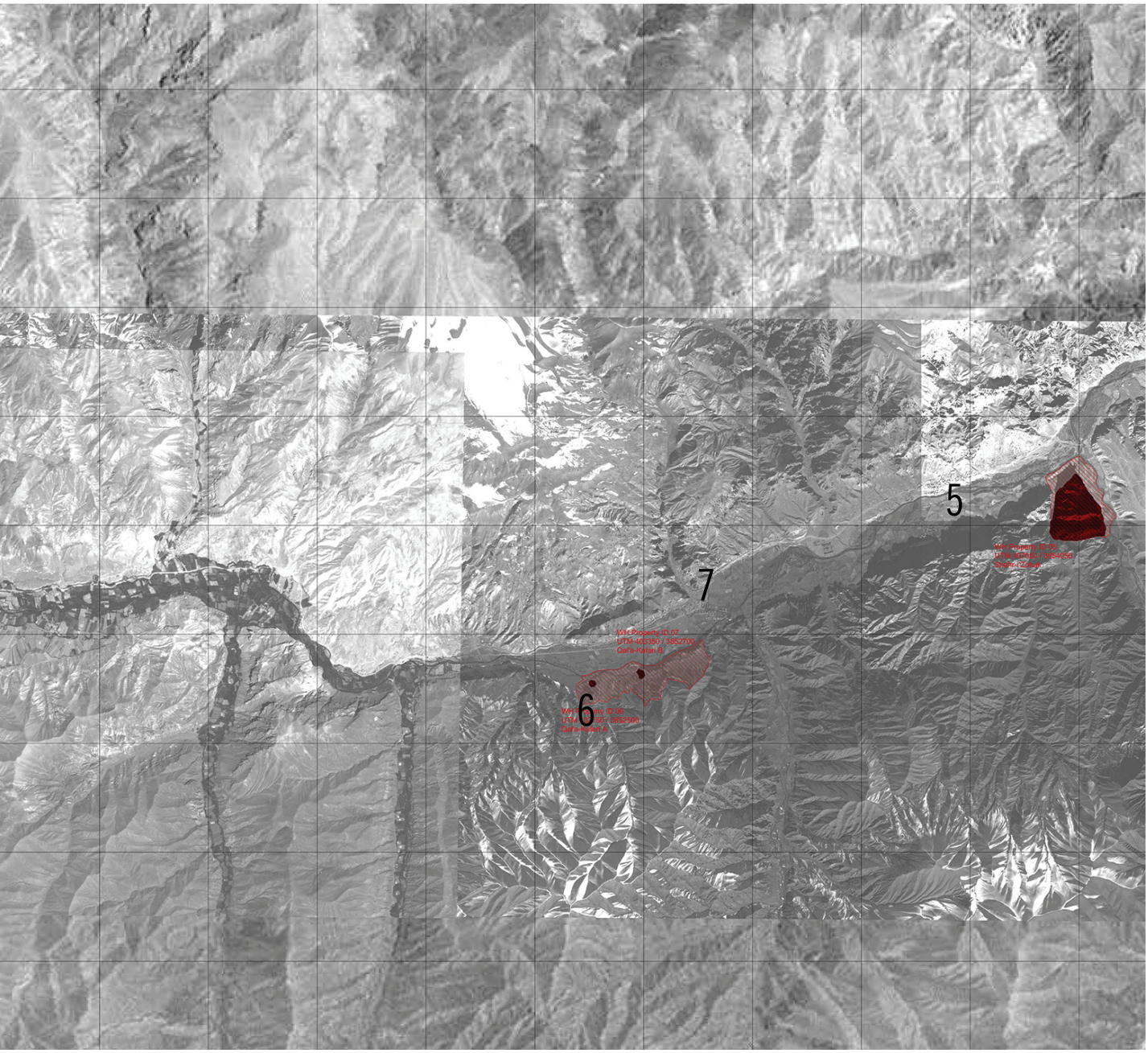
22 The eight components of Bamyan's World Heritage Sites are the Buddha Cliffs, Kakhrak Valley caves, two cave sites in Foladi Valley, Shahr-e Zohak, two Qal'a-e Kafari monuments, and Shahr-e Gholghola.

23 Mariani, *Linking Relief, Rehabilitation and Development*, 44.

24 Constance Wyndham, "A Short Study Investigating Values Ascribed to Heritage Sites in Bamyan by Residents of the Bamyan Valley," in *The Giant Buddhas of Bamiyan Volume II: Safeguarding the Remains 2010-2015*, ed. E. Erwin et al. (Munich: ICOMOS, 2016), 3.

25 Ibid., 16. Little is known by local populations about the work conducted by UNESCO and their international partners. Additionally, bureaucratic restrictions impede local access to many heritage sites, distancing people's access to any tangible cultural heritage.


WH Property ID 01
UTM 392600 / 3855100
Bamiyan Cliff including niches of 38 meter Buddha, seated Buddha
55 meter Buddha and surrounding caves
1
8
WH Property ID 04
UTM 393853 / 3855600
Shahr-i Gholghola
4
WH Property ID 04
UTM 390500 / 3852200
Foladi and Kakrai Caves
in the Foladi Valley
WH Property ID 03
UTM 391900 / 3852500
Group I Ajdhar Caves
in Foladi Valley
3
2
WH Property ID 02
UTM 394950 / 3851300
Kakrak Valley caves including
niche of the standing Buddha



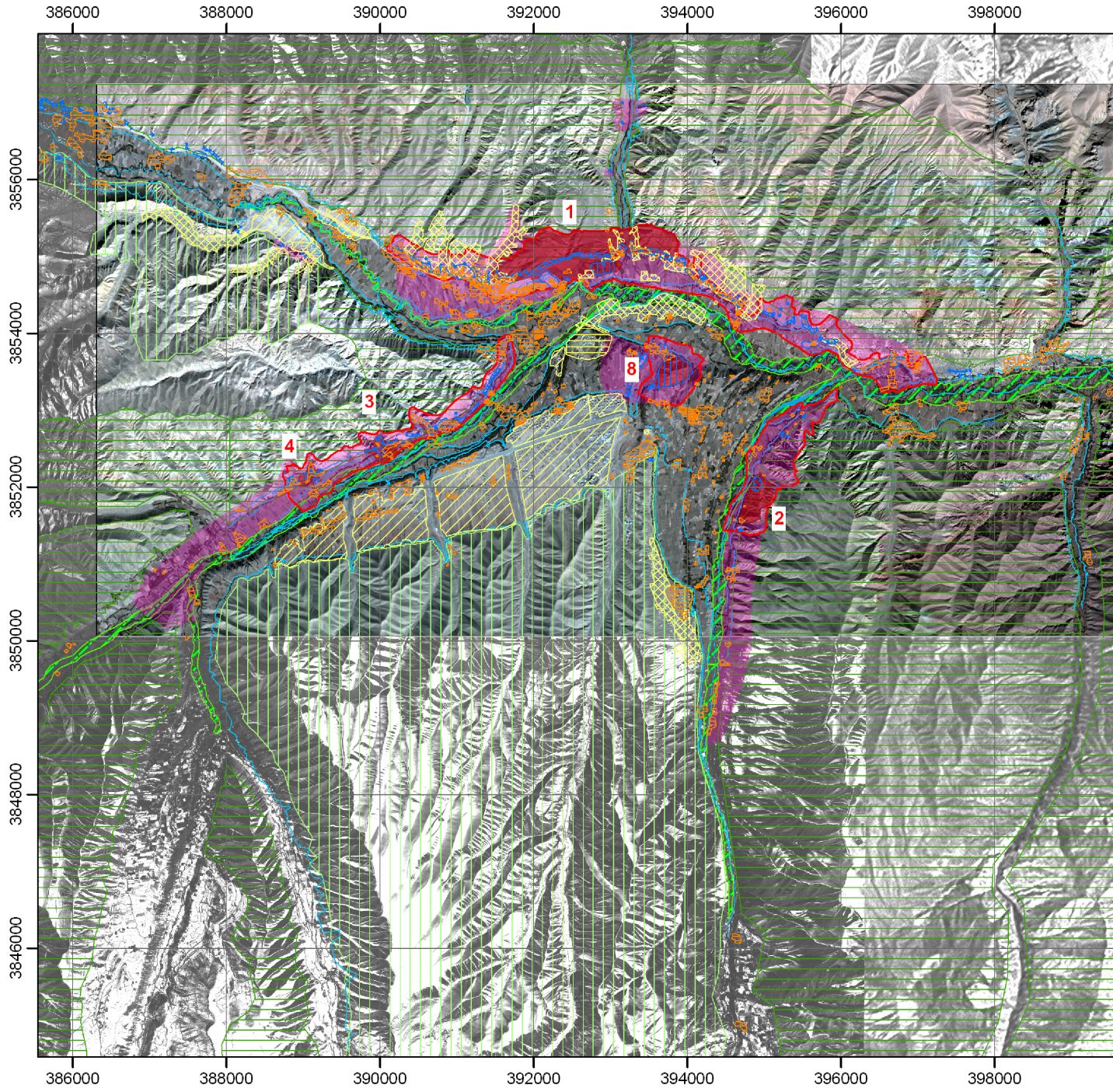
1. *Buddha Cliff*
2. *Kakhrak Valley caves*
3. *Qoul-e Akram caves in Foladi Valley*
4. *Qoul-e Ghamay caves in Foladi Valley*
5. *Shahr-e Zohak*
6. *Qal'a-e Kafari A*
7. *Qal'a-e Kafari B*
8. *Shahr-e Gholghola*

UNESCO World Heritage Property Buffer Zone

UNESCO World Heritage Core Zone

Indicates site plan of Bamiyan Cultural Centre

Figure 2.11
UNESCO World Heritage property and protection zone.


386000
388000
390000
392000
394000
396000
398000
3856000
3854000
3852000
3850000
3848000
3846000
1
2
3
4
8

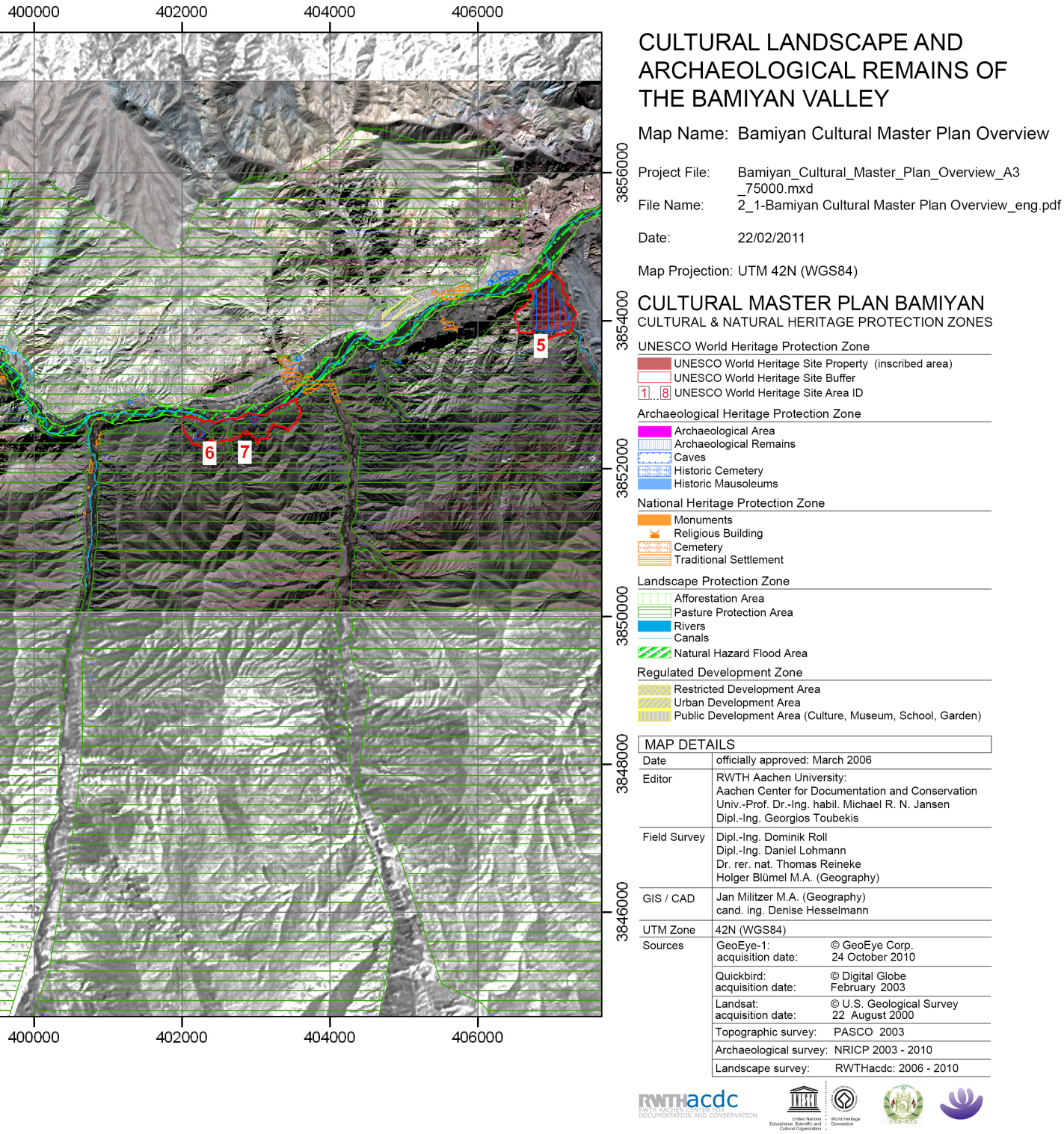
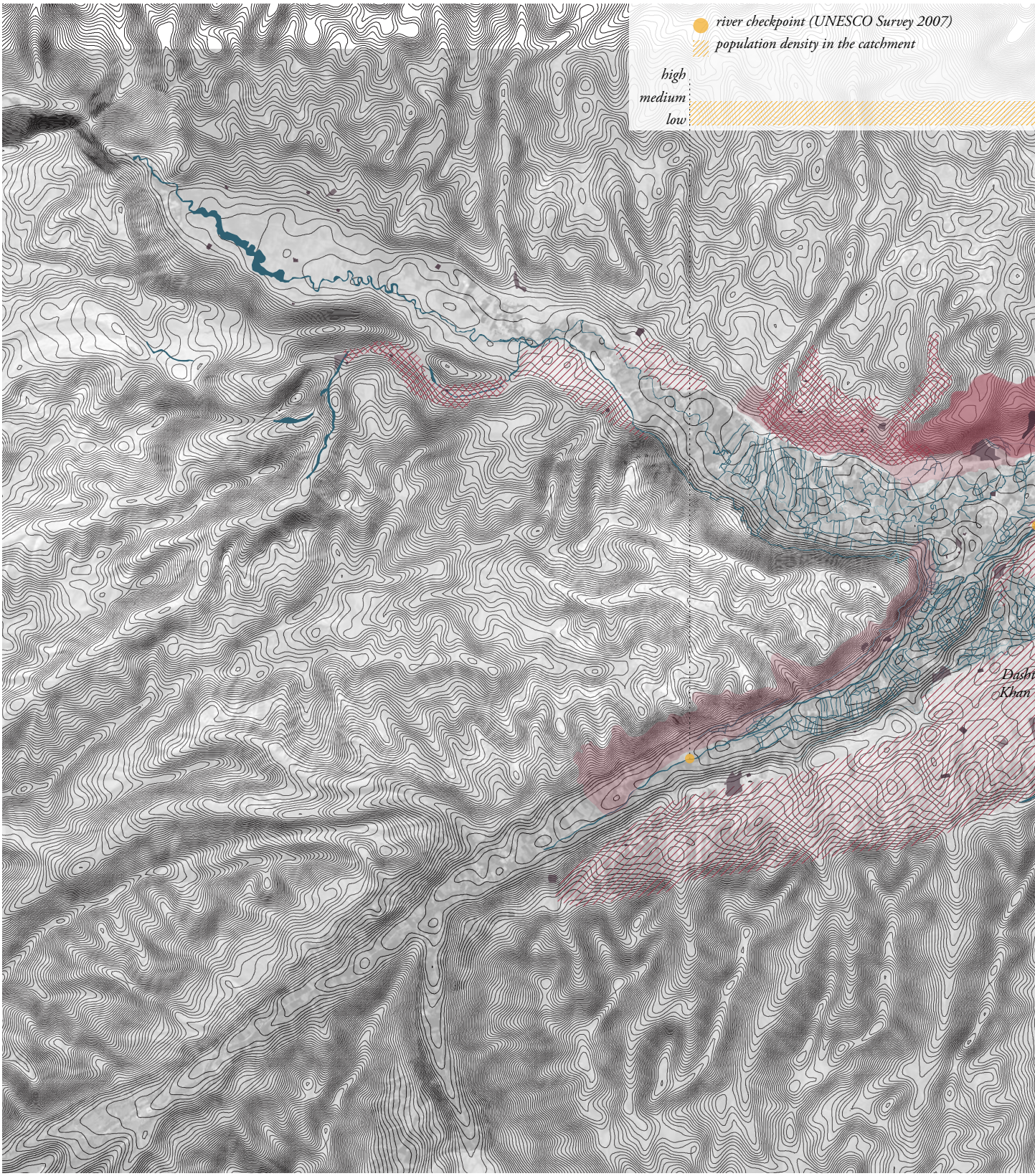


Figure 2.12
UNESCO Cultural Master Plan


river checkpoint (UNESCO Survey 2007)
population density in the catchment
high
medium
low
Dashi
Khan

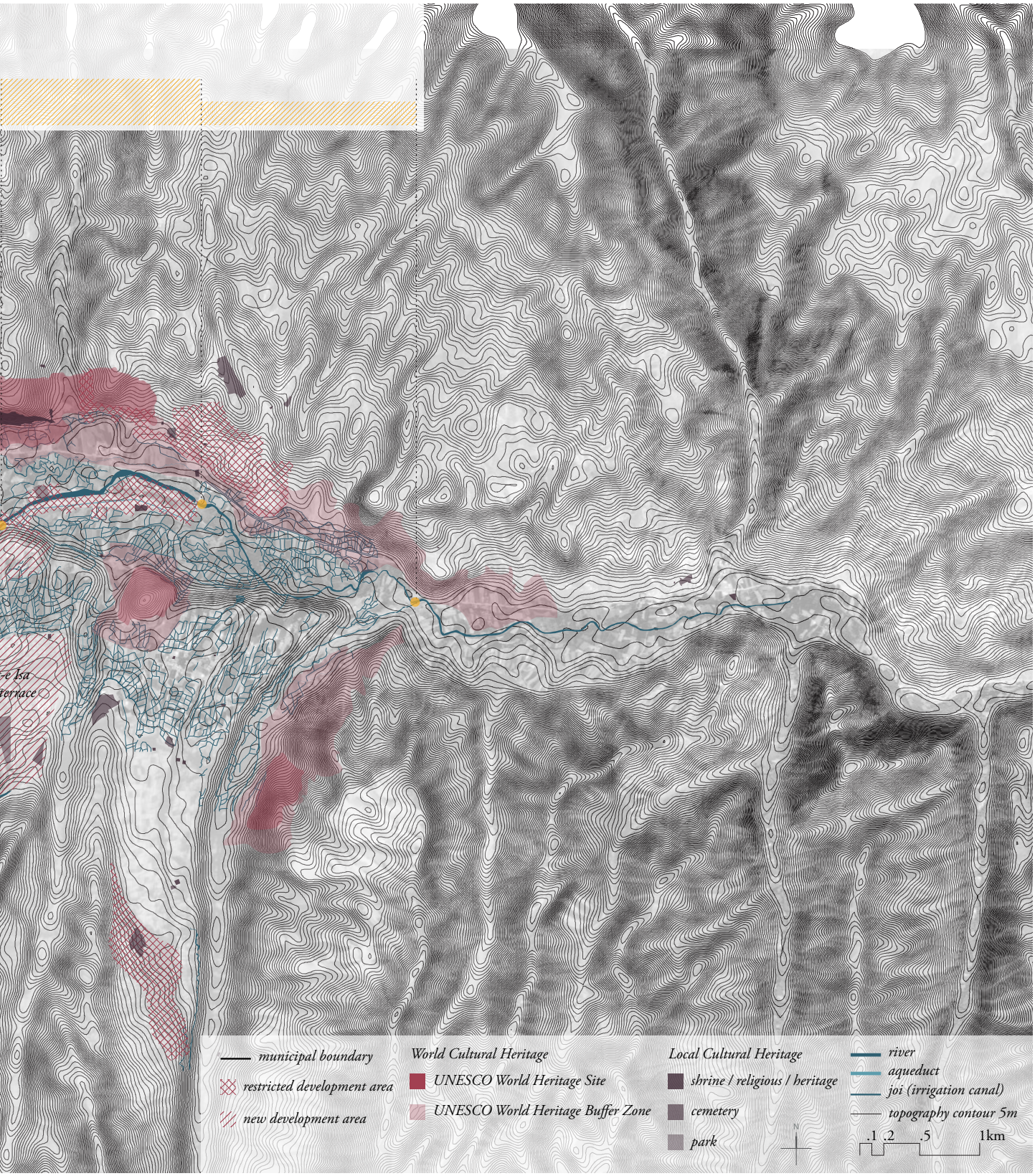


Figure 2.13
Urban development per the Bamiyan Cultural Master Plan.

as poetry, music, and storytelling, international agencies focus on tangible cultural 'world' heritage such as monuments.[26]

Peacebuilding in Bamyan thus takes the form of the BCMP, which ultimately treats the city as a *tabula rasa*. The master plan is arranged based on proximity to the World Heritage sites, notably the Buddha cliffs along the northern edge of the valley. This Cultural Heritage zone is buffered by a National Heritage zone (which includes other historic and archaeological sites, traditional settlements, and historical monuments), and a Landscape Protection zone (fig. 2.12).[27] Negligible consideration is given to existing urban form, and urban development is regulated farthest away from the heritage sites (fig. 2.13). Existing buildings that "do not adapt the traditional architectural style, neither in its wall colour, nor in its construction material, nor in its typology and dimension," should be "subordinated," so as not to detract from the valley's cultural landscape.[28] This includes the building's visibility in the landscape, its change of traditional land-use, and its pollution with regard to noise, waste-water, or exhaust fumes.[29] In large part, this translates to moving all existing and proposed development to designated non-intrusive areas, a futile task requiring enormous time and resources.[30]

Bamyan bazaar is expected to entirely relocate to New Town, an area on the city's southern plateau, the Dasht-e Isa Khan terrace (fig. 2.14). This was once the site of the PRT military base, and today hosts the single-runway airport as well as several government buildings and residential areas. The new campus of Bamyan University is also nearby, as is a 1.05 mega-watt solar field providing electricity to 2,500 homes and businesses in the city.[31] The Dasht-e Isa Khan terrace is the site scheduled for all future urban development. Not only is this a significantly less central location in the valley,

26 Ibid., 10.

27 Georgios Toubekis, "Introduction," in *Bamiyan Cultural Master Plan,* UNESCO et al. (Germany: RWTH Aachen University, 2007), 7.

28 Roll, "Present Urban Development in the Bamiyan Valley," 90.

29 Ibid., 90.

30 Ibid. Moving existing built areas additionally undermines other development projects; notably the old complexes of Bamyan hospital and Bamyan University, currently seated in the World Heritage Buffer Zone, are scheduled to move as they "do not assimilate to their surrounding landscape." Accordingly, the road to access these complexes remains unpaved to deter significant vehicular use so close to the Buddha Cliffs.

31 The off-grid solar project was funded and implemented by the New Zealand Provincial Reconstruction Team. Construction was completed in 2013. Bamyan's climatic conditions render solar energy an extremely viable option for sustainable energy supply. Solar panels are thus commonly seen on the roofs of homes and businesses.



Figure 2.14
View of Dasht-e Isa Khan terrace, the site of proposed urban development. Paved roads and new building construction has already begun. The airport runway is visible on the right.

it also has incredibly poor access to water supplies.[32] Provisions for this in the BCMP entail pumping urban water supply from groundwater in Kakhrak Valley, the south-eastern valley draining into the larger Bamyan valley. Hard infrastructure will be necessary for this endeavour, which will only serve the purpose of water access in the short term. This solution, moreover, fails to acknowledge the hydrological conditions of the valley; already the Kakhrak River suffers considerably from water withdrawal for agricultural irrigation such that the river runs dry before it reaches its confluence point with Bamyan River.[33] Tapping this water source for purposes of the BCMP will have serious consequences for the traditional agricultural landscape of Bamyan valley, which in itself, is an important component of the master plan.

Despite UNESCO's deep-seated belief that a sense of shared cultural attachment is a prerequisite for sustainable peace, development actions in Bamyan, like those elsewhere in Afghanistan, are uneven, and largely fail to include local communities. World heritage is distinctly prioritised over local livelihood. This is made particularly evident through the BCMP's neglect of sustainable natural resource management, notably water, which has important ecological and cultural implications for the valley, detailed further in subsequent sections. Even so, the people of Bamyan continue to support this work, in part because they anticipate a corresponding reboot in international tourism, but also because they fear losing international investment and the safety this ensures, especially with heightening insecurity in surrounding areas.[34] Such reliance on foreign aid is incredibly detrimental, especially when there is little sense of self-sufficiency within the cultural development agenda. That is, when little emphasis is given to sustainable

32 Holger Blumel, "Qualitative and Quantitative Screening of the Water Situation in Bamiyan Valley," in *Bamiyan Cultural Master Plan,* UNESCO et al. (Germany: RWTH Achen University, 2007), 45. The canal that once used to serve the Dasht-e Isa Khan terrace today runs dry, functioning solely as a sediment trap. Nonetheless, the move of Bamyan bazaar has already begun; the wood-working sector was recently relocated to the Dasht-e Isa Khan terrace.

33 Ibid., 47.

34 Wyndham, "A Short Study Investigating Values," 19. There is a general perception among the people of Bamyan that the World Heritage Sites will drive in more international tourists, boosting the economy as the statues once did in the 1970s. Additionally, there is a recurring sentiment among the people that failure to oblige with the directives of the BCMP, regardless of the implications for socio-economic livelihoods, will result in removal of the valley's 'World Heritage' designation, and consequently remove international attention, funding, and development projects from Bamyan. Moreover, even though Bamyan valley is itself quite safe, because surrounding areas do have Taliban presence, security is increasingly unpredictable for both internationals and locals. Thus the people prefer greater international presence even if the foreign agenda is not appropriately supportive of local needs.

socio-economic and infrastructural development, when minimal priority is accorded to mechanisms of intangible forms of cultural heritage, and when communities are unable to participate in decision-making processes, local people are effectively disempowered, stripped of their solidarity, identity, and dignity. International engagement in Bamyan is thus "a deeply ironic endeavour that resonates throughout the rebuilding of Afghanistan: the struggle to save empty holes from disintegration."[35]

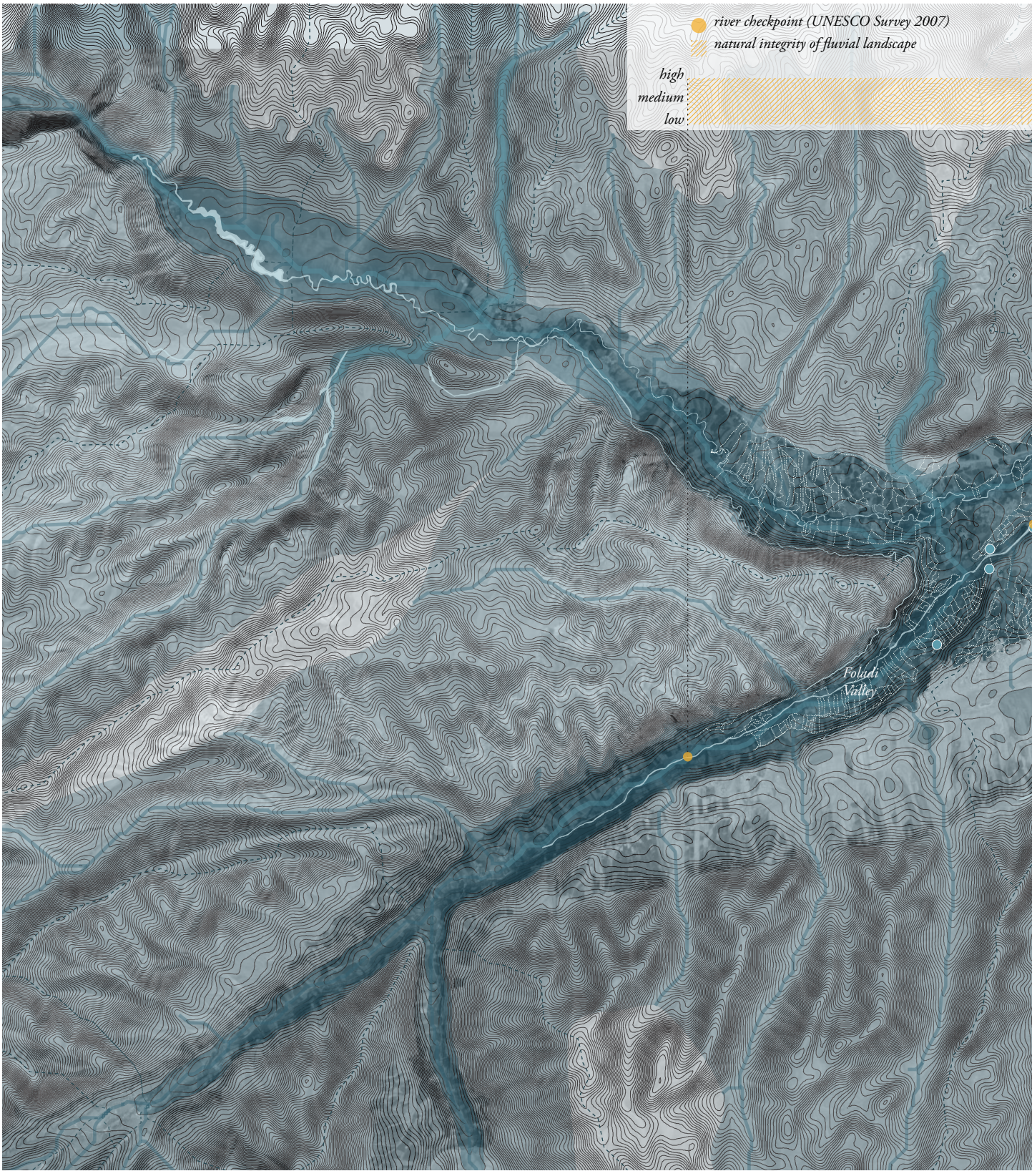
35 Power, "The Lost Buddhas of Bamiyan," 73.

Water

> *From the window of an aircraft, Afghanistan is barren. It is dry. It is rugged. It is worn away. Layers of rock are visible along the slopes of steep mountain ranges that conquer and divide the patchwork country. Amid this grey-brown dust, narrow strips of quilted green define terrains of water; patches of subsistence agriculture supporting scattered settlements of rural Afghans. Water is life is truth in Afghanistan.* [Tuesday May 17, 2016]

Given Afghanistan's turbulent history, water scarcity is a critical issue in many parts of the country. Equated with famine, water scarcity is inextricably connected to poverty and underdevelopment. Restoring water services and infrastructure has accordingly been an important component of the peacebuilding process. Disconnected from the daily realities of local Afghan livelihoods, however, "government and international efforts to superimpose water management structures on existing and functioning [local] resource [management] systems have caused resentment and given rise to local-level conflict," with serious ecological repercussions for sustainable development.[36] Despite the efforts of the Afghan Government's National Solidarity Programme (NSP), water resource management has not been cohesively integrated into

36 Jennifer McCarthy and Daanish Mustafa, "Despite the Best Intentions? Experiences with Water Resource Management in Northern Afghanistan," in *Water and Post-Conflict Peacebuilding,* ed. Erika Weinthal et al. (New York: Earthscan, 2013), 190.


river checkpoint (UNESCO Survey 2007)
natural integrity of fluvial landscape
high
medium
low
Foladi
Valley

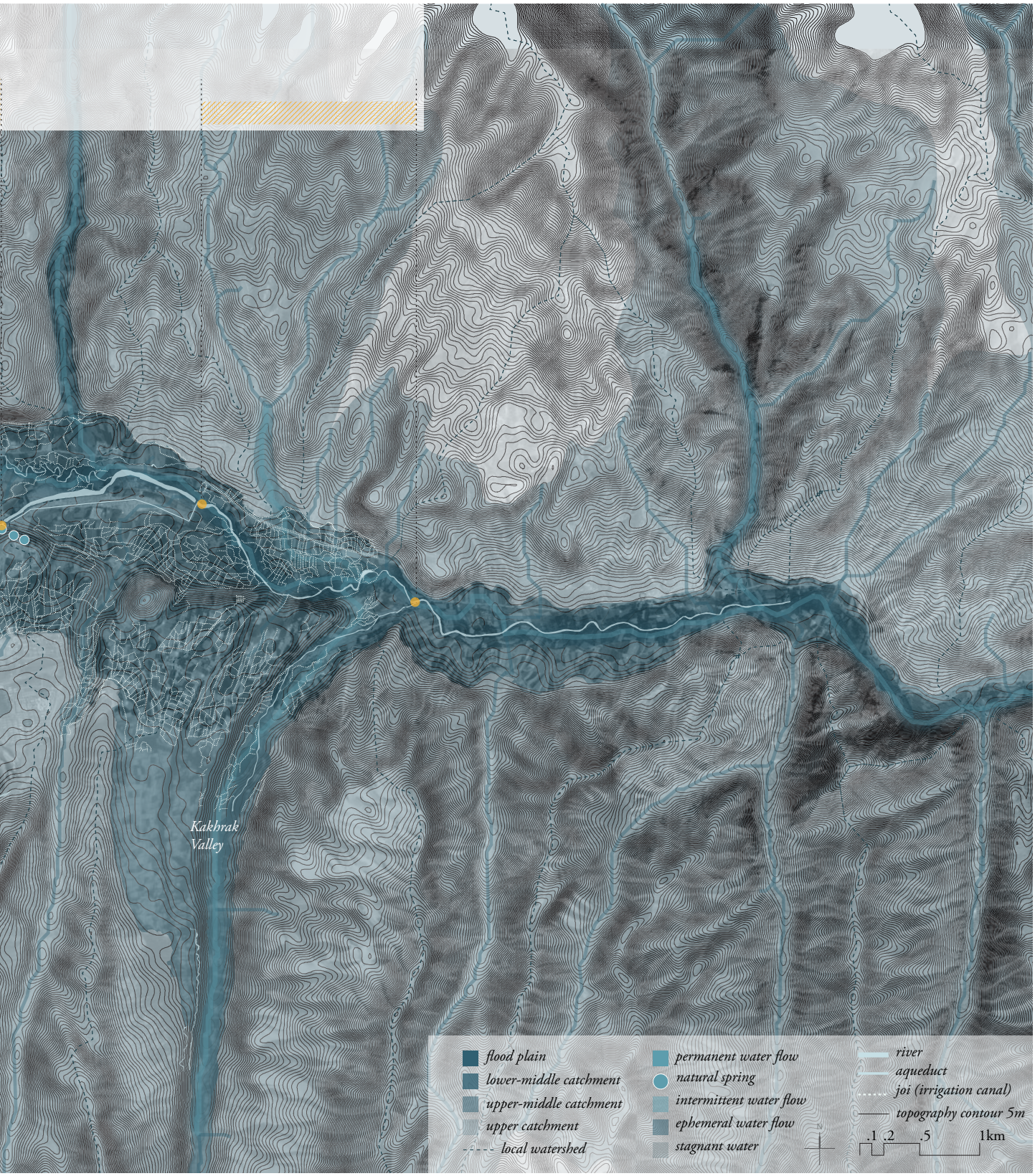


Figure 2.15
Local watersheds and hydrology in Bamyan.

the international peacebuilding strategy.[37] The quick-impact nature of many of these projects with little understanding of overall ecosystem dynamics does little for long-term sustainability or disaster-risk-reduction necessary for lasting peace. In Bamyan, inadequate and inappropriate consideration of water resource management, predicated by the 'Bamiyan Cultural Master Plan' (BCMP), ultimately isolates water from its users and its landscape.

Water Supply

Bamyan River finds its origin in the glacier regions of the Koh-e Baba mountain range, some twenty kilometres southwest of Bamyan city. It is comprised of the Khitak, Foladi, and Kakhrak rivers, and is a tributary of the Kunduz River, which drains the Amu Darya River Basin of northeast Afghanistan. Covering an area of 1,200 square kilometres, the Bamyan catchment is seated at an elevation of 2,500 metres above sea level, quickly rising to over 5,000 metres in the surrounding mountain ranges (fig. 2.15). Accordingly, the valley is characterised by a cold arid steppe climate with extreme temperature variations, and a long frost period.[38] Air temperatures vary from lows of -30°C in the winter to highs of +30°C in the summer, with a mean annual temperature of 6.9°C. Average annual precipitation in Bamyan ranges from sixty to 130 millimetres, most of which falls between October and April. Of the average forty-two days of precipitation, twenty-four are snow, concentrated between February and April. Rainfall is greatest, though sporadic, through May and June, while subsequent summer months are mostly dry. Major discharge to the rivers thus peaks in May and June when snow is melting (fig. 2.16).

Snow is the primary natural means of storage for Bamyan's water supplies, and is the main source of surface water, used for household, agricultural, and industrial uses. In the upper catchment areas of the watershed,

37 Ibid., 194. The Afghan national government, through the Ministry of Rural Rehabilitation and Development (MRRD), implemented the NSP soon after the Bonn Agreement, as the principal mechanism for achieving peace in rural areas of Afghanistan. The initiative began as a three-year project, with the aim of rehabilitating close to 5,000 villages throughout the country. With technical support from UN-HABITAT, the NSP mobilises Community Development Councils (CDCs) to support the creation of local governance structures that link traditional resource management mechanisms with provincial and national level administration. While the project has enjoyed success in certain parts of the country, the NSP has been unable to secure equitable access to water resources in other areas particularly because of a lack of thorough understanding of local conditions.

38 Thomas Reineke, "Environmental Assessment of the Bamiyan Valley in the Central Highlands of Afghanistan," in *Bamiyan Masterplan Campaign*, UNESCO et al. (Germany: RWTH Achen University, 2005), 10.

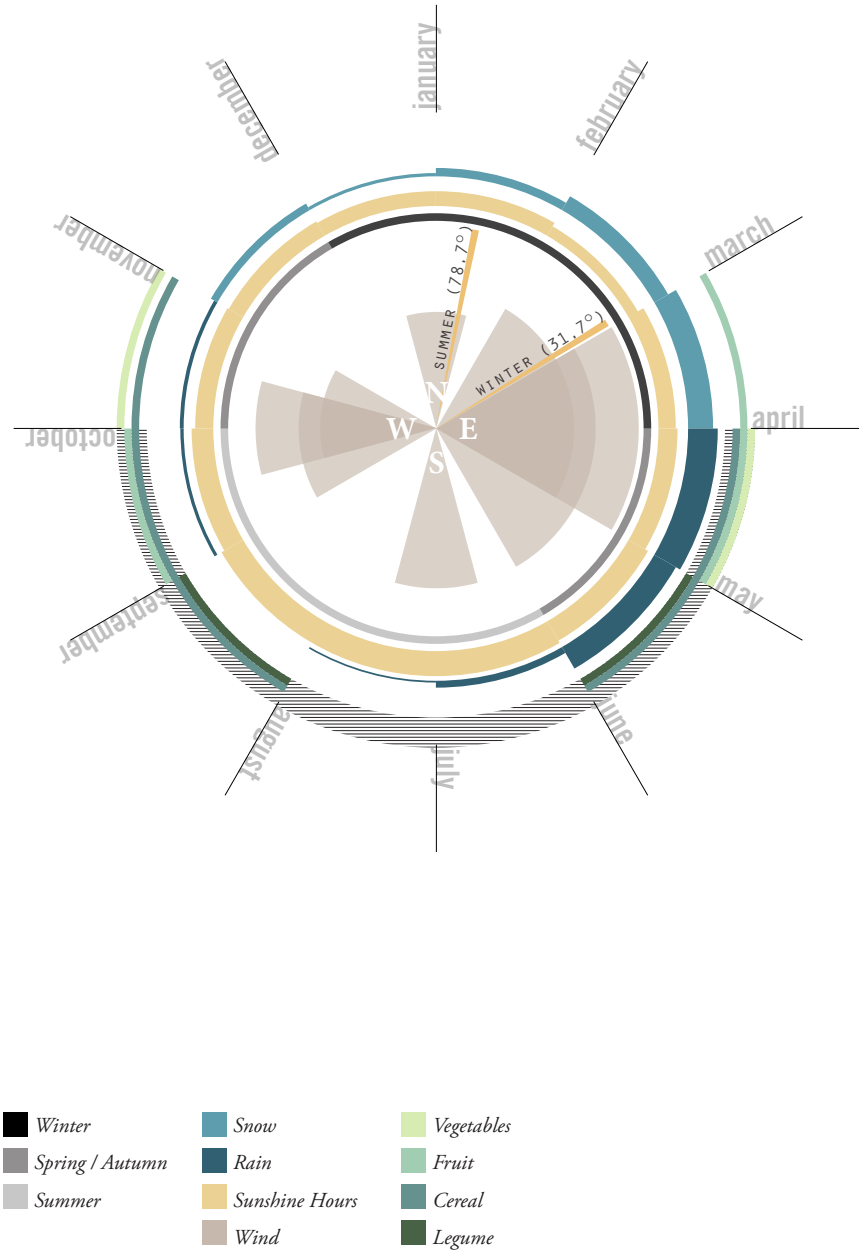


Figure 2.16
Local climatic conditions in Bamyan.





Figure 2.17
Historic flooding conditions in Bamyan (March - June).





Figure 2.18
Historic drought conditions in Bamyan (July - October).

which are characterised by geologic formations of travertine, sandstone, or conglomerate, soil cover is sparse and unable to absorb and store large quantities of water from snowmelt, resulting in widespread surface runoff and significant erosion. Recharge of groundwater aquifers therefore takes place through infiltration in the alluvial plains of the lower catchments of the watershed.[39] These shallow aquifers, accessed either through natural springs or man-made wells, supplement surface water flows. In the lower catchment, however, decades of conflict have destroyed the necessary infrastructure and landscape that would traditionally collect, store, and distribute water in Bamyan. The valley is thus denuded, with poor water retention capacity, experiencing events of flooding in the spring (fig. 2.17), and correspondingly, drought in the summer (fig. 2.18).[40] The recurring nature of these events, in conjunction with the devastating effects of war and widespread drought from 1997 to 2002, has resulted in gradual desertification of the land, and impedes sufficient agricultural output (fig. 2.19).[41] Vulnerability of Bamyan's water resources is increased by the effects of climate change. Bamyan is progressively experiencing warmer temperatures and greater rainfall, indicative of glacial retreat in the high altitudes of the Koh-e Baba mountains, with glaciers anticipated to disappear over the next ten years.[42]

Water Infrastructure

Water gives agricultural land its value. Bamyan's difficult terrain, harsh climatic conditions, and poor soil quality strictly restrict the annual vegetation period, and restrict the valley's agricultural productivity which is already predominantly subsistence-based. Crop cultivation, reliant on the availability of surface water, is a function of timing and duration of annual snowmelt; the single growing period from May through September therefore faces a discrepancy between precipitation levels and water demand. Rural farms, on average, require 800 to 1,000 cubic metres of water per person per year for

39 Blumel, "Qualitative and Quantitative Screening of the Water Situation in Bamiyan Valley," 40.

40 Reineke, "Environmental Assessment of the Bamiyan Valley," 43. The last major flood event was in 2005 when most of the lower catchment had flooded, included the bazaar.

41 This is especially important when, Bamyan remains an agrarian-based economy. In 2014, agriculture accounted for approximately 80 percent of the city's revenue.

42 Blumel, "Qualitative and Quantitative Screening of the Water Situation in Bamiyan Valley," 40. Throughout Afghanistan, mean annual temperatures have been rising at a rate of 0.13°C each decade, and rainfall is decreasing by two percent each decade.

crops to yield adequate nutritional value.[43] A sophisticated network of water distribution accordingly forms the precondition of irrigation agriculture in Bamyan. In this traditional method of water management, water is distributed through *jois*, canals that form the veins of the valley (fig. 2.20), based on availability and a complex arrangement of water entitlements related to irrigated area.[44] In periods of high water availability, water is proportionally distributed per entitlements, while during low flow, a system of rotational allocation, *nawbat*, is used.[45]

Water distribution decisions are made by communities, based on land area and crop type for each farmer, and will vary annually to accommodate these changing needs. Operation of the overall water network is led by a designated *mirab*, typically a well-respected community member and landowner, elected to the position by water right holders.[46] Maintenance of water infrastructure is the responsibility of the local community. Under the traditional *hashar* system, landowners provide labour in proportion to their water entitlements, or a cash equivalent.[47] This enables a shared sense of responsibility and ownership within the water network, and ensures that water continues to flow, especially during warmer, dryer months. Supporting infrastructure includes water diversion (*sarband*), water conveyance (canals, siphons, aqueducts, culverts), water control (weirs, bifurcators, offtakes, spillways), and water protection (embankments, gabion walls, retaining walls) (fig. 2.21).[48] These structures are the product of local knowledge and experience, historically built with readily available and affordable construction materials including earth, mud, wood, and stone.

Influx of development projects is steadily changing this material palette, however. Larger canals are rehabilitated with impervious materials such as concrete (fig. 2.22). While this ensures that water reaches communities further away, it also impedes the process of groundwater recharge. Aid interventions for water infrastructure focus primarily on single-solution supply-management technologies for immediate water access or flood protection, with little consideration of the larger watershed and

43 Kyle J. Thomson et al., *Snow Harvesting: A Potential Water Source for Afghanistan* (Washington: U.S. Army Corps of Engineers, 2009), 1.

44 Bob Rout, "How the Water Flows: A Typology of Irrigation Systems in Afghanistan," in *Applied Thematic Research into Water Management, Livestock and The Opium Economy* (Afghanistan Research and Evaluation Unit, 2008) 13.

45 Ibid., 19.

46 Ibid., 17.

47 Ibid., 20.

48 Ibid., 14.



Figure 2.19
Desertification in Bamyan increases food insecurity and inhibits self-sufficiency for the largely agrarian economy.



Figure 2.20
Traditional *joi* irrigation network in Bamyan (pre-conflict).

its hydrological systems. Uncontrolled application of water access through simple bore-hole wells (fig. 2.23) without appropriate consideration of well placement, for example, provides access to water in the short term, but dries out traditional wells.[49] Without adequate groundwater recharge, withdrawing water in this way fosters drought-like conditions, and renders groundwater an unsustainable solution to issues of water scarcity.

Presently, the groundwater table in the lower catchment is quite high, and in the valley centre, groundwater is easily reached even three to six metres below the surface.[50] Easy access also makes for easy contamination of these water supplies, however. Areas of increased population density that coincide with high agricultural activity have augmented concentrations of nitrate in water supplies.[51] Notably, where Bamyan River passes through the valley centre near Bamyan bazaar, excess nitrogen compounds are found in the water due to wastewater discharge from nearby settlements, remnants of animal manure, and excess artificial fertilisers.[52] Wastewater management in Bamyan is negligible and incomplete. Existing pit latrines are typically in poor condition, and often drain into irrigation channels, contaminating surface water supplies. Although there has been considerable work by international NGOs in the Water, Sanitation, and Hygiene (WASH) sector, primarily through construction of community latrines and public education about hygiene, development initiatives remain singular in nature, addressing only immediate water needs with little consideration of the larger water cycle.

This mentality is evidenced again in a recent development project on Bamyan River. Just west of the point of confluence between the Foladi and Khitak rivers, Bamyan River's braided path has been framed by deep, protective, concrete masonry retaining walls that run the river's length through the urban centre of the valley (fig. 2.24). Channeling of the riverbed has mitigated, in the short-term, yearly events of flooding at the bazaar; during peak runoff, when water levels are higher and flow rates are much faster, flooding is pushed downstream of the channelized area. Another hard-path solution to water resource management, this only addresses water protection, once again failing to consider implications for the larger water network. In the long-term, this intervention will isolate water from its floodplain; the increased flow rate over a smaller surface area prevents water from percolating

49 Reineke, "Environmental Assessment of the Bamiyan Valley," 25.

50 Ibid., 23.

51 Blumel, "Qualitative and Quantitative Screening of the Water Situation in Bamiyan Valley," 42.

52 Ibid., 42. Many farmers still believe that greater fertiliser use is equated with a greater harvest, and fertiliser amount is therefore not adjusted to soil quality.

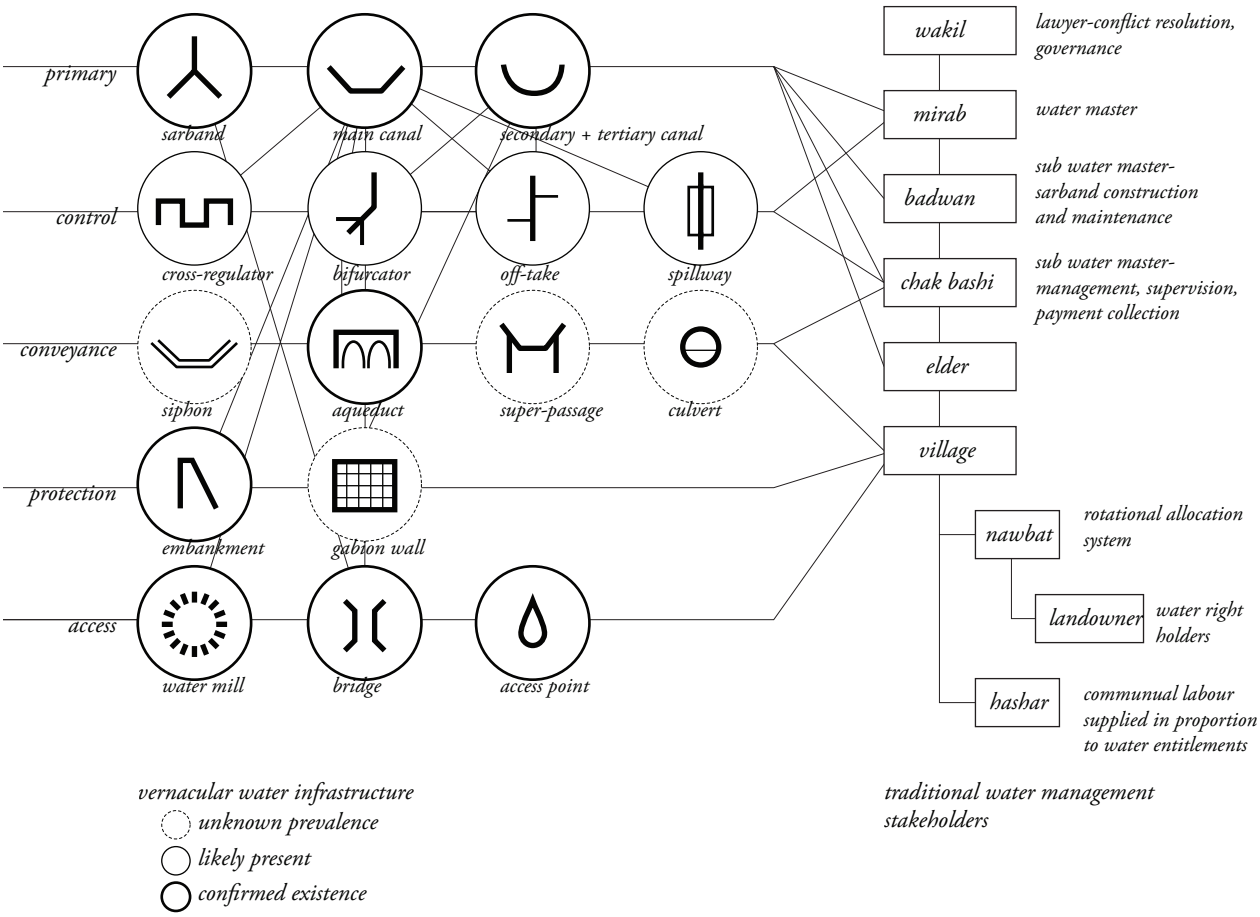


Figure 2.21
Matrix of existing water infrastructure in Bamyan.



Figure 2.22
Concrete water channel along the slope of Bamyan's Dasht-e Isa Khan terrace.



Figure 2.23
Wells, implemented by foreign agencies initially provide easy access to safe groundwater supplies



Figure 2.24
Channelization of Bamyan River. Water levels remain low in the summer months.



Figure 2.25
Barren land behind Bamyan Bazaar is strewn with litter and stagnant pools of wastewater.

back into the landscape and recharging groundwater supplies. Consequently, barren and vacant land is growing in prevalence along the valley centre, and stormwater and agricultural runoff regularly form pools stagnant with filth and animal refuse in these areas (fig. 2.25). Lack of groundcover, stemming from years of conflict, and now diminished groundwater supply decreases soil quality and further reduces the land's natural water retention capacity. These issues are aggravated by continued urban development in Bamyan which affects both surface and groundwater conditions, particularly in terms of water runoff and infiltration, further depleting the natural integrity of the valley's fluvial landscape (fig. 2.26).[53]

Water for household use, including human consumption, is accessed primarily along Bamyan valley's southern terraces which rise fifty to seventy metres parallel to the Kakhrak and Foladi Rivers. Seasonal springs along the lower edges of these terraces have situated traditional settlements, and remain important points of water access. Water from irrigation channels on the upper terrace level infiltrates into slope debris and is filtered ecologically as it moves through the ground, producing mostly potable water at the spring mouth.[54] Reliance on irrigation water, however, means that these springs run dry in the winter, and water is then accessed from community wells or all-season springs. Perennial springs have recently become the site of storage reserves, stepped rectangular masonry basins, that tap into the wealth of water below ground (fig. 2.27).

Water is free and accessible to everyone in Bamyan. Seemingly never-ending streams flow continuously into the ground, or into canals delivering water to agricultural fields, the bazaar, and eventually emptying into Bamyan River. Several water taps piped from these reserves, run freely in the bazaar providing additional water access points for local people. A well at the southern end of Bamyan bazaar additionally feeds a private water pipeline running up the northern slope of the valley. The cost of water access from this pipeline, however, is too large to bear for most households.[55] As of 2013, fifty percent of Bamyan's population has access to improved drinking water sources from either public taps or unprotected springs.[56] Very few buildings

53 Aziza Chaouni, "The Role of Design in Hydrological Modeling of River Basins: The Draa Oasis Valley," in *Out of Water: Design Solutions for Arid Regions*, ed. Aziza Chaouni and Liat Margolis (Germany: Birkhauser, 2015), 113.

54 Reineke, "Environmental Assessment of the Bamiyan Valley," 25.

55 Roll, "Registration of Cultural Zones and Traditional Architecture in Bamiyan Valley," 20.

56 Islamic Republic of Afghanistan, *Socio-Demographic and Economic Survey Bamiyan* (Kabul: Central Statistics Organisation, 2013), 75. Public taps are the main source of drinking water for 24.4% of households, while 19.4% of the population accesses unprotected springs.

have piped water access. Those that do are primarily institutional, equipped with on-site facilities including private wells, water reservoirs, and sewage water tanks.[57]

Elsewhere, Bamyan River remains the principal site for dumping of refuse materials (fig. 2.28). In summer, when Bamyan River lacks depth and wild grass grows in the river bed, much of the western section of the channelized riverbed is littered with transparent pink and blue plastic bags filled with garbage. Bazaar stalls back onto the river here, enabling convenient dumping access (fig. 2.29). Livestock have the only direct interaction with the river, and that too for only a short time (fig. 2.30). These animals belong to shopkeepers in the Butcher's bazaar; their proximity to the river raises the question of the quantity of dead animal fluids that run into the river water. Bamyan River has become an afterthought: 'out of sight, out of mind,' water is 'away,' and the river exists now as negative space in the landscape.

Peacebuilding in Bamyan as it is practiced today will inevitably have drastic ecological implications, particularly regarding water resources. While the value and historical background of the traditional water network is considered an important component of the valley's cultural landscape in the BCMP, focus on cultural preservation alone fails to address holistic, integrated water management strategies, and ultimately sacrifices the integrity of the landscape.[58] Poor coordination between aid agencies in terms of development project goals, methods, and implementation exacerbates this problem.[59] When water management in Bamyan has historically been reliant upon the strength of, and within, local communities, engineered infrastructural solutions from aid agencies break intrinsic ecological relationships between land, water, and people.

57 Roll, "Registration of Cultural Zones and Traditional Architecture in Bamiyan Valley," 19.

58 Roll, "Present Urban Development in the Bamiyan Valley," 93.

59 Resource issues are also compounded by the presence of foreigners; aid agencies necessarily occupy land and utilise water resources.





Figure 2.26
Water in Bamyan centre.



Figure 2.27
Storage reserve at a natural spring site along the edge of Bamyan valley's southern terraces.



Figure 2.28
Everything, including wastewater, drains into Bamyan River.



Figure 2.29
Bazaar stalls back onto Bamyan River which serves as a convenient dumping site for refuse materials.



Figure 2.30
Bamyan River is 'away.'

Women

> There is a close relationship between ritual and water management of all kinds. Water is the essence of fertility and growth, of sustained life, associated with cleansing and renewal, with the spiritual forces of the cosmos….it has an indispensable role in human life, for it lies behind everything we do, from cooking food and washing clothes to agriculture, cattle herding…. Water is one of the few cultural universals, inspiring a profound mingling of ritual and day-to-day use.[60]

Growing distance between water and people, perpetuated by peacebuilding processes, also has significant cultural consequences. In Islam, water is embedded in the psyche of the people, vital to their material and spiritual well-being. It is additionally an endlessly evolving enactment of gender, family, and community relations in Afghanistan. Nodes of public water infrastructure have historically been points of social interaction for communities, especially as sites of household activities such as washing and water collection. The traditional domestic role of women in this context renders water an important social domain, a way of being in the world for women. Women's role, as keepers of family honour in Afghan society, means that there is an intrinsic link between spaces for women and spaces for family and the larger community. Ignorance of the cultural dynamics of water and water infrastructure in the liberal peacebuilding project will therefore fracture the community solidarity necessary for enduring peace. This is particularly evident in the 'Bamiyan Cultural Master Plan' (BCMP), where the imposition of Western urban planning principles generates spaces of isolation instead of unification, breaking social relations embedded in traditional Afghan settlement patterns.

60 Brian Fagan, *Elixir: A History of Water and Humankind* (New York: Bloomsbury Press, 2011), xx.

Water in Islam

Water has an important religious and aesthetic dimension in Islam. It is central to life, a unifying medium for all living things, vital for hygiene, health, the sacred, and the sublime. *Ma'*, the Arabic word for water, occurs sixty-three times in the Qur'an; water is the Qur'anic sign of eternal life, a divine blessing that gives and sustains life. Water was thus meant to be shared, a resource for all community members to equitably partake in. Particularly, given the aridity of the historic Islamic world, access to water has also been a sign of prosperity, and the provision of drinking water to the thirsty or the poor was considered a work of excellent charity, *sadaqa*.[61]

Water in Islam is both purifier and purified. It is part of ritual practice, and essential for washing (fig. 2.31). Prior to prayer or other religious or daily acts, the Qur'an mandates ritual ablution, *wudu'*, an act that "releases the believer several times a day from [their] temporal conditions and concerns, allowing [them] to enter a state of purity," and therein commune with the divine.[62] *Wudu'* is thus a symbolic cleansing of the soul as well as the body, and emphasises the lack of division between practical daily life and spiritual needs.[63] Bathing of the whole body, *ghusl*, is often necessary to achieve ritual purity, as is *taharah*, the washing of clothes, items, or spaces that are, in effect, an extension of the body. The ritual importance of this action with water is witnessed annually in the ceremonious washing of the Kaaba,[64] and through the integration of water in historic Islamic architecture, notably mosques and other religious buildings, as well as *hammams* (bathhouses), and Islamic gardens.

61 Sheila Blair and Jonathan Bloom, "Introduction," in *Rivers of Paradise: Water in Islamic Art and Culture*, ed. Sheila Blair and Jonathan Bloom (London: Yale University Press, 2009), 16. *Wudu'* involves washing the hands, mouth, nostrils, arms, head, and feet with water.

62 Stefano Bianca, *Urban Form in the Arab World: Past and Present* (London: Thames and Hudson, 2000), 34.

63 Emma Clark, *The Art of the Islamic Garden* (Wiltshire: The Crowood Press, 2004), 90.

64 Each year, the walls of the Kaaba are washed with water from *Zamzam,* the blessed spring located at the perimeter of the sacred complex in Mecca.



Figure 2.31
Prior to eating, you are invited to wash your hands. Water from the jug is poured over your hands, the bowl below catching spillover.

Centrality of water in these spaces is indicative of the significant role water plays in the spatial composition of historic Islamic cities.[65] Traditionally, spaces for water were associated with the courtyard typology, an enclosed, intimate space repeated at various scales in the city's urban fabric. Emerging as a response to local diurnal climatic conditions, the courtyard is simultaneously a microcosm of the larger universe, "holding within one view the relationship between centre and edge…ground and sky…to reflect in symbolic form the connection between heaven and earth, the divine and [man]."[66] The presence of water is common in these enclosed, open-air spaces, reinforcing connection between material and spiritual, and allowing space for contemplation and refuge. Moreover, in hot environments, water in the courtyard is also critical in facilitating a cooler, more comfortable micro-climate. Water centres the courtyard, which in turn centres man's universe. Producing a sense of interiority and enclosure, buildings become self-contained units, architecturally self-sufficient, and independent of any predetermined circulation layout.[67] When repeated, the courtyard imbues notions of the sacred, of oneness and wholeness, *tawhid*, throughout the entire urban form of the city.[68]

Composite growth of individual buildings, in this relationship of solid and void, is a process of cellular aggregation, and public space is "reduced to…an interior corridor system, framed by adjacent buildings."[69] Any open space is integrated as larger courtyards into specific social and architectural entities, i.e. mosques, madrasas, thereby ensuring no leftover, undefined, or residual exposed space. Thus, the street in the traditional Islamic city "is there less to ensure the efficiency and hegemony of statehood, and more as a ribbon to insinuate cultural fabric," a means of linking separate programs of courtyards outside the household.[70] The resulting accumulative process of

65 D. Fairchild Ruggles, "From the Heavens and the Hills," in *Rivers of Paradise: Water in Islamic Art and Culture,* ed. Sheila Blair and Jonathan Bloom (London: Yale University Press, 2009), 84. The planning of an Islamic city necessitated, first and foremost, a place for congregational prayer, in turn requiring spaces for water for *wudu'*. Water centred in a courtyard became a prevalent typology during medieval Islam, notably in the construction of a variety of religious and secular monumental building types.

66 Bashir A. Kazimee and Ayad B. Rahmani, *Place, Meaning, and Form in the Architecture and Urban Structure of Eastern Islamic Cities* (New York: The Edwin Mellen Press, 2003), 86.

67 Bianca, *Urban Form in the Arab World*, 39.

68 Ibid., 36.

69 Ibid., 40.

70 Kazimee and Rahmani, *Place, Meaning, and Form*, 106.

centring, enclosing, and integrating produces the cellular urban structure of the traditional Islamic city; one is enveloped by multiple architectural shells, moving between solid and void, in which "every section of the network matches the character of the space it serves and the social needs of its users."[71]

Space reflects social organisation: where larger, public courtyards and noisier thoroughfares such as the bazaar facilitate, to a greater extent, the day-to-day activities and social life of men, the more private residential and neighbourhood courtyards become the primary hub of domestic activity, and therein largely the domain of women. Water is central to these interactions, existing at the locus of both public and private realms. Points of water storage and access are commonly areas of social assembly. At the larger public scale, water hubs were centres for community gathering and festivity, and more intimately, at the neighbourhood scale, these points were important nodes of social encounter, particularly for women and children whose public lives were often confined to the domestic realm.[72]

This is reflected even in the rural fabric of Afghanistan, which is characterised by the *qala*, fortress compound, a variation of the traditional courtyard typology (fig. 2.32).[73] Herein, the enclosed courtyard, once again centred around water, additionally offers a sense of security for agricultural households, protecting stored crops from thieves, and families from tribal hostilities. Built on or adjacent to the field controlled by the landowner, the *qala* begins as a self-contained unit, providing shelter and protection for an extended family and their livestock.[74] As the family grows, so too the *qala* evolves, mimicking the aggregative and incremental growth of the traditional Islamic city. Subdividing or expanding to accommodate growing families, *qalas* are divided into clusters that share common entryways and courtyard spaces. A village similarly grows organically by the adjacency of many *qalas*,

71 Bianca, *Urban Form in the Arab World*, 202.

72 Blair and Bloom, "Introduction," 14.

73 Particularly in Bamyan, where hot summers and cold winters are characterised by large diurnal temperature swings and low humidity, the *qala* is additionally environmentally responsive, designed for seasonal rotation. The first-floor rooms, with compact, thick walls providing thermal mass are used in the winter, and in the summer, families move to the second level which feature verandas and larger, more frequent apertures.

74 Albert Szabo and Thomas J. Barfield, *Afghanistan: An Atlas of Indigenous Domestic Architecture* (Austin: University of Texas Press, 1991), 163. There are two main types of *qalas*: the prestige *qala* belongs to a single extended family and is reflective of their political status whereas the tenant *qala* is designed to house the families of farmers employed by a landowner on a sharecropping basis

becoming a "cluster of clusters."[75] The process of moving through the rural village and the *qala* thus emulates the Islamic city: "moving from the outside, one pierces a number of symbolic boundaries, beginning with the massive walls of the *qala* itself, followed by blank alleys and entryways, before entering any of the residence clusters."[76]

Qalas are still present in some of Bamyan's older residential settlements of Foladi and Kakhrak valleys. These communities, south of Bamyan bazaar, retain the traditional scattered pattern of settlement that is evidence of the delicate balance between the urgent need for water and fertile land (fig. 2.33, fig. 2.34).[77] Conversely, north of the bazaar, along the barren sloping cliff faces of the Hindu Kush mountain range, Bamyan is densifying rapidly to support the growing returning population who seek safety and security unparalleled in other areas of Afghanistan (fig. 2.35, fig. 2.36). Residences here are stacked in closed proximity to one another. They follow a simplified version of the typical walled courtyard typology, with single or double-storey linear or L-shaped buildings along the north edge of the courtyard.

Residents of these northern communities are primarily reliant upon work in the bazaar, with aid agencies, or are supported by income from family abroad, while southern communities generate economy principally through agriculture, often supplemented by investment ties to Kabul. International emphasis on 'World Heritage' preservation activities has meant that the national government does not adequately support the agricultural sector in Bamyan; increasingly, residents of southern communities are turning to urban investment in the valley over agricultural production. Economic levels throughout Bamyan valley are therefore relatively consistent, reflected in the mix of old mud-brick and new concrete construction that comprise the residential material palettes of both north and south communities.

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75 Daniel Lohmann, "Inventory of Historical Monuments in the Bamiyan Valley," in *Bamiyan Cultural Master Plan,* UNESCO et al. (Germany: RWTH Achen University, 2007), 108.

76 Szabo and Barfield, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 179.

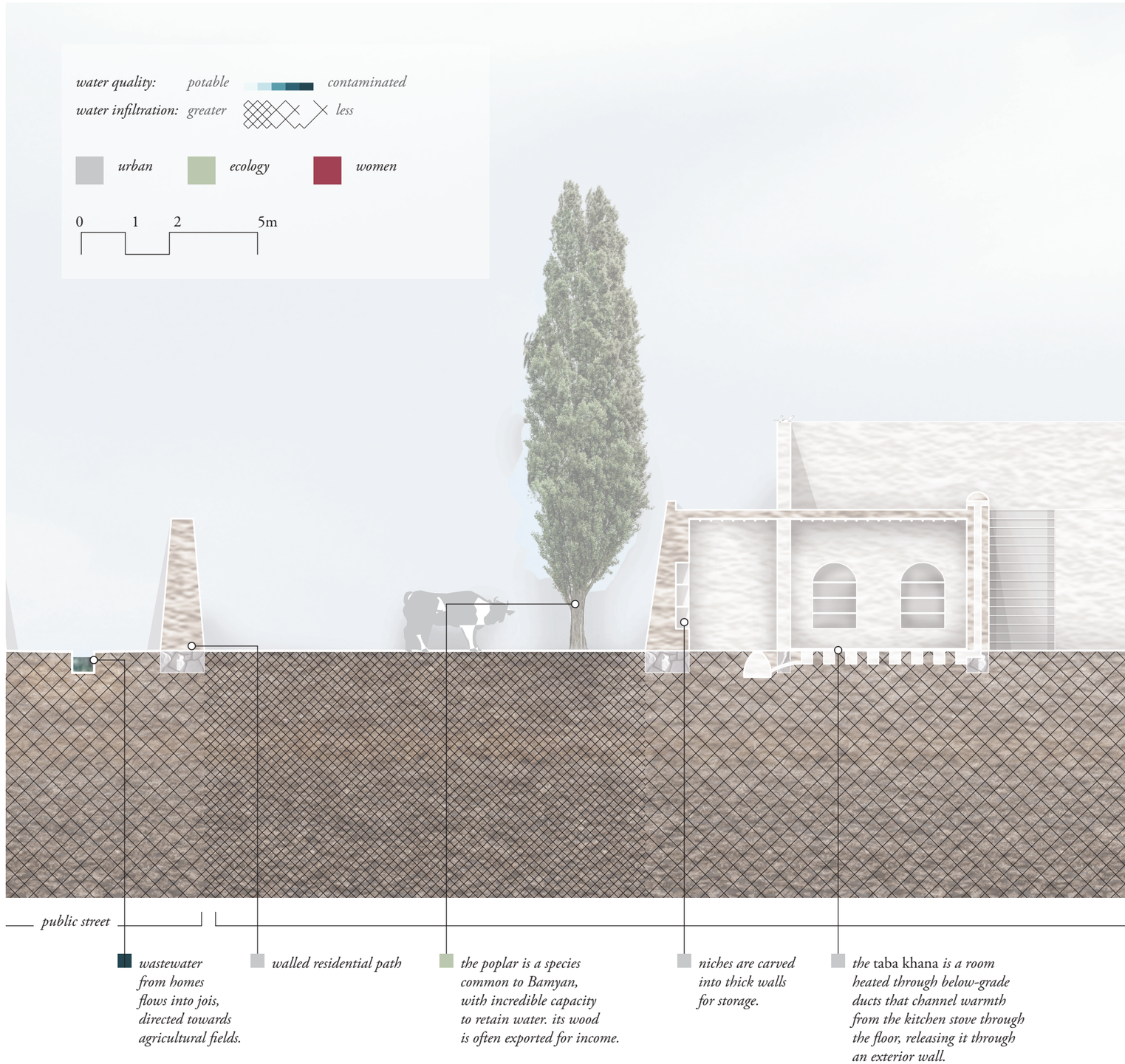
77 Dominik Roll, "Registration of Cultural Zones and Traditional Architecture in Bamiyan Valley," in *Bamiyan Cultural Master Plan,* UNESCO et al. (Germany: RWTH Achen University, 2007), 14. Communities south of the bazaar have been much longer established and by way of their traditional pattern of settlement have access to arable land and irrigation.



Figure 2.32
A *qala* in Bamyan district, distinguished by its massive walls and four corner towers.



Figure 2.33
Communities south of the bazaar, such as Saidabad, retain their traditional settlement patterns.



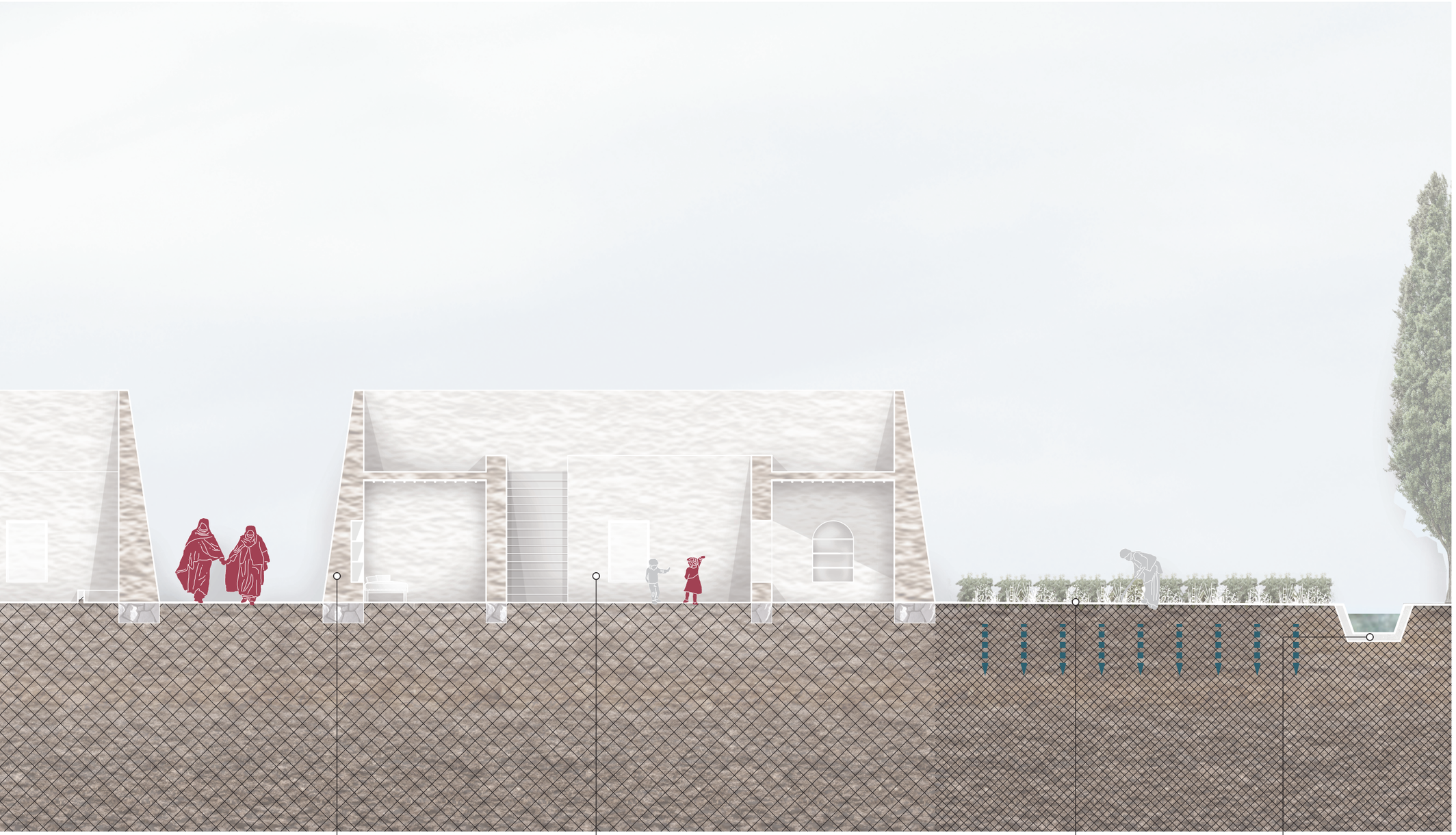
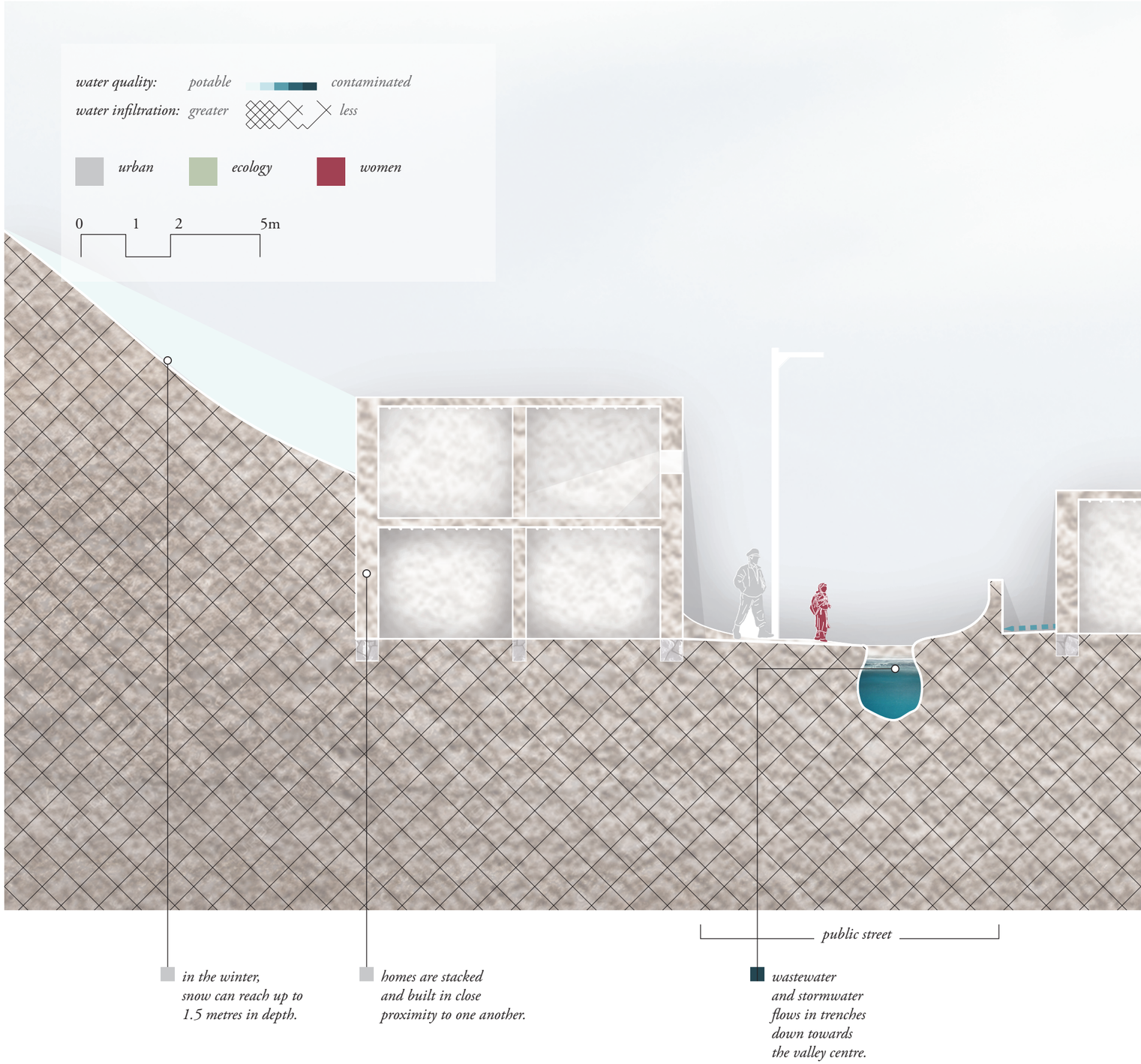


Figure 2.34
Section through typical south community.



Figure 2.35
Zargaran, a neighbourhood north of Bamyan bazaar is densifying rapidly on the slopes of the Hindu Kush mountains.



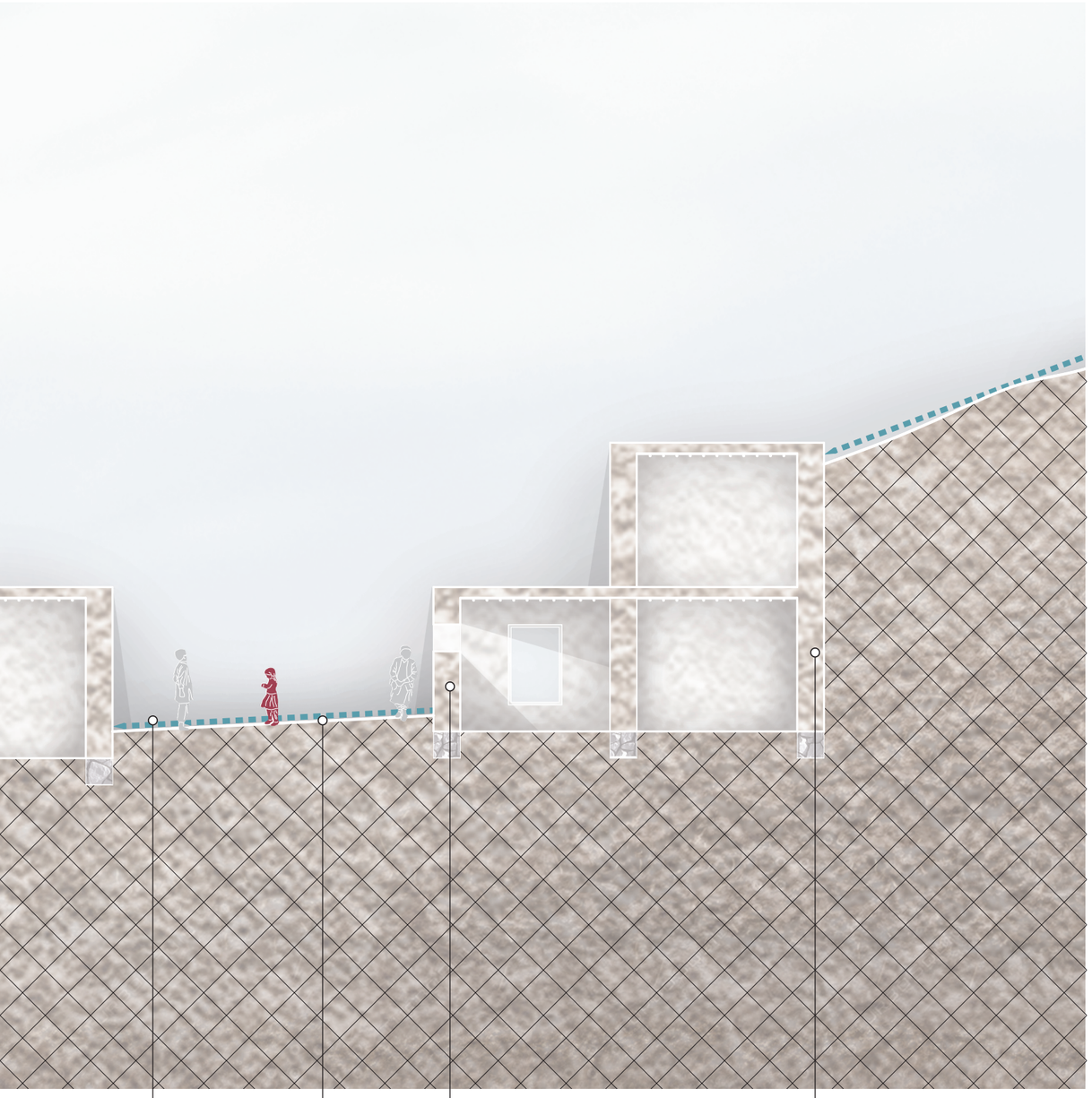


Figure 2.36
Section through typical north community.

Local Tensions

Friction is common between residents of north and south communities regarding economic development and employment opportunities. Ethnic hostilities are also prevalent in Bamyan valley, which is comprised of four main groups: Hazara people make up 75 percent of the valley's population, fifteen percent are Saadat, Tajik people near an estimated ten percent (and are the only Sunni Muslim group in Bamyan), and the Qizilbash comprise less than one half percent.[78] Ethnicity played a major role during the many decades of conflict and is ingrained as a point of contention in the local conscience; historically, racial discrimination against the Hazaras had led them to occupy an inferior status to Saadat and Qizilbash, although all three of these groups maintain minority status as Shia Muslims in the dominantly Sunni Muslim country.[79] Subtle lingering tensions are common between the four groups and has "resulted in the physical separation and cessation of intimate social interaction between [them]."[80] Even so, Bamyan is comparatively peaceful today: Hazaras and Saadat live together in many mixed communities throughout the valley; Qizilbash live almost exclusively in southern Bamyan; and Tajiks reside primarily in homogenous communities along the northern edge of Bamyan valley, as well as in a few mixed communities around the periphery of Bamyan bazaar. Beyond the perfunctory nature of bazaar transactions, social interaction between the groups will occur for the celebration of births, weddings, and deaths.[81]

Public Space

As axial road systems are imposed by the BCMP, however, the historic urban and social fabric of Bamyan is deteriorating. Where urban form has traditionally been generated by the enclosure of voids by correlated solids, urban development under the BCMP follows a foreign typology based on the Western oriented narrative of street-oriented blocks and undefined

78 Adlparvar, "When Glass Breaks," 24.

79 Ibid., 91. During the Taliban regime, Hazaras suffered considerably more than the Saadat or Qizilbash because of their specific facial features. Specifically, the inability of many Hazara men to grow facial hair during a time when beards were obligatory resulted in their obvious recognition, and thus persecution.

80 Ibid., 110.

81 Ibid., 110.

representative civic space.[82] Regulated areas of development on the Dasht-e Isa Khan terrace, and even in some of the northern communities follow planned, rectangular roads which are alien to traditional settlement patterns (fig. 2.37).[83] Streets, paved to the scale of the vehicle, cut into the organic, cellular order of the valley, disrupting relations of solid and void, "and expose the introverted precincts of secluded residential areas to the immediate impact of functions and activities from which they were carefully screened off."[84] This imposed and misguided urban zoning will cause any sense of cohesive community to become distinct social groups that are alienated from each other, and from a sense of place, physically, culturally, and socially. For example, water access points, now placed along major roads, are considerably more public (fig. 2.38); while this means that men and boys are increasingly participating in domestic activities such as water collection (fig. 2.39), such moves are confining already limited social spaces for women in Bamyan.

To compensate, the BCMP's urban development scheme on the Dasht-e Isa Khan terrace features a large public park between two central roads leading to the new provincial head office (fig. 2.40, fig. 2.41).[85] Framed on either side by the posterior facades of various administrative buildings and encircled by asphalt, the park is an oversized void, uncomfortable to occupy. The park is vacant throughout the day unless the city is hosting celebrations for a commemorative occasion, and in the evening, may often be the site of a men's pick-up soccer game. Similarly, Bamyan Peace Park, a stretch of land planted with thin lines of poplar that separate small areas of grass, located between Bamyan River and the bazaar, remains largely isolated (fig. 2.42, fig. 2.43). Entirely built and funded by the Afghan Youth Peace Volunteers in 2009, Bamyan Peace Park was a sign of local initiative, and an important symbol of growth that was born and bred in the community, without foreign aid.[86] Nonetheless, other than large-scale community events such as International Peace day, the park is an imported typology and is

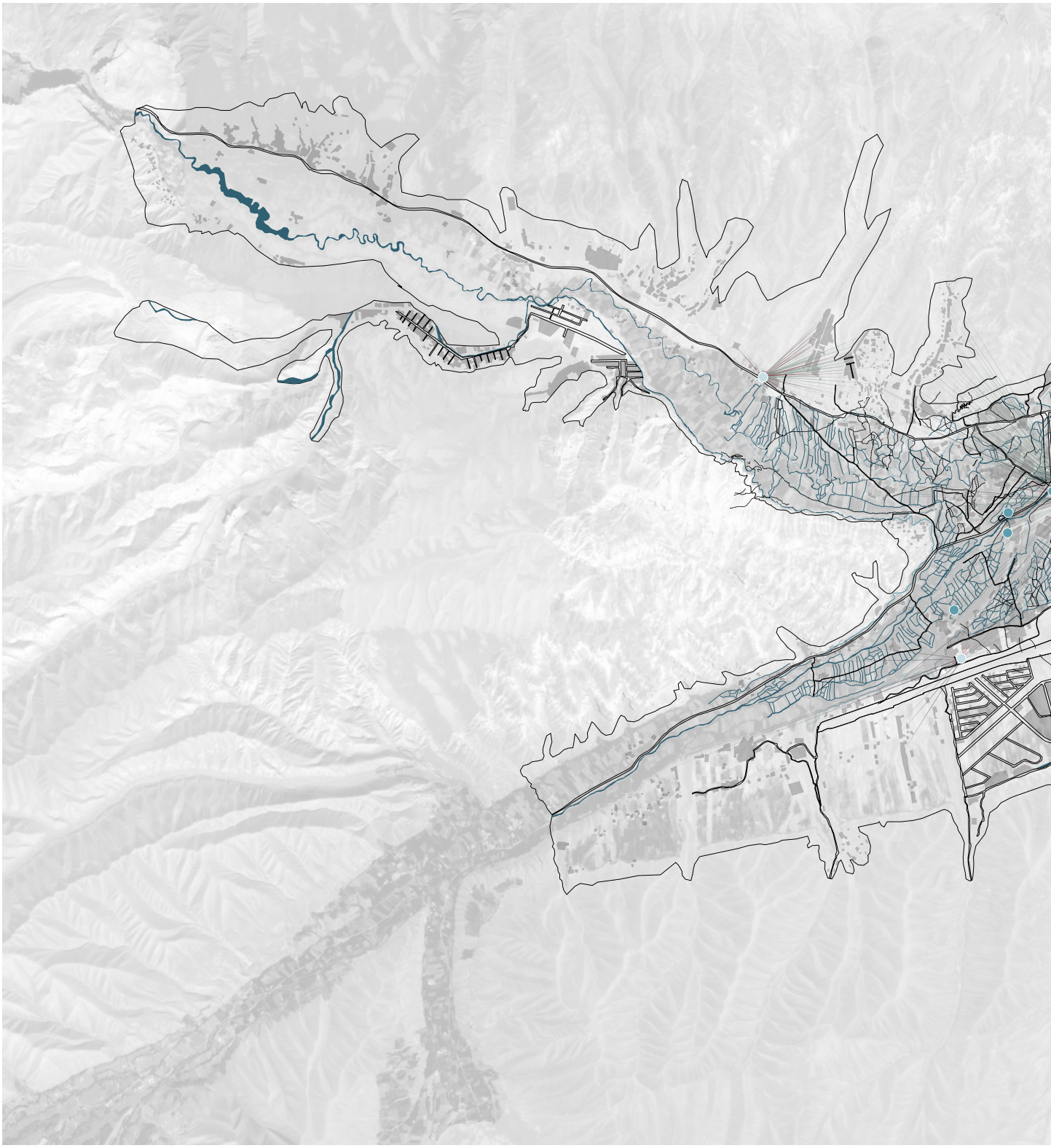
82 Bianca, *Urban Form in the Arab World*, 204. Bianca's analysis of the problems that historic Middle-Eastern Islamic cities face as they confront modernity is useful to understand the implications of liberal peacebuilding in Bamyan. Bianca's exploration of the conflicts between traditional Islamic models and Western planning methodologies is applicable in Bamyan, moreover, for the shared values that exist in both Middle-Eastern and Afghan societies.

83 Lohmann, "Inventory of Historical Monuments in the Bamiyan Valley," 109.

84 Bianca, *Urban Form in the Arab World*, 202.

85 Roll, "Registration of Cultural Zones and Traditional Architecture in Bamiyan Valley," 19.

86 David Smith-Ferri, "Building Bamiyan Peace Park," *Counterpunch,* October 21, 2010. http://www.counterpunch.org/2010/10/21/building-bamiyan-peace-park/



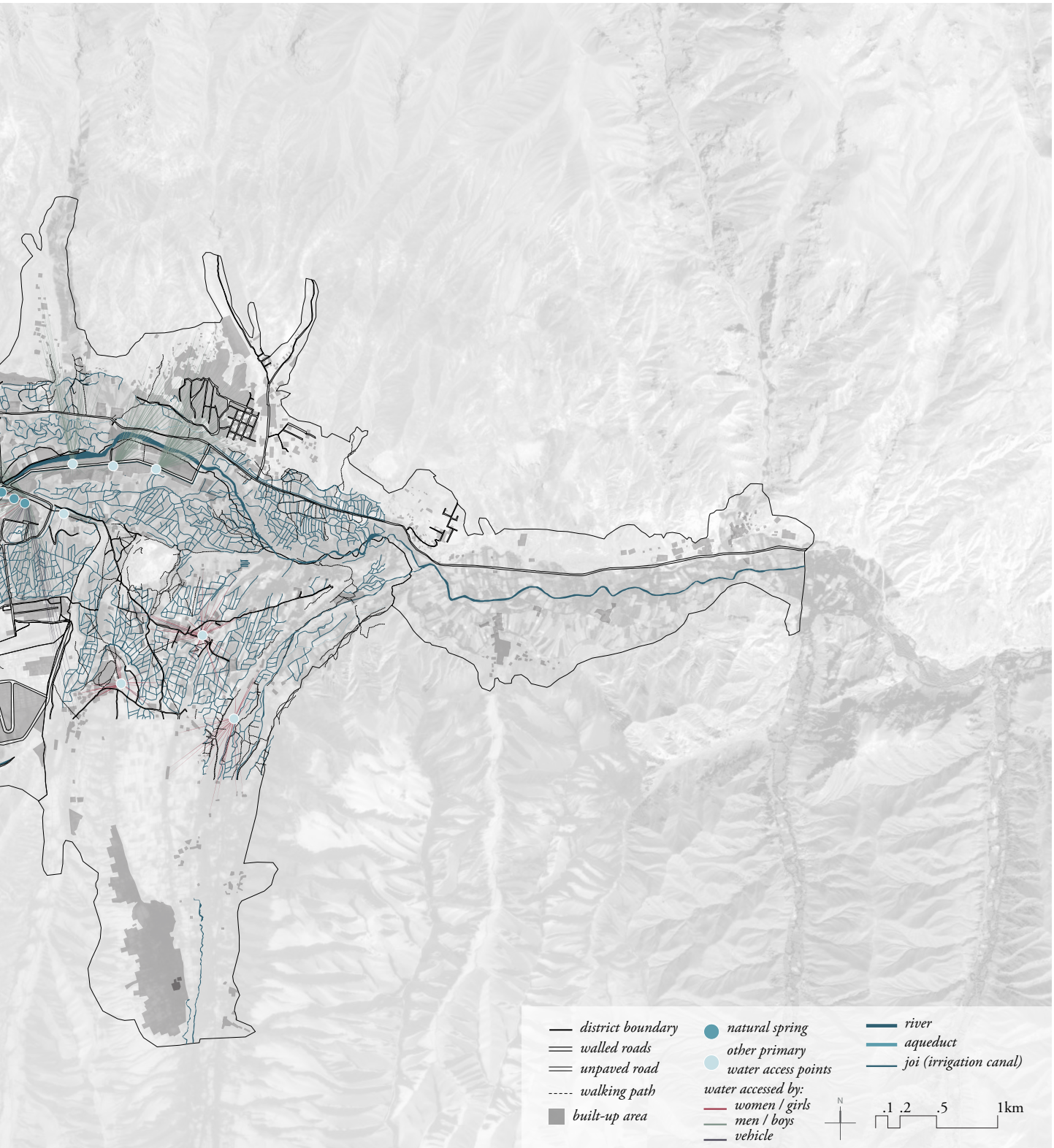


Figure 2.37
Road network in Bamyan. Access to water is increasingly made public by the axial road network imposed by the BCMP.



Figure 2.38
A water well is made considerably more public by the imposition of axial roads through previously secluded residential areas in southern Bamyan.



Figure 2.39
As water access points become more public, men and boys increasingly participate in water collection.



Figure 2.40
New public park on the Dasht-e Isa Khan terrace in southern Bamyan.

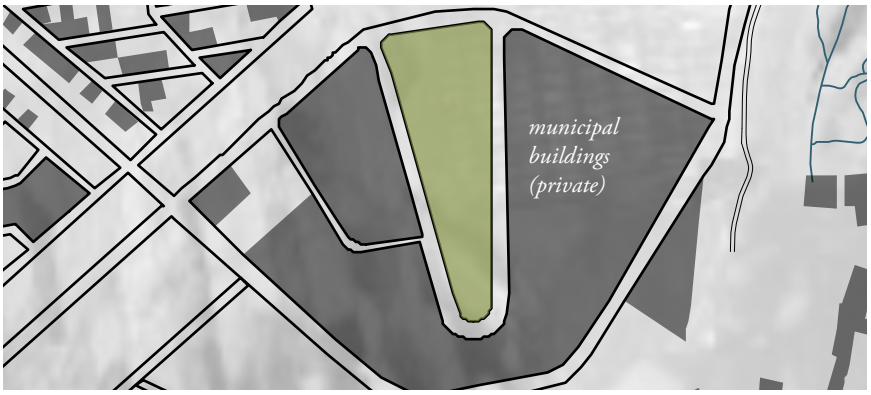


Figure 2.41
New public park on the Dasht-e Isa Khan terrace in southern Bamyan.



Figure 2.42
Bamyan Peace Park.

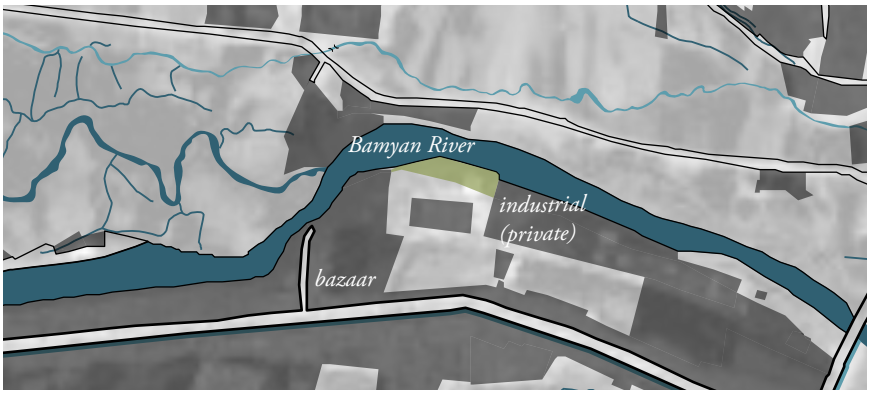


Figure 2.43
Bamyan Peace Park.

locally perceived as an uncomfortable space. It remains empty, holding little value for its citizens, save the occasional men who lazily wander in to smoke in solitude.

Family Space

Personalised, enclosed, qualitative space is very clearly being replaced by anonymous, open, quantitative space.[87] Minimal occupancy of both parks can be directly attributed to the lack of enclosure, and therein the unawareness of concepts of public and private space in Afghan society. This is understood through the example of the Women's Garden, a walled park outside Bamyan city limits, near the archaeological site of Shahr-e Zohak.[88] Established in 2007 by PARSA (Physiotherapy and Rehabilitation Services for Afghanistan) a private NGO, the Women's Garden is both well-designed and well-kept, in stark contrast to the two city parks (fig. 2.44). Enclosed by a tall masonry wall along its perimeter, the Women's Garden is programmed to include a restaurant, greenhouse, and a place for women's crafts. A water feature near the entrance provides a tranquil backdrop to the sound of children playing on swings, and complements the hum of conversation from families, couples, and groups of women picnicking under the shade of scattered poplar and willow trees. The garden is intimate, comfortable, and safe. The very presence of women, facilitated by the sense of enclosure, qualifies the garden as a family space; entrance to the garden is not permitted if a group is unaccompanied by a woman. Especially when popular forms of local Afghan cultural expression are intrinsically linked to social interaction, for example, cooking, poetry reading, and singing, enclosed places of gathering provide an important space for Afghan communities to engage together in these dimensions of culture.[89]

Enabled by the presence of women, the concept of the family space mediates between conventional notions of public and private to generate culturally acceptable social spaces for both genders. This is because family is a zone of safety for Afghan people, "the most important institution of identity, socialisation, and moral support."[90] Particularly when extended families have

87 Bianca, *Urban Form in the Arab World,* 39.

88 Shahr-e Zohak, colloquially the Red City, was the largest of numerous fortifications spread across the Hindu Kush. Whoever commanded the Bamyan valley and the fortress at Zohak effectively controlled the main route from Central Asia and northern Afghanistan to the capital city south of the Hindu Kush (Kapisa in the Buddhist period, and Kabul during the Islamic period).

89 Wyndham, "A Short Study Investigating Values," 25.

90 Skaine, *Women of Afghanistan in the Post-Taliban Era*, 73.



Figure 2.44
Women's Garden near Shahr-e Zohak. Enclosing walls enable a sense of intimacy.

historically formed the premise for village settlements, the family is the major economic, social, and political unit of society, guaranteeing security for each family member from birth to death.[91] Family ties and loyalty thus remain "resilient sources of psychological well-being, social welfare, and economic security."[92] Traditionally, any sense of Afghan national identity, *Afghaniyat*,[93] has never been based on the individual, but rather is embedded deeply in the collective unit of the tribe, clan, and family: "in Afghanistan, you understand yourself as a son, a brother, a cousin to somebody, an uncle to somebody. You are part of something bigger than yourself."[94] Family is solidarity.

Women play a critical role in terms of family integrity; women are the perpetuators of ideal society, their deeds reflect the honour and dignity of their families.[95] Women are thus central to the family dynamic, and protectively guarded. Spatially, this means that women have traditionally been secluded, participating in a private life that takes place in the enclosed walls of the domestic courtyard. A family space is therefore denoted by the presence of women, and invokes a sense of interiority, privacy, and modesty. Necessarily, appropriate community spaces in the larger urban fabric, such as the Women's Garden, will draw upon similar values. Informal gathering spaces, such as areas of water storage and water collection, will also have analogous characteristics. Particularly through its link to domestic activities such as cooking and washing, water vindicates women's rights to leave the private realm of the household, and legitimates their public existence:

> Parwana's day unfolds as it always does, as it has for the four years since their parents' deaths. She feeds the chickens. She chops wood and lugs buckets [of water] back and forth from the well. She makes dough and bakes the bread in the *tandoor* outside their mud house. She sweeps the floor. In the afternoon, she squats by the stream, alongside other village women, washing laundry against the rocks.[96]

Points of access render water a physical place for women; the daily

91 Nancy Hatch Dupree, "The Family During Crisis in Afghanistan," *Journal of Comparative Family Studies* 35 (2004), 313.

92 Samir Khalaf and Roseanne Saad Khalaf, ed., *Arab Society and Culture: An Essential Reader* (London: Saqi Books, 2009), 259.

93 Abirafeh, "Afghanistan Gozargah," 132.

94 Hermione Hoby, "Interview with Khaled Hosseini," *The Guardian*, June 1, 2013. https://www.theguardian.com/books/2013/jun/01/khaled-hosseini-kite-runner-interview

95 Skaine, *Women of Afghanistan in the Post-Taliban Era,* 65.

96 Khaled Hosseini, *And the Mountains Echoed* (Toronto: Penguin Group, 2013), 52.

process of walking towards these places, waiting in line, filling water, and walking back, also become occasion to exchange news, gossip, and so on (fig. 2.45). In Bamyan, neighbourhood wells, often funded and built by local community councils, *shuras*, are visited by groups of women and children to fill five-gallon yellow oil containers, the water vessel of choice throughout the valley, carried home on donkeys or by hand. Washing-related activities occur downstream of water access points, at the closest available *joi*. Women bring cleaning agents and large metal or plastic bowls, squatting along the edge of the *joi* to clean their family dishes and laundry (fig. 2.46). The hours spent on these tasks necessarily bring women together, and enable an important social network for women.

Otherwise, beyond institutional buildings, social spaces for women are few and far between in Bamyan (fig. 2.47, fig. 2.48).[97] In the bazaar, women are typically moving, lingering only at: the Titanic Bazaar, a set of canopied rows of market stalls where vendors sell everything from hair-removal cream to children's toys (fig. 2.49); the local Women's Café, a small tea and snack shop where men are permitted to enter only if accompanied by a woman (fig. 2.50); or in the Women's Bazaar, a quieter pedestrian-scaled side street where women are safely able to work as shopkeepers (fig. 2.51); or in. Despite their presence in the larger public arena, all three of these spaces maintain the same sense of enclosure and interiority common to spaces for women. Yet as dominantly commercial spaces, they hardly prove appropriate spaces for intimate cultural community gathering.

Moving to and from these places, women use smaller lanes and pathways, often walking along *jois* and waterways . To this end, channelization of Bamyan River has had some unexpected benefits. Fitted intermittently with staircases only along its northern edge, direct access to the water is limited, deterring men from using the river as a toilet as had been done previously. Women and girls now feel comfortable walking and meeting along the river's concrete edge (fig. 2.52), preferring this to the crowded streets and vehicular activity of the bazaar and other larger paved thoroughfares. Where the river breaks from its immediate adjacency to the bazaar, it too becomes a social space for women and girls who squat on river stones to scrub their clothes. Just north of the river, before irrigation water enters the river, *jois* widen, opening into concrete washing platforms, providing additional spaces for weekly washing activities (fig. 2.53).

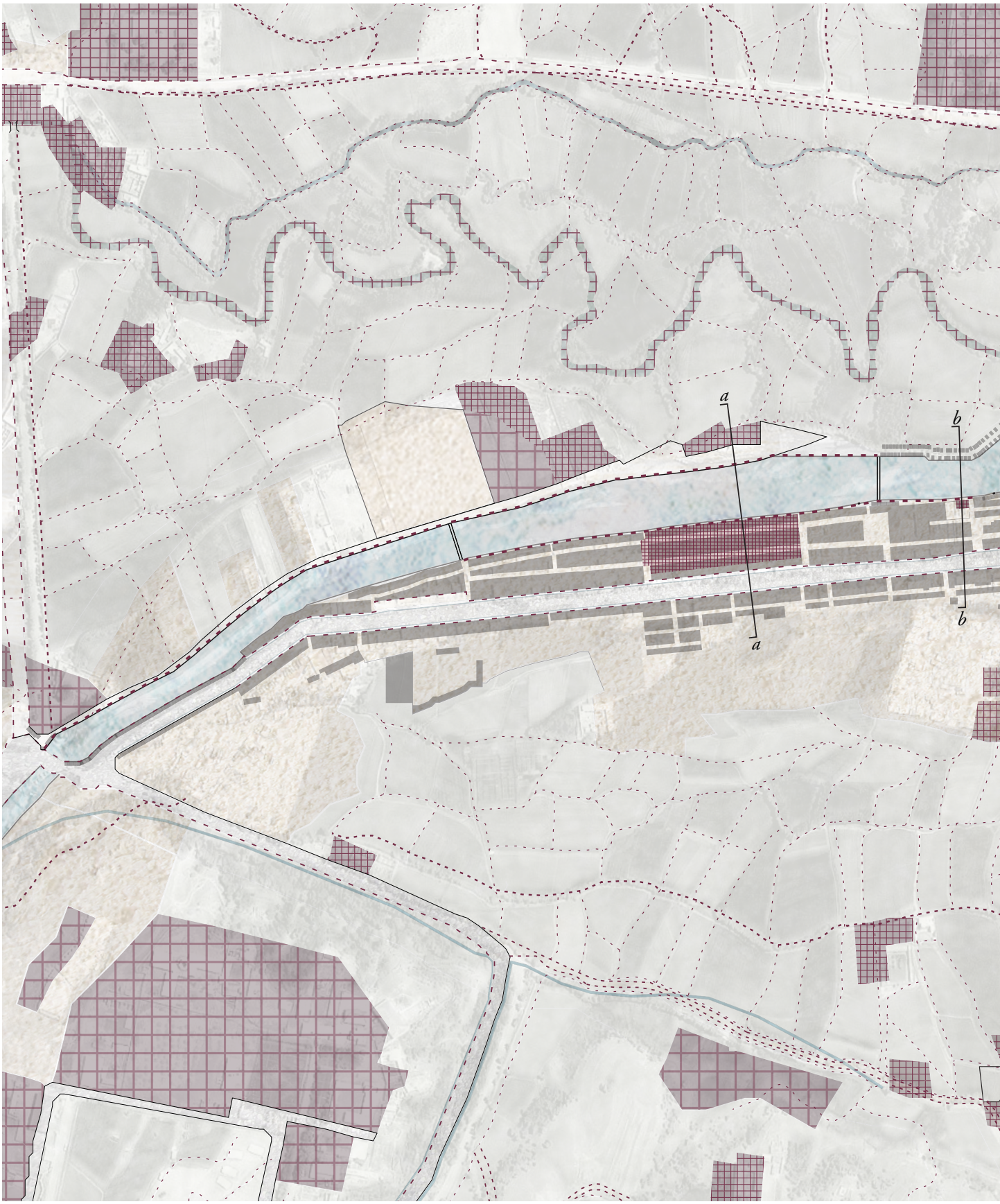
97 During the week, girls attend local schools, and increasingly many women are employed with NGOs and civil society institutions. Women can also participate in sports during scheduled hours at the indoor gym in New Town, but otherwise tend to lead private social lives, visiting one another in the safety and comfort of their enclosed homes.



Figure 2.45
Water creates physical places for women to come together in the public realm.



Figure 2.46
Women walking with their laundry along a *joi.*


a
a
b
b

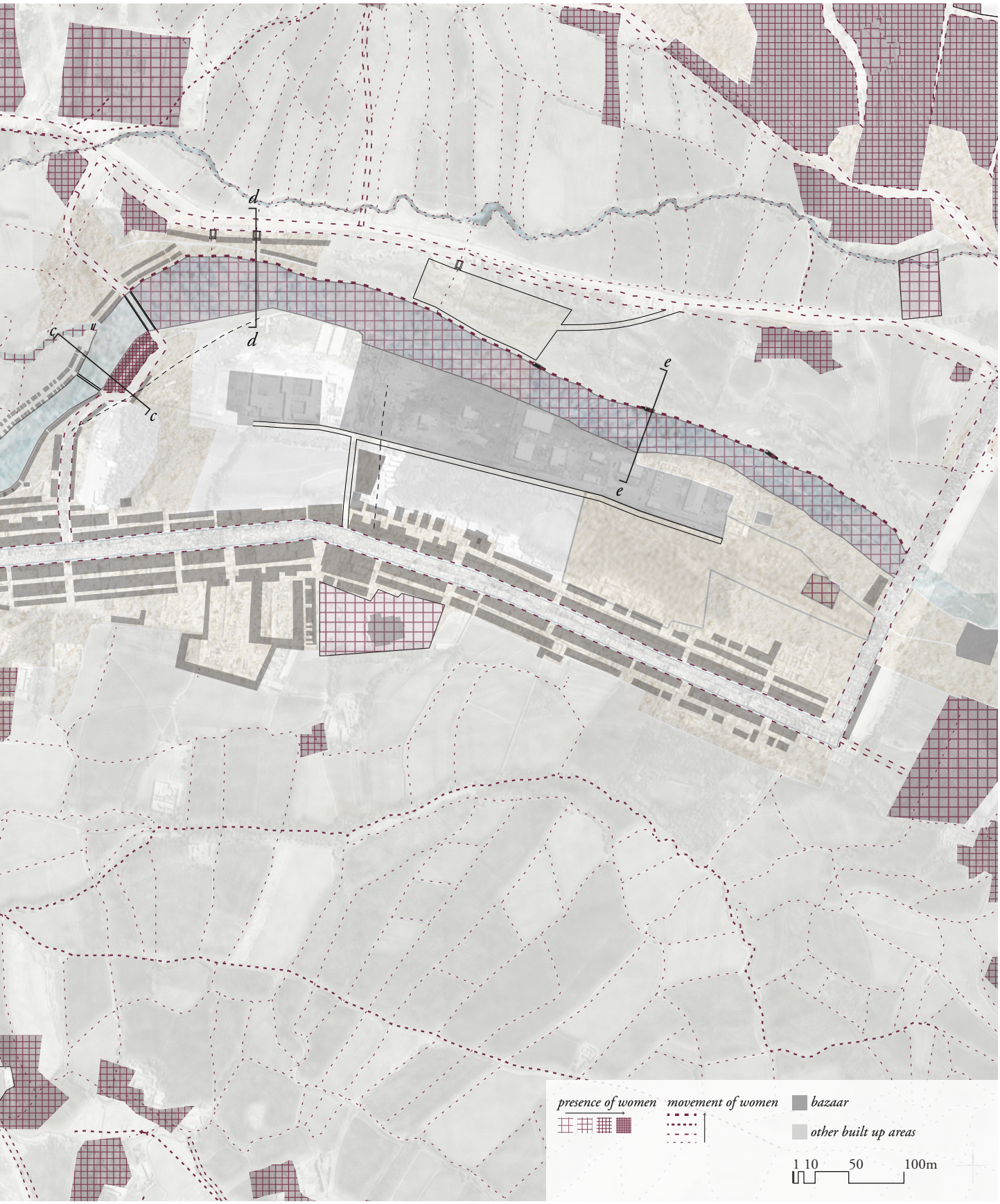


Figure 2.47
Presence of women, and therein family spaces, in Bamyan centre, which are predominantly residential-based.



titanic bazaar













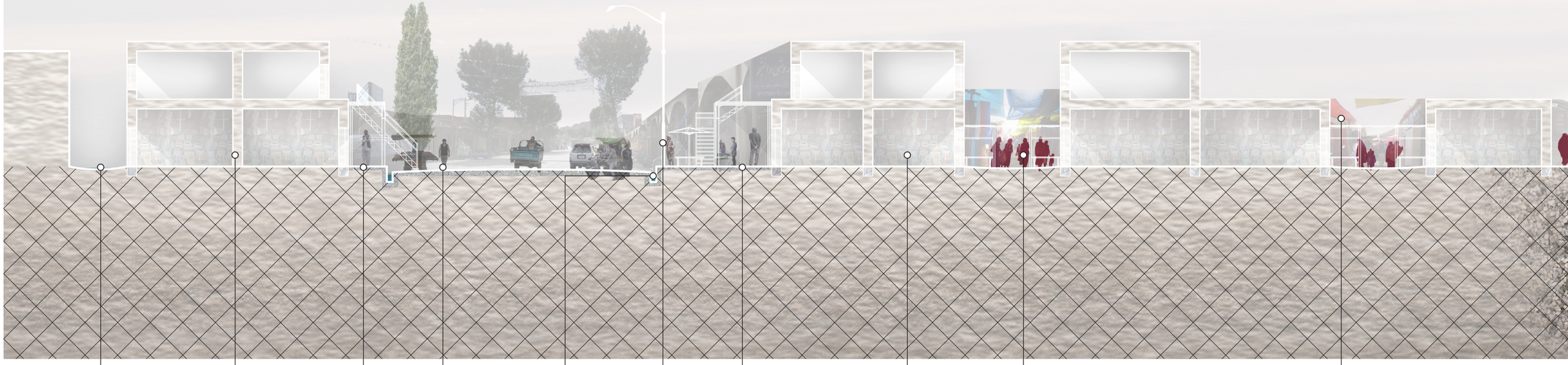
Figure 2.48
Spaces for women, and therein family spaces, in Bamyan centre.

water quality: *potable* — *contaminated*

water infiltration: *greater* — *less*

urban *ecology* *women*

0 1 2 5 10m



bazaar (main)

Titanic bazaar

- *runoff water pools over barren land.*
- *bazaar buildings are made out of local mud-brick or concrete.*
- *shaded walking path.*
- *paved road, scaled to the vehicle.*
- *open gutters separate street from sidwalk.*
- *solar street lights.*
- *extended walkway area provides space for merchants to set up exterior stalls.*
- *shops are small cupboards opening onto the street.*
- *lanes are scaled to the pedestrian, providing a sense of enclosure and safety.*
- *canopies of colourful fabric and plastic enclose the lanes of the Titanic bazaar.*

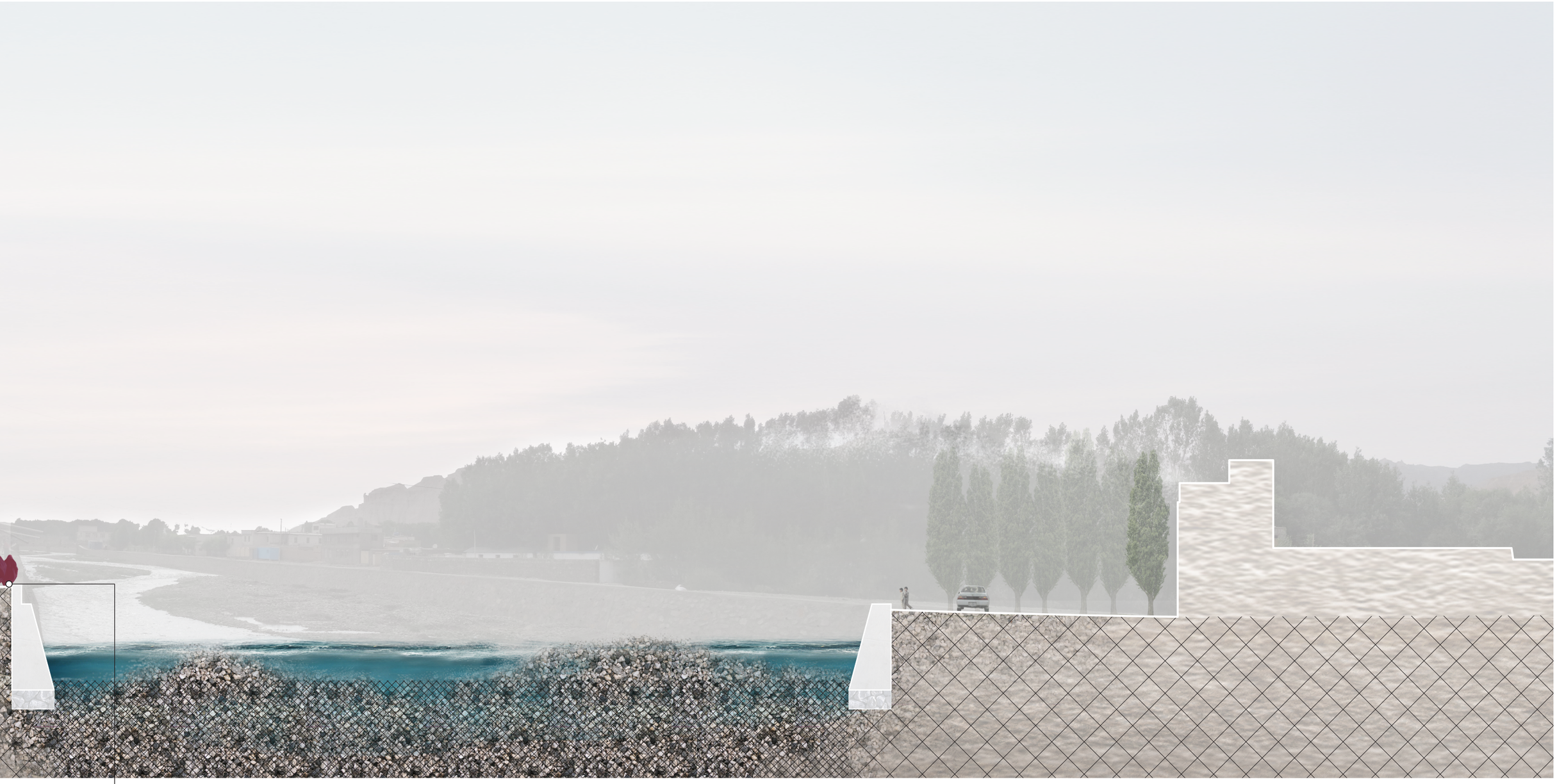
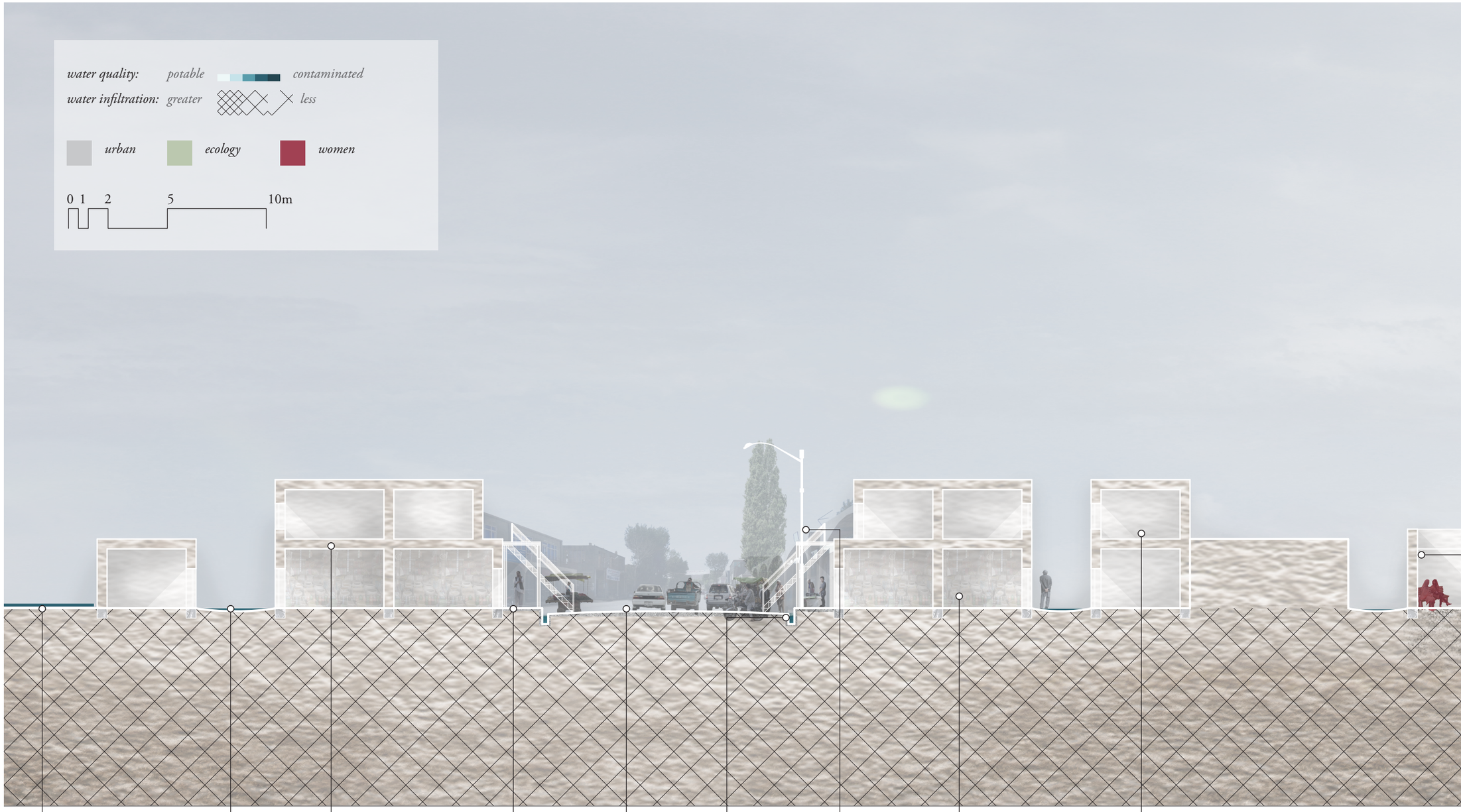


Figure 2.49
Section aa, through Titanic Bazaar.


water quality: potable contaminated
water infiltration: greater less
urban
ecology
women
0 1 2 5 10m
bazaar
agricultural land is increasingly being converted to commercial land use.
runoff water pools over barren land.
bazaar buildings are made out of local mud-brick or concrete.
shaded walking path.
paved road, scaled to the vehicle.
open gutters separate street from sidwalk.
solar street lights.
shops are small cupboards opening onto the street.
second storey of many buildings provide rooms for rent to male students of Bamyan University.

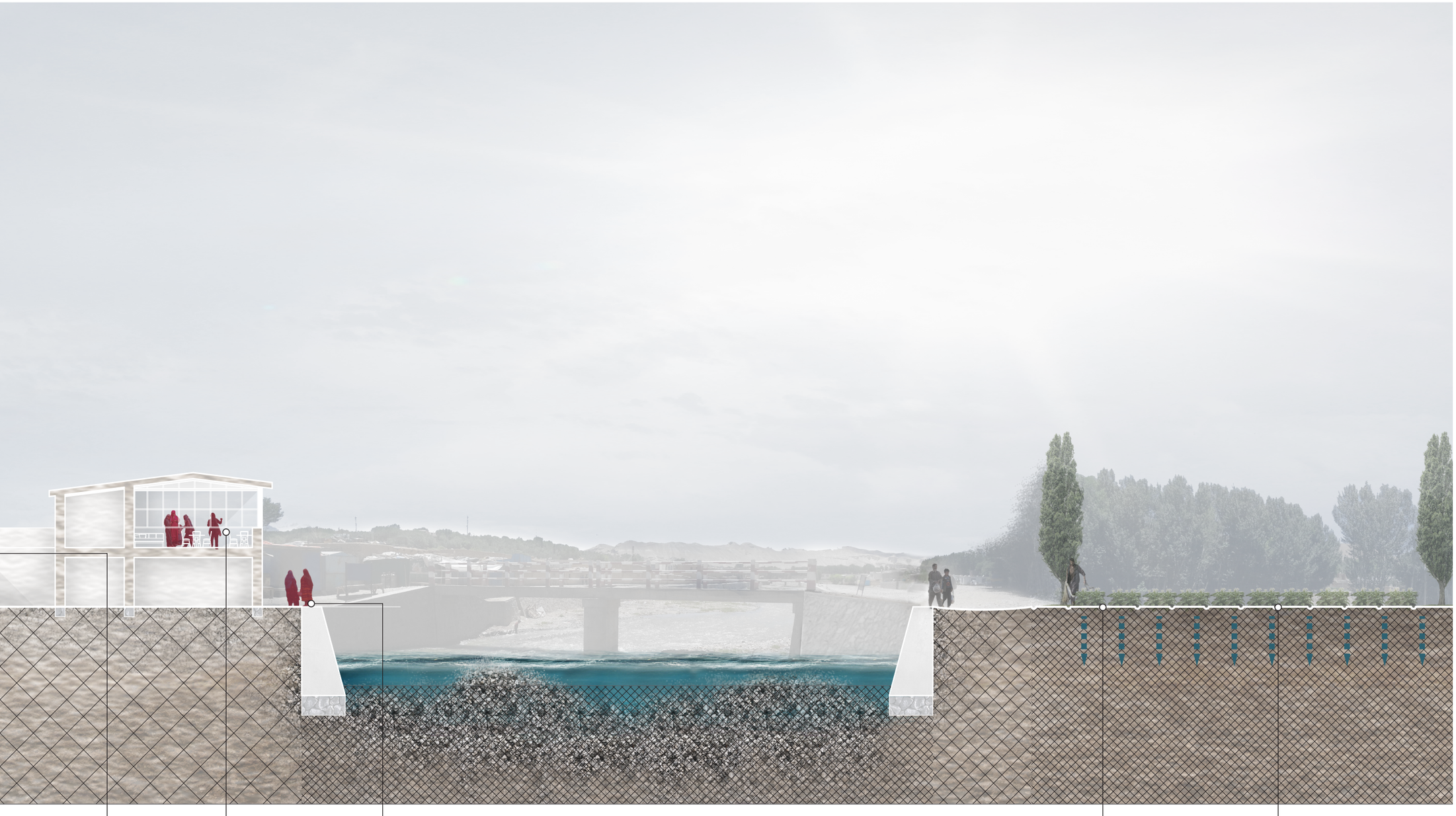
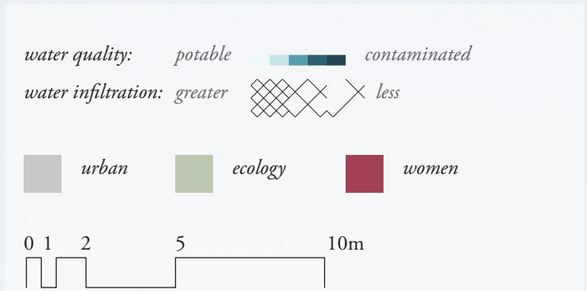


Figure 2.50
Section bb, through Women's Cafe.



Koh-e Baba mountain range, source of the valley's water supplies, visible in the distance.

the poplar is a species common to Bamyan, with incredible capacity to retain water. its wood is often exported for income.

road to main bazaar.

bazaar lane is scaled to the pedestrian, providing a sense of enclosure and safety to the space.

women are allowed to own shops here.

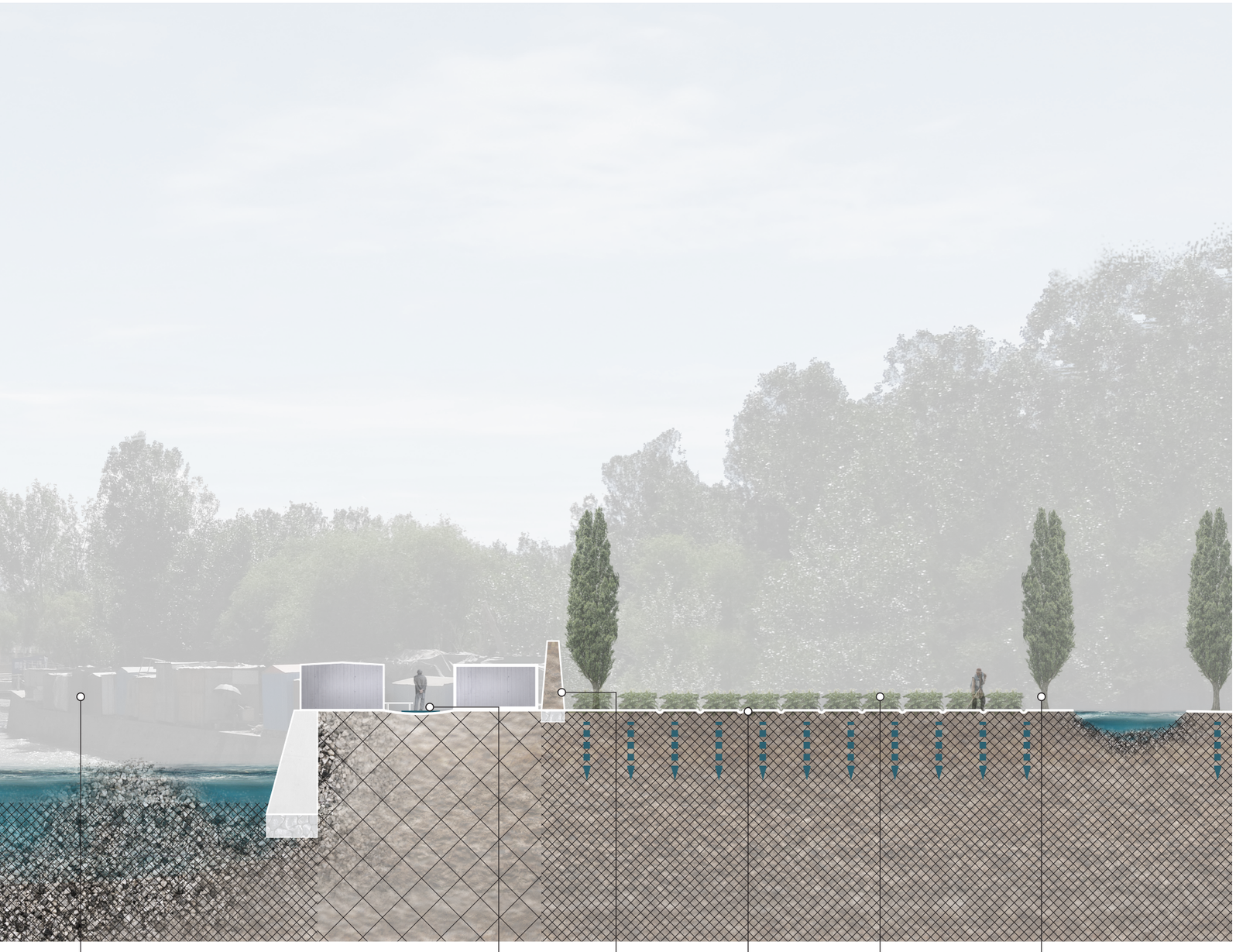


Figure 2.51
Section cc, through Women's Bazaar.


water quality: potable contaminated
water infiltration: greater less
urban
ecology
women
0 1 2 5 10m
industrial (private)
channelized river
barbed wire fence separates private program from the river and is indicative of areas of higher security.
daily and weekly household washing activities take place in the river, especially on Fridays.
stairs carved into the concrete retention walls provide access to the river.
the river wall provides a space for women to walk and meet with one another.
runoff water pools over barren land.
jois are additionally used for washing activities.



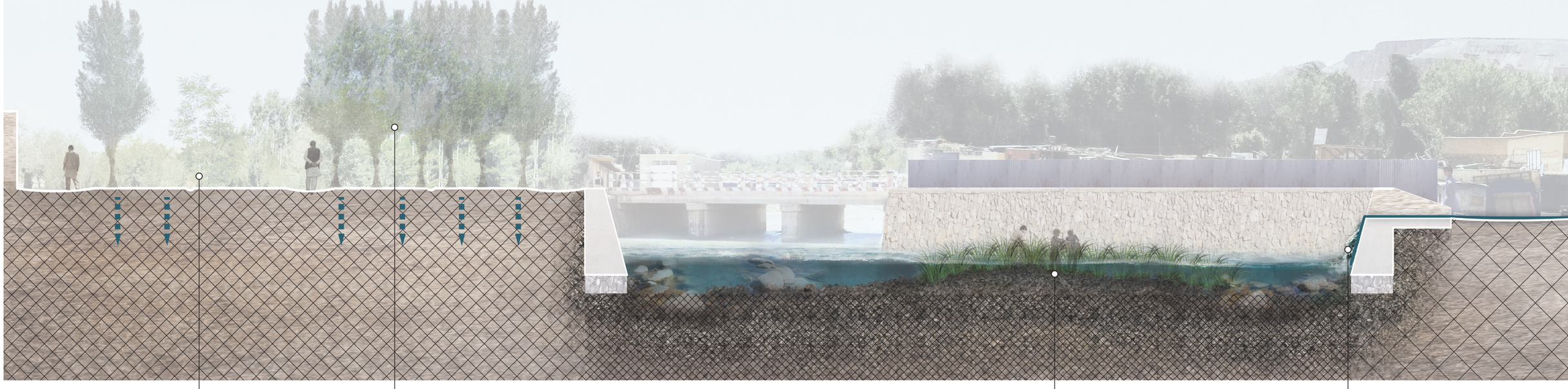
Figure 2.52
Section ee, through river access stairs.

water quality: *potable* *contaminated*

water infiltration: *greater* *less*

urban *ecology* *women*

0 1 2 5 10m



Bamyan Peace Park *channelized river* *metal works bazaar*

lack of enclosure negates the park as a family space.

the poplar is a species common to Bamyan, with incredible capacity to retain water. its wood is often exported for income.

during low flow, the river's path is braided, creating islands of activity.

agricultural wastewater and urban runoff re-enter Bamyan River.



Figure 2.53
Section dd, through widened *joi*.



We turn off the old highway just before the bus terminal, parking in the middle of the jumbled lane of metal-working shops fronting the river. What a change from my previous glimpses! Today the river is unignored! It bustles with activity and laughter of girls and boys, women and men.



Activity is centred on points of access to the river: concrete stairs cut into a recess in the retaining wall leading to a platform stepping into the river.



Families are spread throughout the braided river, on islands of rock and grass. Women and older girls, hands sometimes shielded by red rubber gloves, scrub at carpets on sheets of plastic.



Men carry the clean carpets to the river's edge where they are hung to dry in the sharp afternoon sun, and exchanged for the next unwashed carpet.



The river is hardly a metre at its deepest point where boys competitively swim and splash one another.



Younger girls, dispersed throughout, beat dirt from clothes with makeshift wooden paddles, and toddlers in sunhats perch on larger rocks observing the vibrant movement around them.



Groups of children clutch the corners of small and large pieces of fabric in hopes of catching small fish in their colourful traps.



Interacting with water gives girls the liberty to roll up their sleeves and pant legs without comment, though older women choose to remain completely covered, hem lines soaked with water.

Figure 2.54
Carpet washing at Bamyan River, before *Eid*. [Friday June 24, 2016].

One or two times a year, typically approaching *Eid*,[98] carpets are removed from the home and brought to the river for a thorough washing. This is a full-family, whole day ritual. Water becomes a shared space for men, women, and children, an informal family space (fig. 2.54). Momentarily, Bamyan River is no longer negative space in the landscape. Its retaining walls carve a protected, inhabitable void into the heart of Bamyan valley, a domestic courtyard for family activities. Ground, sky, and water are united, and once more, the city is imbued with the sacred. Water in Bamyan thus goes beyond simple survival. It is a medium that connects, negotiates, and transcends interior and exterior spaces, zones of public and private, of male and female.

The implications of the BCMP, then, are far-reaching, with detrimental consequences for both the ecology of Bamyan valley as well as the cultural identity and community solidarity of its people. Recognising 'positive' peace as a social environment where communities can formally and informally come together necessitates a sensitivity to existing mechanisms for such spaces in the peacebuilding process. The need for water is universal. Through its link to women's spaces, water provides opportunity for community gathering for all genders, all demographics, and all ethnic groups, a shared space for dialogue and decision-making.

98 *Eid al-Fitr* and *Eid al-Adha* are the two official holidays in Islam, common to both Shia and Sunni Muslims. The former marks the end of the month of Ramadan, and the latter falls on the tenth day of the Islamic month of Dhu al-Hijjah.





Part Three

The mapping of Bamyan valley in Part Two of the thesis clarifies underlying conditions, processes, and forms in sequential and analytical layers. Herein, site is treated as an operational construct:[1] considering relationships and forces of interaction and exchange present in the local context brings to light the spatial network of water in Bamyan, making evident the links between ecological and cultural systems, and the implications of liberal peacebuilding on these relationships. Comprehensive analysis of parameters of peace, water, and women suggests the potential of shared spaces for water to mobilise community solidarity, empower cultural identity, and build human dignity so as to facilitate long-term sustainability and self-sufficiency in the post-conflict urbanising environment of Bamyan.

Emerging from this inclusive understanding of site, the proposed design goes beyond an "area of control," to encompass an "area of influence," and an "area of effect," deliberately considering forces acting upon a site, as well as the wider impacts following design intervention.[2] Ecology is used as a framework to rebuild social capital through an incremental process of community-based natural resource management (fig. 3.02); water resources are appropriately activated in Bamyan valley's watershed to build local economy and community capacity, propagated further by use of both vernacular and modern building technologies. Design begins at

1 Andrea Kahn, "Defining Urban Sites," in *Site Matters: Design Concepts, Histories, and Strategies*, ed. Carol J. Burns and Andrea Kahn (New York: Routledge, 2005), 285.

2 Carol J. Burns and Andrea Kahn, "Why Site Matters," in *Site Matters: Design Concepts, Histories, and Strategies,* ed. Carol J. Burns and Andrea Kahn (New York: Routledge, 2005), xii. As outlined in *Site Matters*, site has three distinct areas. The area of control is the most common understanding of site, delineated by boundaries. This is typically the extent of understanding of site achieved through present practices of liberal peacebuilding. The second area is the area of influence, which recognises the forces that act upon a site but may not necessarily be confined to the bounding area of the site. Finally, the area of effect looks at the relationships that emerge after design intervention.

Figure 3.01
[Previous] Channelized river walls provide a social space for women and girls.

the scale of a network, in which interventions demonstrate a coupling of infrastructure, architecture, and ecology to speculate a pattern of sustainable and participatory growth, which is elaborated in the detailed design of a washing house along Bamyan River. Under principles of ecological urbanism and emancipatory peacebuilding, the thesis seeks to design the context for peace, spaces in which tension and conflict can be choreographed through dialogue and compromise.



Figure 3.02
Jawkar, a village in the upper catchment of the Bamyan valley watershed, where community-based natural resource management is critical to support local livelihoods.

Agency of Water

Water scarcity in Bamyan is largely an issue of inefficiency and poor management.[3] Development solutions in the water sector aggravate this issue, addressing immediate needs of supply management such as water access or flood prevention, without considering the larger water network, traditional systems of management, or resulting social and ecological implications. This stems from a modern reliance on finance and technology to address water issues, based on the prevalent understanding of water scarcity as solely a physical issue. That is, present water management analysis revolves around the discourse of 'blue water,' water that is visible, flowing in liquid form above or below ground, harnessed by physical infrastructure.[4] 'Green water,' the invisible flow of vapour to the atmosphere through evaporation and transpiration is largely unaccounted for but plays an important role in ecosystem health and long-term security of water resources.[5] Incorporating both blue and green water flows in development projects necessitates looking at the complete water cycle, understanding water as it moves through land-based processes, to increase opportunity for water productivity.

Integrated Water Resource Management (IWRM) takes this soft-path approach, looking at water resources in terms of a watershed ecosystem

3 Brown and Blankenship, *Natural Resource Management and Peacebuilding in Afghanistan*, 26.

4 Malin Falkenmark and Johan Rockstrom, *Balancing Water for Humans and Nature: The New Approach in Ecohydrology*, (London: Earthscan, 2004), 5. In the realm of natural resources, security is typically associated with abundance; more water is equivalent to greater water security. Throughout human history, water has been directly associated with infrastructure and technological developments, both vernacular and modern. As development has modernised and associated itself with profusion of financial capital however, water security is less and less linked to the proximity or capacity of water in the environment. Water management strategies have become highly centralised and authoritarian in nature. Such modern innovations have considerably distanced users from their water source.

5 Ibid., 6.

to reconceptualise the purposes of water, and how it is used. Beginning at this larger scale ensures that development projects do not exist in isolation, and instead function synergistically with one another. Infrastructure projects are decentralised and go beyond supply management and simple water access, to incorporate measures for water harvest, water storage, water retention, water treatment, and water infiltration, among other things. Infrastructure is incremental, employed at a variety of scales, includes all affected stakeholders, and is responsive to the conditions of its local context. IWRM thus requires a highly interdisciplinary and cross-sectoral approach to water management that understands the interrelations and interdependencies between various economies, industries, and activities. Successful development interventions will necessarily operate through economies of proximity and economies of scale, utilising community participation and vernacular technologies to capitalise on local conditions.

Appropriate interventions are therefore inherently rooted in ecological urbanism, a pattern of growth that focuses on the ecological, economic, and social conditions of a place. Reanimating sustainability within political, social, and cultural discourse, ecological urbanism provides a framework to integrate relationships between ecology and urbanism such that cities are made fluid and adaptable, capable of evolving, reversible, and provisory, and therein able to respond to the needs of a society that is under constant reorganisation.[6] Through the intersection of infrastructure, ecology, and architecture, this approach emphases the interaction between spatial patterns and ecological processes. It is a systems-thinking methodology rooted in the self-organisation of ecosystems and patterns of existing relationships to speculate emergent behaviours.[7] The consideration of abiotic, biotic, and cultural factors, as well as the energetics of a given site, ensures that the interdisciplinary ecosystem-based design approach is not only about quantitative prediction, but also about qualitative understanding of site.

Key to this approach is a focus on cultivating resilience, the ability to recover after shock and deal with future uncertainty. Resilience stems from an understanding of the ecological forces of a given area through a composition of networks, both physical systems and human communities, that value diversity and distribution over centralised efficiency. Seeking to restore and maintain underlying conditions, in the event of future trauma, natural or human-induced, the overall system will be able to self-heal,

6 Charles Waldheim, "Weak Work," in *Ecological Urbanism*, ed. Mohsen Mostafavi and Gareth Doherty (Zurich: Lars Muller Publishers, 2010), 114.

7 James J. Kay, "An Introduction to Systems Thinking," in *The Ecosystem Approach: Complexity, Uncertainty, and Managing for Sustainability,* ed. David Waltner-Toews, James J. Kay, and Nina-Marie E. Lister (New York: Columbia University Press, 2008), 3.

coping with external stress through internal adaptation mechanisms. The marriage of ecology with urbanism thus enables infrastructural systems that are simultaneously redundant, efficient, autonomous, strong, independent, flexible, and collaborative, with the fundamental notion that future development will not increase community vulnerability. Herein, the question for design becomes about appropriate intervention in the underlying context to enhance resilience.

Especially when economy in Bamyan is inseparable from the environment, the sustainable community-based management of water resources within the framework of a watershed ecosystem holds considerable potential as a mechanism for conflict prevention and peacebuilding, a means of rebuilding both environmental and social resilience in Bamyan.[8] Working with water addresses the growing need to integrate peacebuilding efforts with climate change adaptation strategies to achieve goals of long-term sustainability.[9] Particularly as Bamyan transitions from rural to urban, the peacebuilding process must mitigate increased demands for water stemming from population growth and economic development, reduce the risk of climate-related disasters specifically drought and flood, and rebuild water infrastructure in an ecologically and culturally appropriate manner.[10]

Network Design

The watershed region is, necessarily, the design terrain of the thesis, a "hydrophysical infrastructure that provides a strategic, intermediary scale for [large-scale, network-oriented] planning."[11] In Bamyan valley, the relevant watershed zones are the upper catchment, consisting of grassland steppes and rangelands with many small glacial streams; the upper-middle catchment, where side streams join to reach larger water bodies; the lower-middle catchment, along larger water bodies where greater settlement occurs; and

8 Brown and Blankenship, *Natural Resource Management and Peacebuilding in Afghanistan*, 3. Conflict has not only destroyed physical infrastructure, but has also eroded social and community relations: an entire generation has grown up in Afghanistan not knowing peace.

9 Matthew and Hammill, "Peacebuilding and Adaptation to Climate Change," 273. Climate change, already evidenced in regions throughout Afghanistan, including Bamyan, multiplies threats of instability and further stresses already limited natural resources.

10 Brown and Blankenship, *Natural Resource Management and Peacebuilding in Afghanistan*, 5.

11 Pierre Belanger, "Redefining Infrastructure," in *Ecological Urbanism*, ed. Mohsen Mostafavi and Gareth Doherty (Zurich: Lars Muller Publishers, 2010), 345. Because hydrologic processes drive landscape processes, the watershed becomes the minimum unit of ecosystem management, and thus design.

the flood plain, the area immediately adjacent to water bodies, subject to material deposit and flooding, typically resulting in highly braided rivers.[12] The unique combinations of each zone demand appropriate infrastructure that adequately addresses the complete water cycle, with particular emphasis on increasing 'green water' flow through the site. For instance, where the upper catchment requires rangeland restoration and check dams to slow down glacial runoff, the lower-middle catchment is best suited for riparian forestry, community gardens, and areas for water retention.

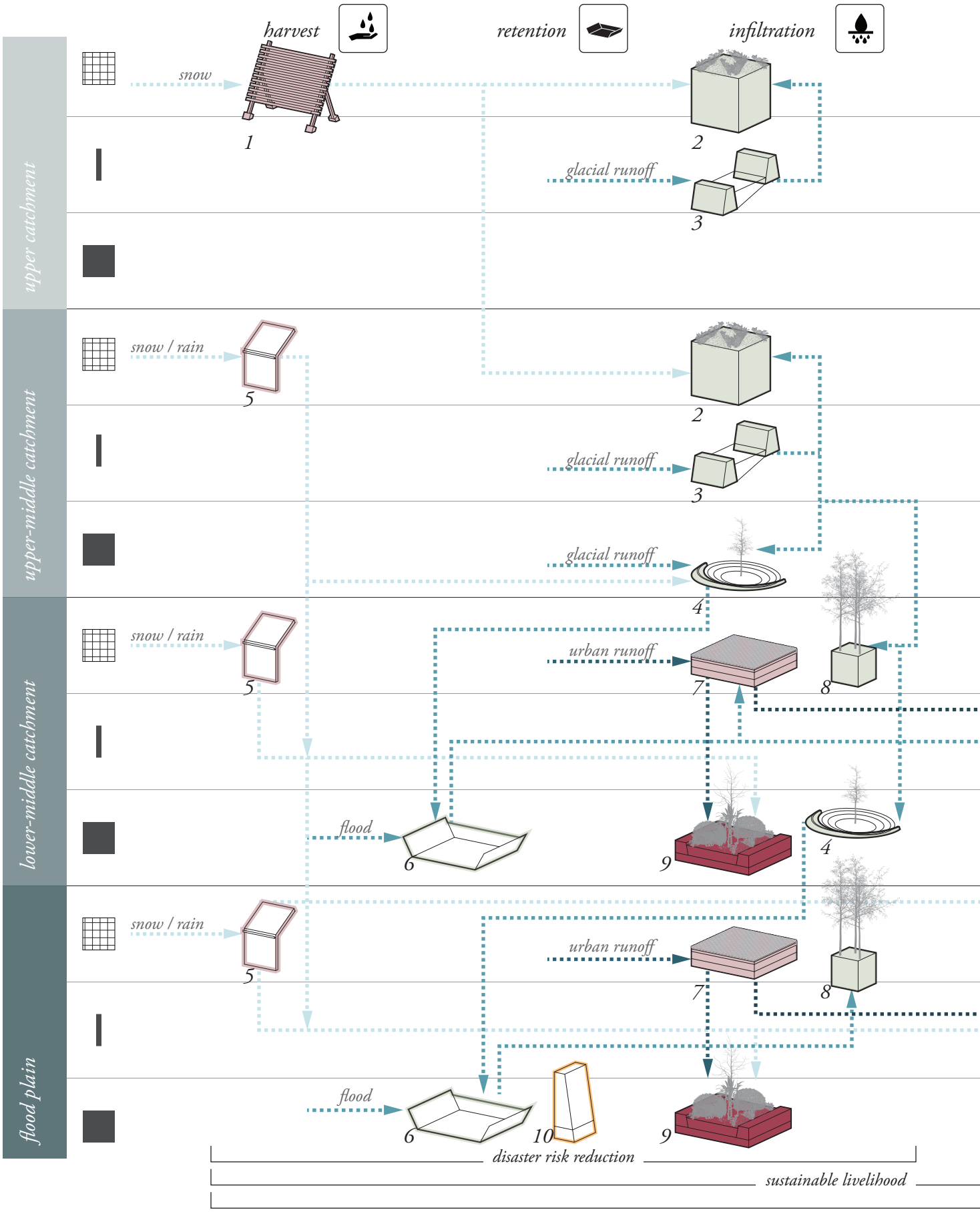
Acknowledging the presence of existing water management systems and recent water development projects, the thesis proposes three types of network infrastructural interventions: physical, pertaining to built components; social, indicating community activity; and ecological, an ecosystem-based solution. The proposed interventions bring together vernacular technologies and local knowledge. They utilise indigenous materials and local labour, providing opportunity for community participation in the construction and maintenance of these interventions. Each infrastructure operates individually as either a field condition, occupying a large geographical area; a linear system; or as points of either 'green' or 'blue' water. In this kit of parts (fig. 3.03), each intervention speaks to an aspect of the natural hydrological cycle: water harvest (fig. 3.04), water retention (fig. 3.05), water infiltration (fig. 3.06), water distribution, water storage, water access, or water treatment (fig. 3.07). Individually, each intervention produces a force that modifies and influences existing systems on the site. The network this creates is thus a composite of particulars, a series of interventions that engage the multiple dimensions of water in Bamyan (fig. 3.08).

Aggregation of these particular infrastructures produces an interdependent network of 'ecological infrastructure,' "critical landscape elements and spatial patterns," that play a strategic role in "safeguarding the integrity and identity of the natural and cultural landscapes, which in turn secures sustainable ecosystem services," (fig. 3.09).[13] That is, the coupling of these physical, social, ecological, and existing infrastructures produces clusters that speak to disaster risk reduction (fig. 3.10), sustainable livelihood (fig. 3.11), and urban growth (fig. 3.12), to produce a critical network of decentralised infrastructures that unite the dichotomous formal and informal patterns of settlement in Bamyan. These clusters, moreover, ensure both environmental and social resilience that will only serve to enhance preservation activities under the Bamyan Cultural Master Plan (BCMP), and further goals

12 UNEP, *Eco-Tech Handbook*. (Kabul: United Nations Environment Programme, forthcoming).

13 Kongjian Yu, "The Big-Foot Revolution," in *Ecological Urbanism*, ed. Mohsen Mostafavi and Gareth Doherty (Zurich: Lars Muller Publishers, 2010), 285.

for community and national solidarity. Supporting the natural resource base in this manner additionally augments the international agenda to conserve traditional livelihoods, and will maintain intrinsic relations between people and their resources. In the understanding of site as a continuous system of relations forces and flows, interventions are integrated, incremental, and accountable, balancing livelihood needs with environmental concerns to mitigate Bamyan's rural-urban influx and transition to sustainable, enduring peace.


harvest
retention
infiltration
upper catchment
upper-middle catchment
lower-middle catchment
flood plain
snow
snow / rain
glacial runoff
urban runoff
flood
1
2
3
4
5
6
7
8
9
10
disaster risk reduction
sustainable livelihood

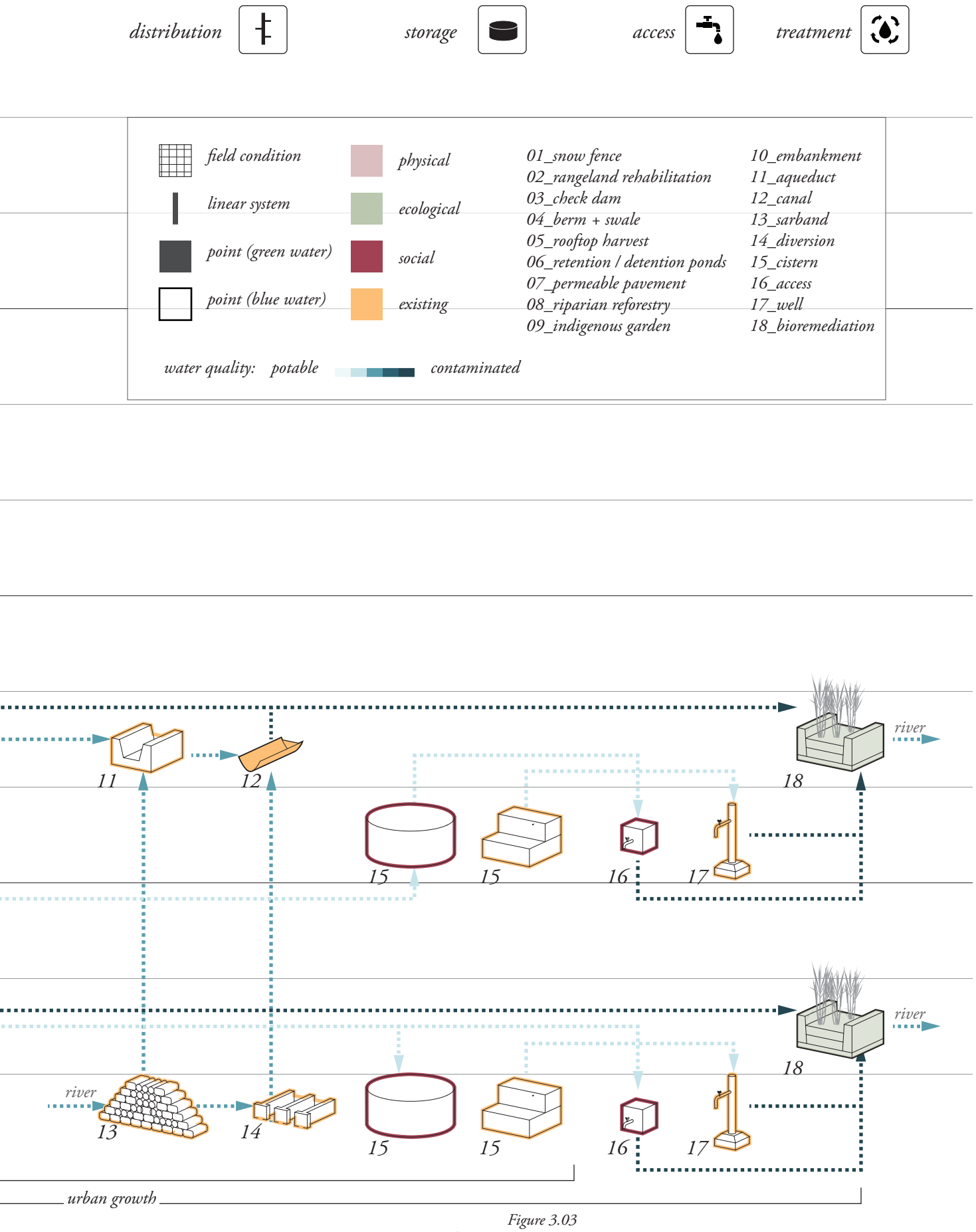


Figure 3.03
Matrix of network interventions (not to scale).

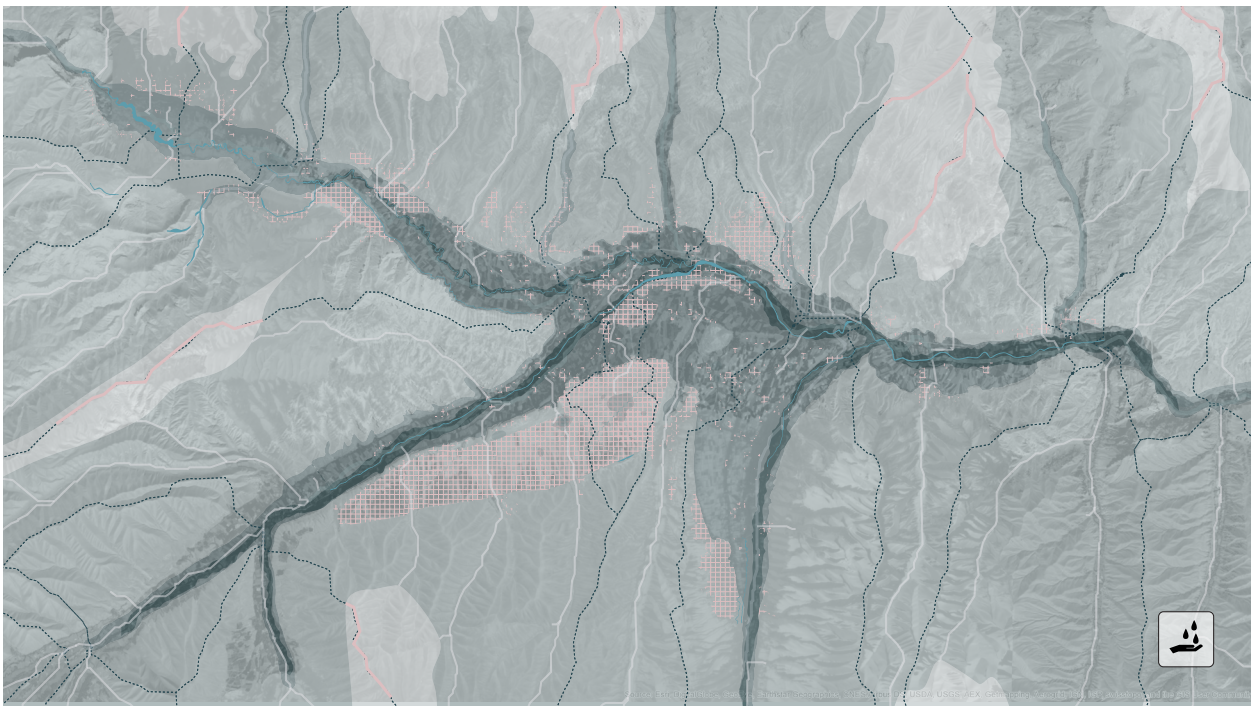


Figure 3.04
Network interventions: water harvest.

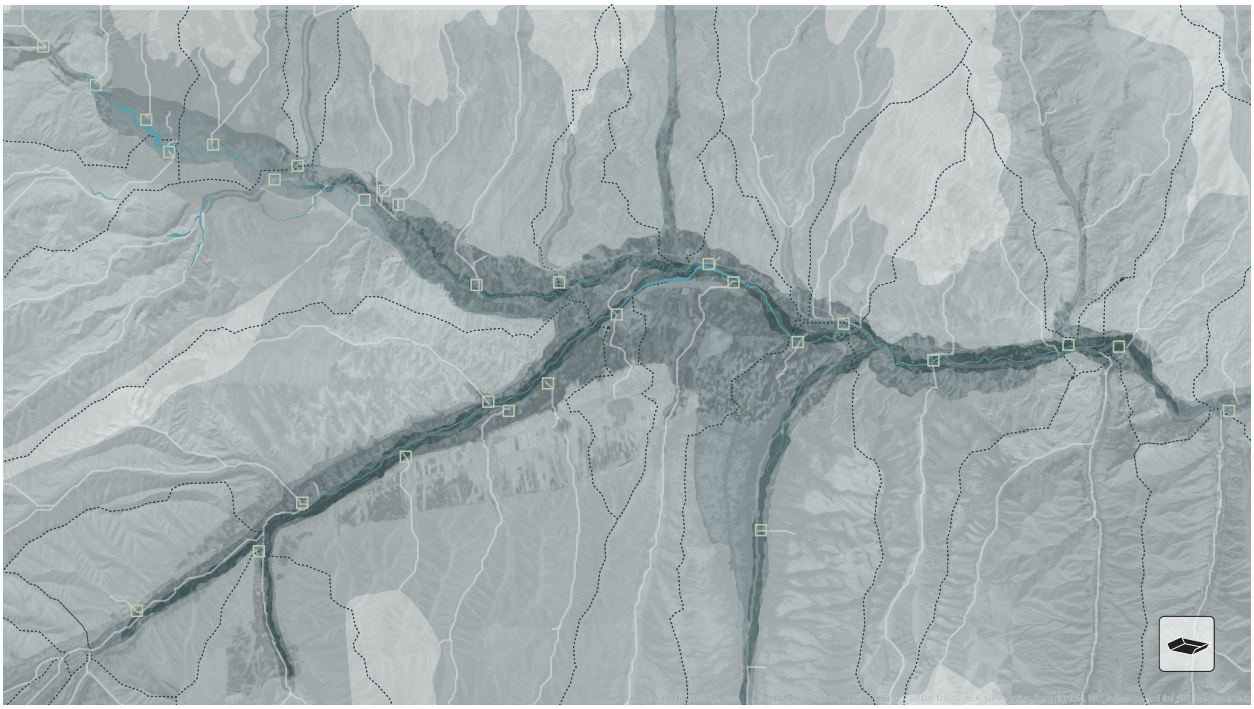


Figure 3.05
Network interventions: water retention.

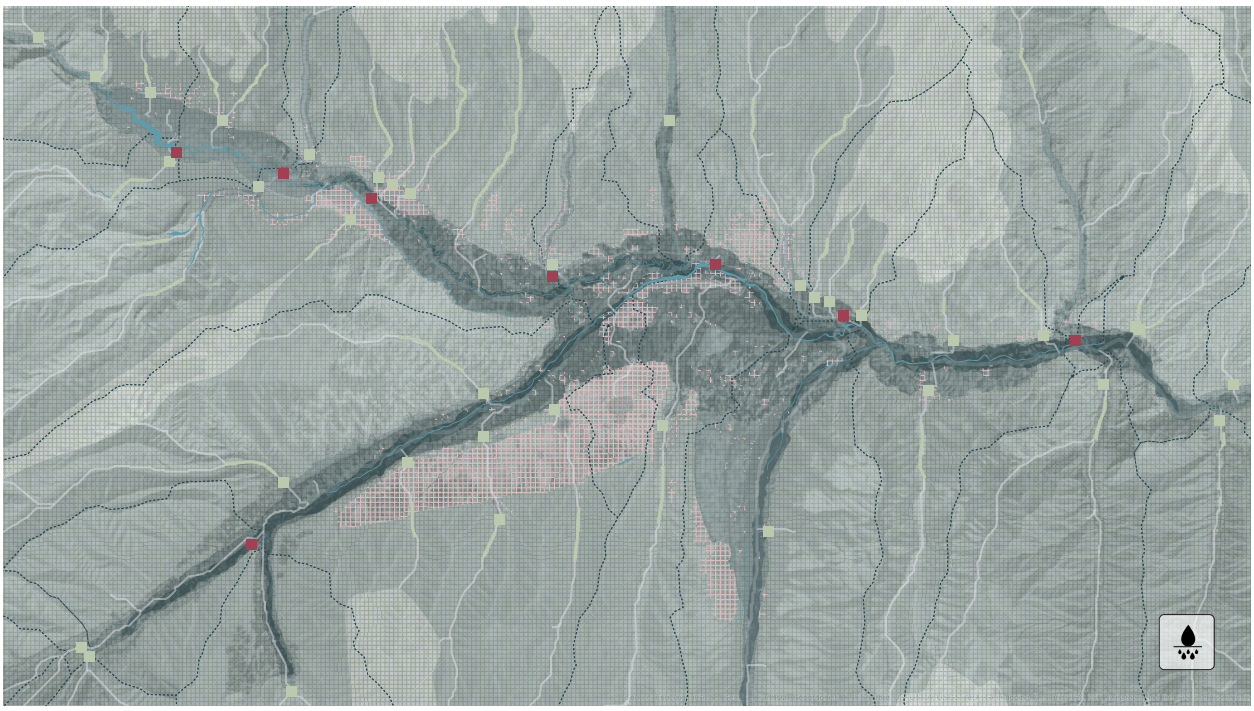


Figure 3.06
Network interventions: water infiltration.

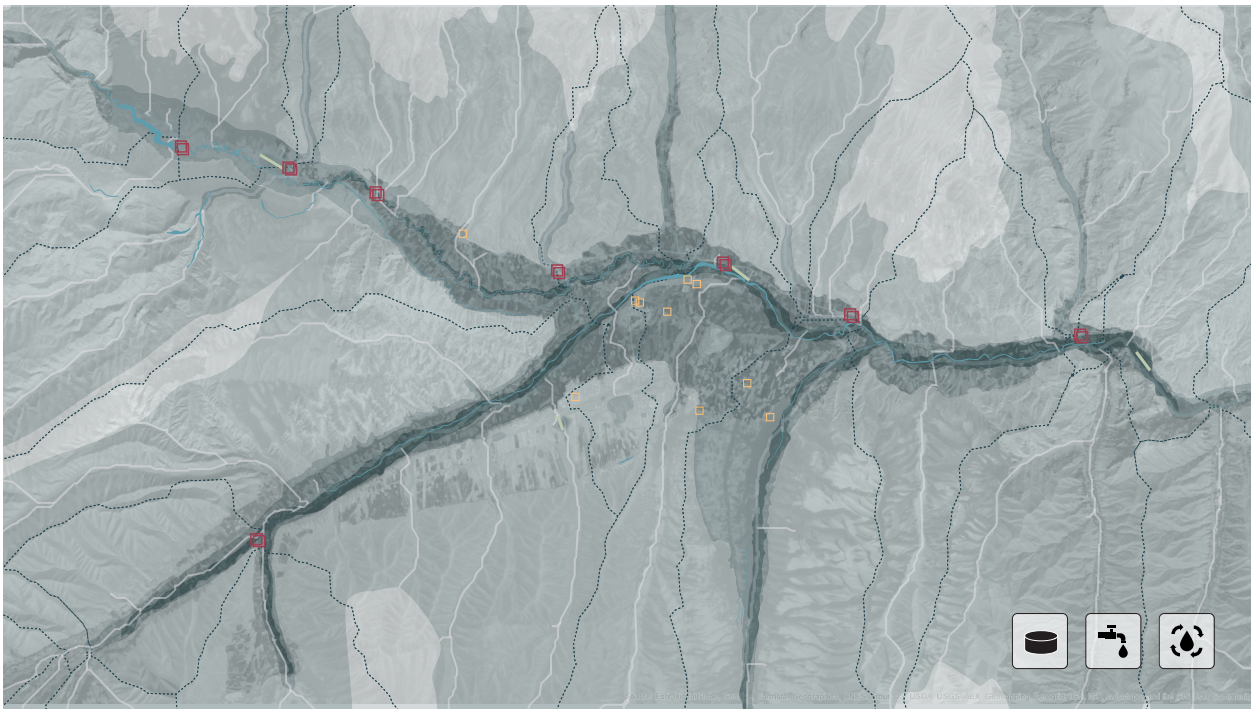


Figure 3.07
Network interventions: water storage, access, and treatment.

water quality: *potable* — *contaminated*

water infiltration *greater* — *less*

0 100 200 500m

physical
ecological
existing
social
component design site

harvest
retention
infiltration
distribution
green water

storage
access
treatment
blue water

field condition

linear system

point

south communities

New Town (Dasht-e Isa Khan terrace)
[proposed area of future urban development]





upper-middle catchment
north-facing slopes of the Koh-e Baba mountain range, characterised by rangelands and smaller side streams

prone to: erosion, micro-flooding

lower-mid
along larger
occurs, char
land.
prone to: ero

Note: Drawing in progress.

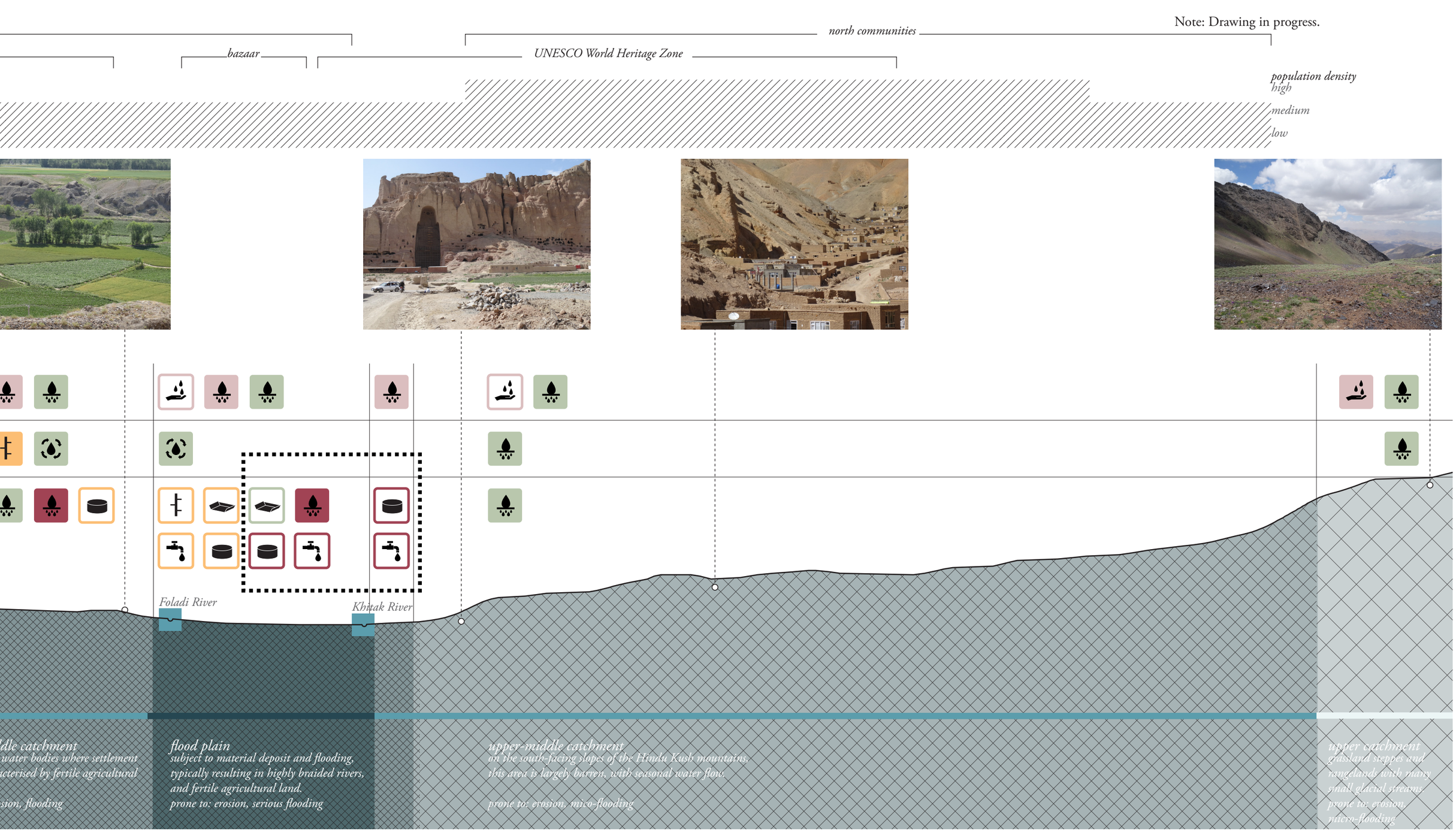


Figure 3.08
Network design scheme: watershed section showing population density, landcover, and intervention types based on catchment area.



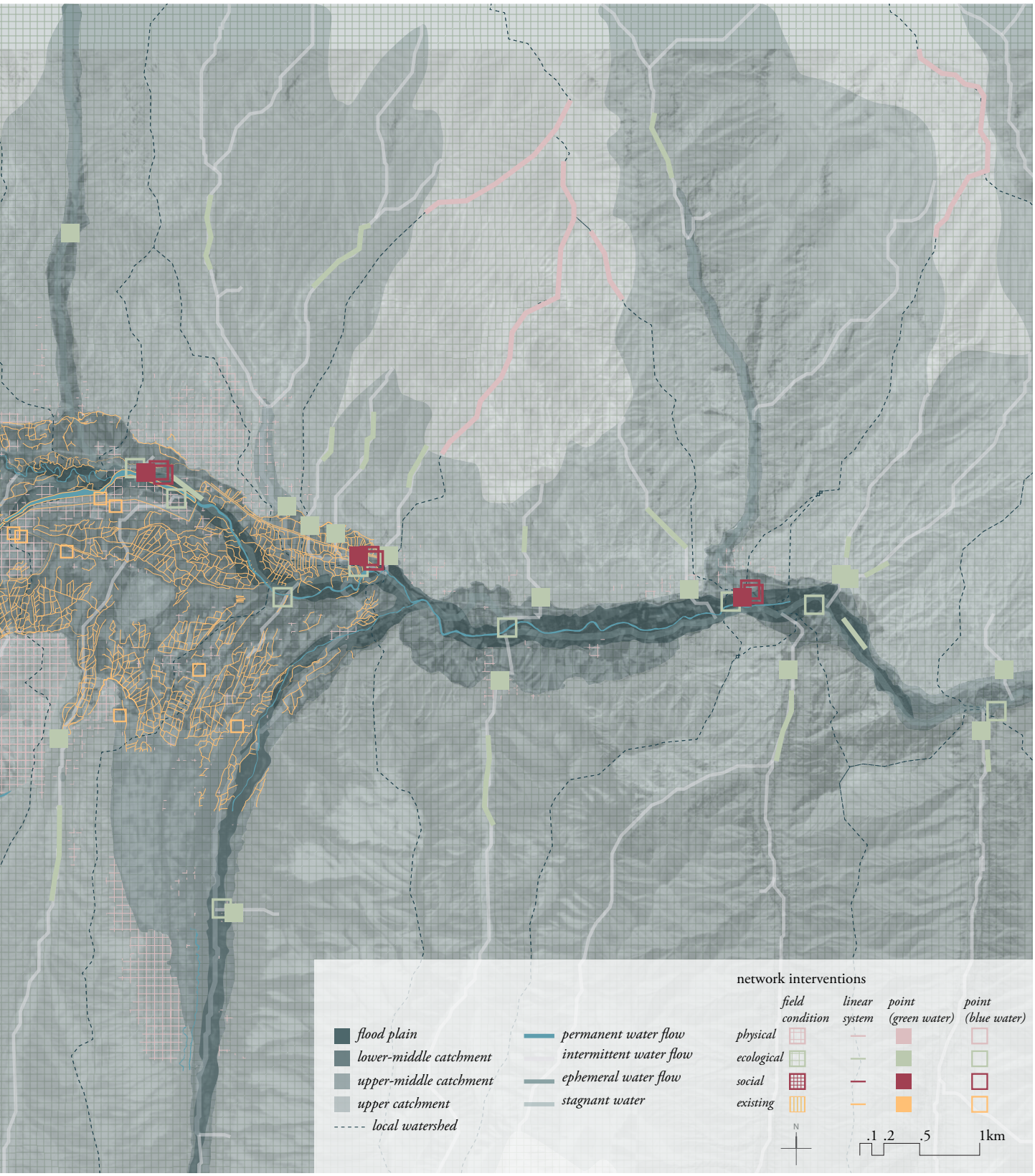
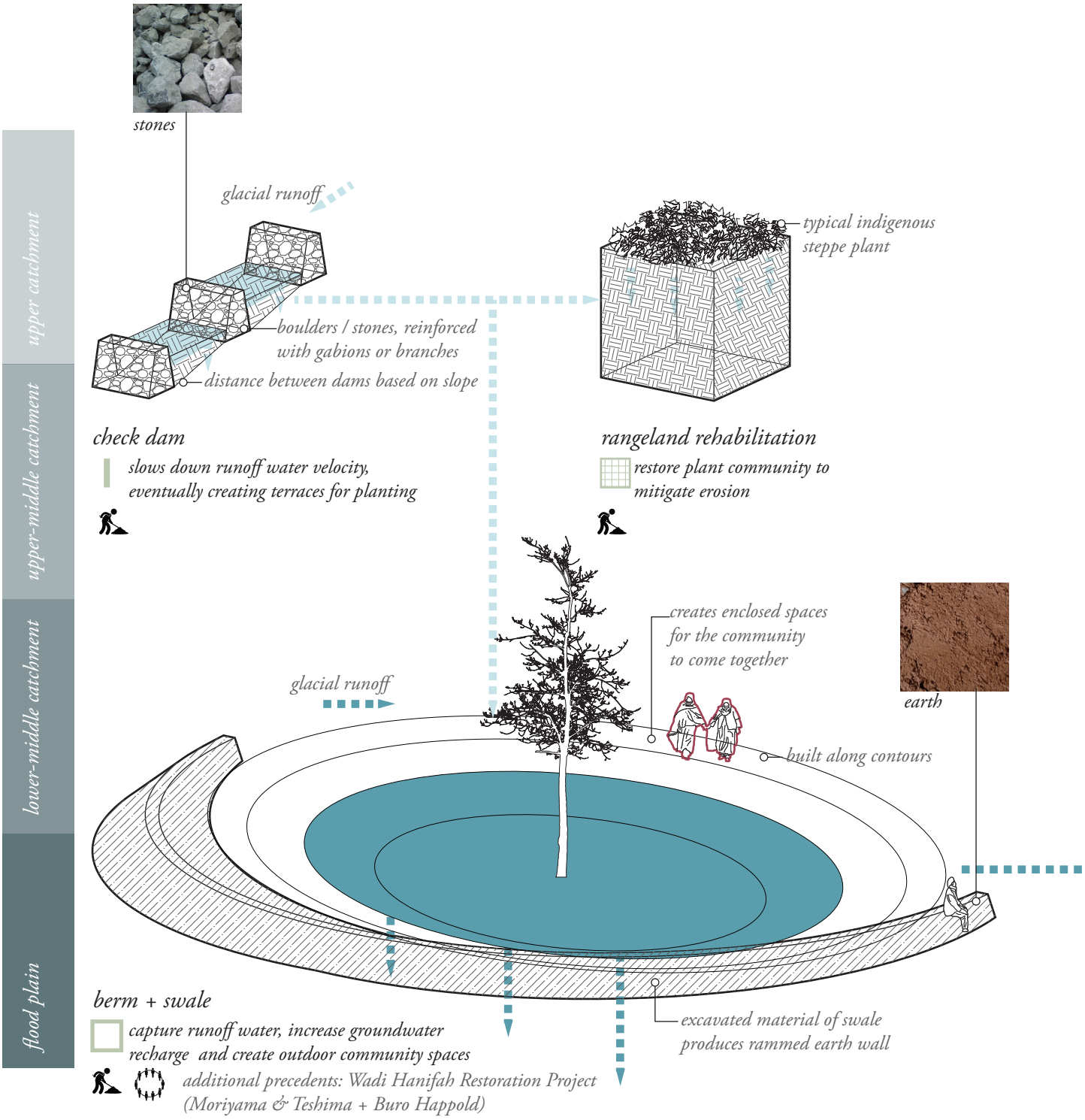
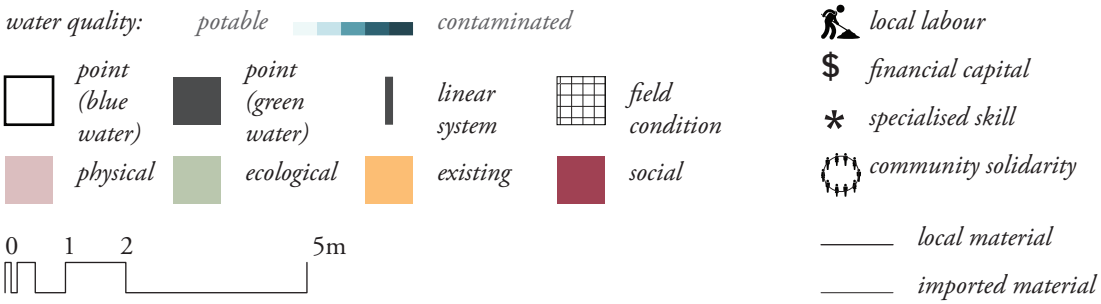


Figure 3.09
Network design scheme.


upper catchment
upper-middle catchment
lower-middle catchment
flood plain
stones
glacial runoff
boulders / stones, reinforced with gabions or branches
distance between dams based on slope
typical indigenous steppe plant
check dam
slows down runoff water velocity, eventually creating terraces for planting
rangeland rehabilitation
restore plant community to mitigate erosion
creates enclosed spaces for the community to come together
earth
glacial runoff
built along contours
berm + swale
capture runoff water, increase groundwater recharge and create outdoor community spaces
excavated material of swale produces rammed earth wall
additional precedents: Wadi Hanifah Restoration Project (Moriyama & Teshima + Buro Happold)



precedents (unless otherwise specifed):
traditional methods, UNEP Ecotech Handbook.

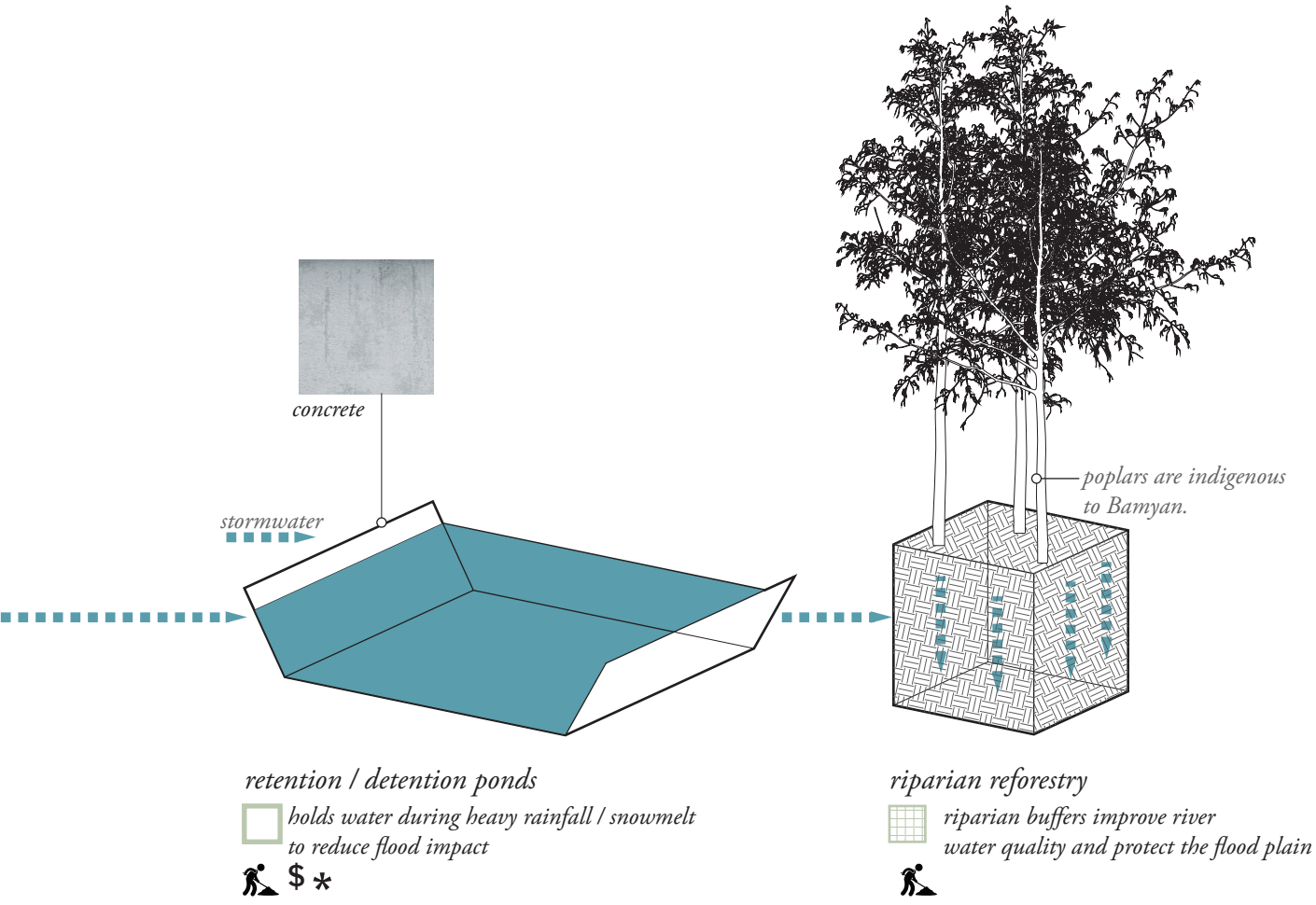
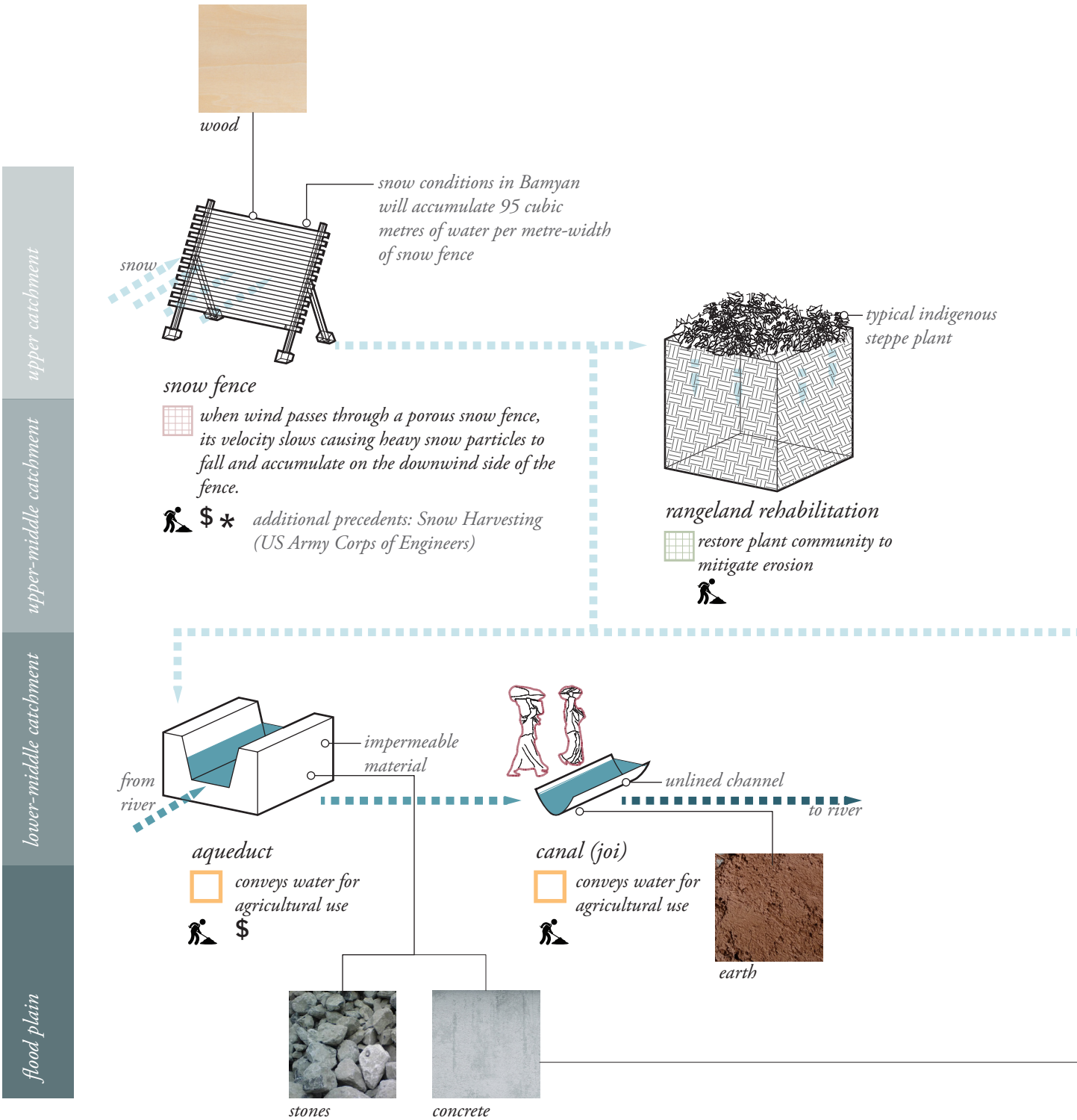
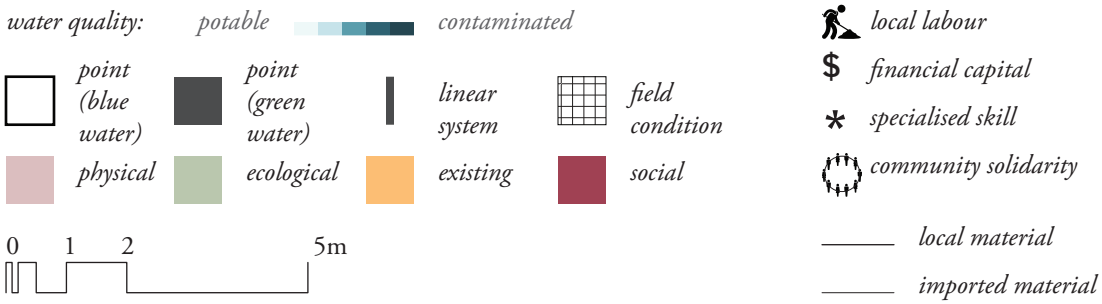


Figure 3.10
Cluster: disaster risk reduction.


upper catchment
upper-middle catchment
lower-middle catchment
flood plain
wood
snow conditions in Bamyan will accumulate 95 cubic metres of water per metre-width of snow fence
snow
snow fence
when wind passes through a porous snow fence, its velocity slows causing heavy snow particles to fall and accumulate on the downwind side of the fence.
$ *
additional precedents: Snow Harvesting (US Army Corps of Engineers)
typical indigenous steppe plant
rangeland rehabilitation
restore plant community to mitigate erosion
impermeable material
from river
unlined channel
to river
aqueduct
conveys water for agricultural use
$
canal (joi)
conveys water for agricultural use
earth
stones
concrete



precedents (unless otherwise specifed):
traditional methods, UNEP Ecotech Handbook.

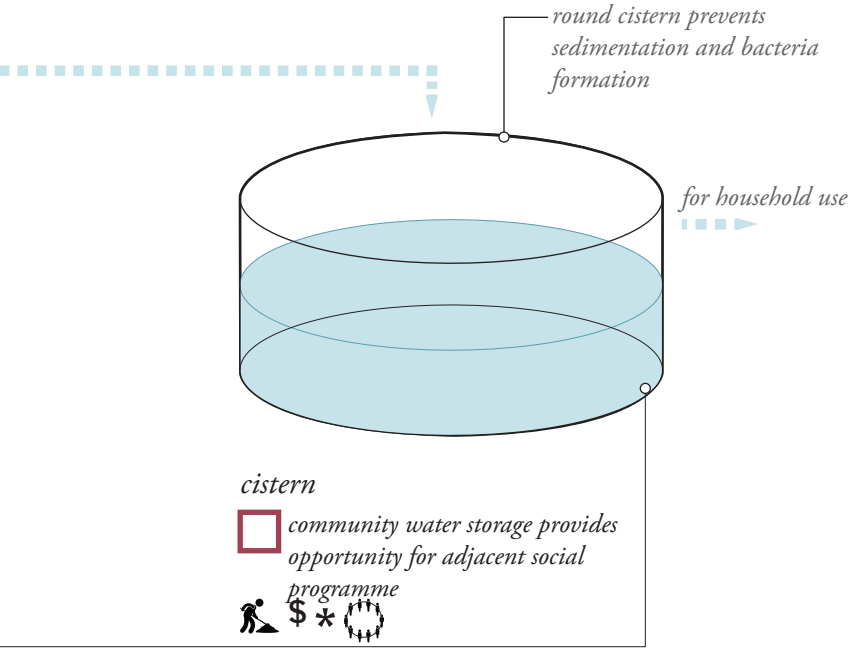
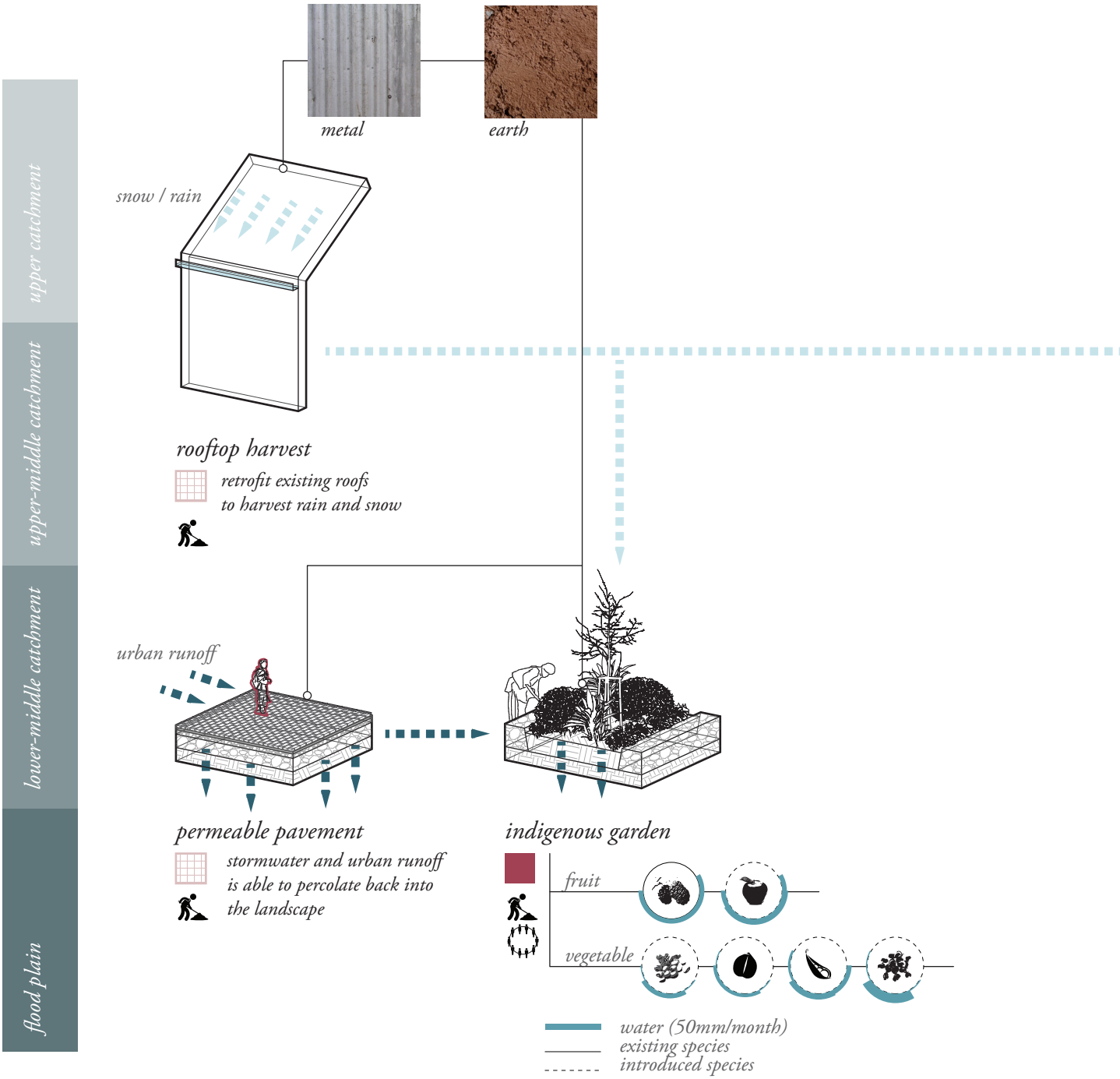
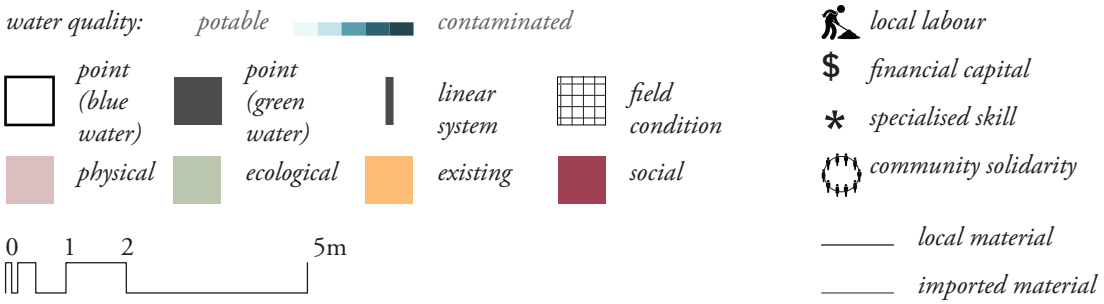


Figure 3.11
Cluster: sustainable livelihood.


upper catchment
upper-middle catchment
lower-middle catchment
flood plain
metal
earth
snow / rain
rooftop harvest
retrofit existing roofs
to harvest rain and snow
urban runoff
permeable pavement
stormwater and urban runoff
is able to percolate back into
the landscape
indigenous garden
fruit
vegetable
water (50mm/month)
existing species
introduced species



precedents (unless otherwise specifed):
traditional methods, UNEP Ecotech Handbook.

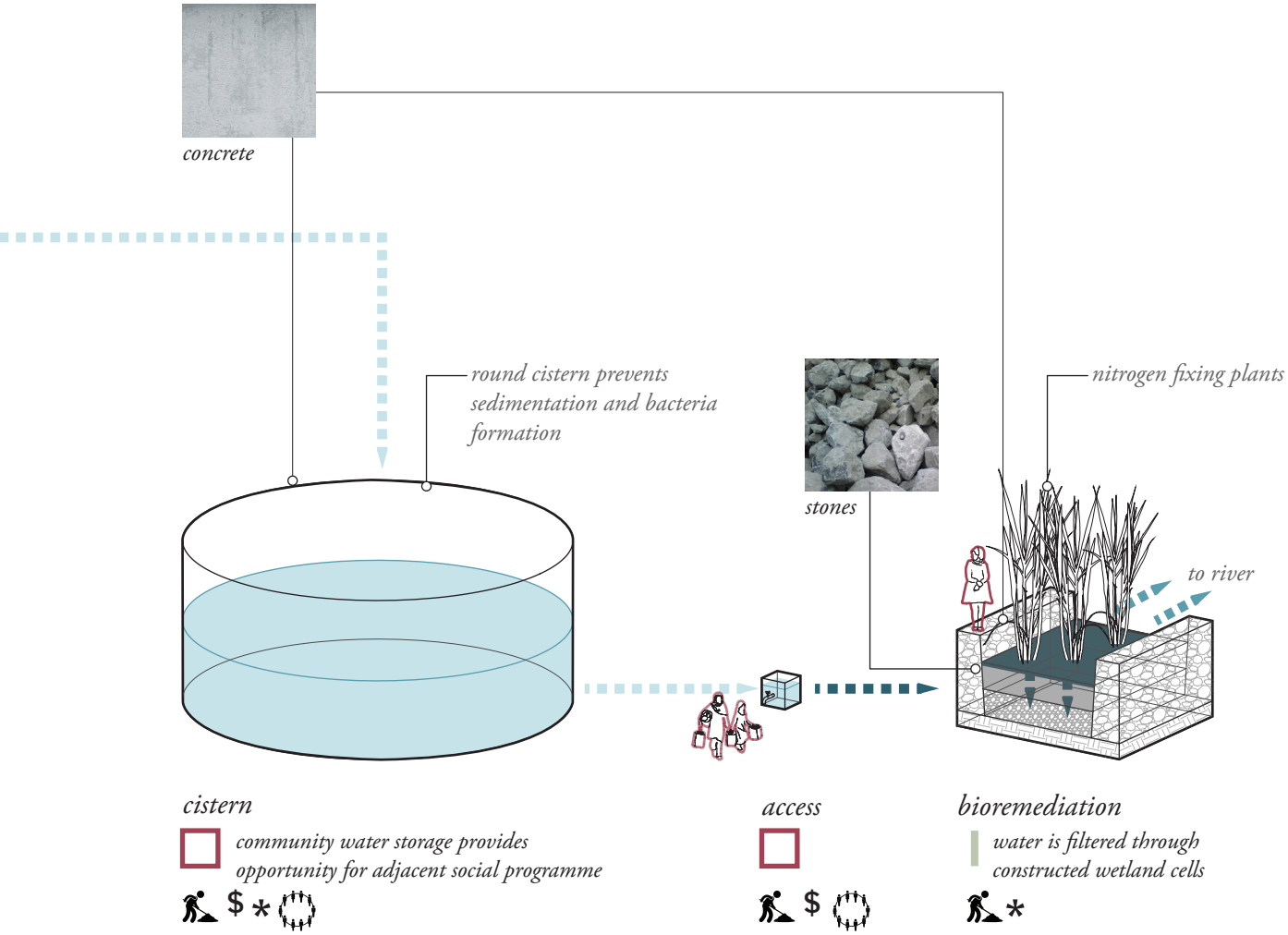


Figure 3.12
Cluster: urban growth.

Water, Alive

Design of the network is ultimately in line with the emerging theory of emancipatory peacebuilding, which seeks to address failures of the liberal peacebuilding project without its abandonment all together. Where liberal peace tends to focus on creation of the state without building a relationship between the state and its people, emancipatory peacebuilding holistically redirects the process to its roots as a bottom-up activity that engages with the local. Placing value in community, emancipatory peacebuilding prioritises traditional and social context for moral and political decision making and action, acknowledging and importantly, accepting that these decisions and actions may be dissonant with international liberal norms.[14] Rejecting the central status of institutions as the objects of peace, emancipatory peacebuilding gives value to the everyday needs of the conflict-affected population. Peace processes utilise empathy, are indigenous, and incorporate local ritual; 'expertise' is removed from the hands of the overbearing foreigner, giving dignity and agency to local populations.[15] A relationship is still maintained with external actors, however, whose primary role in this peacebuilding model is to enable and support capacity building without commanding local economy.

Very obviously, this necessitates a grounding of local ownership within the peacebuilding process. In a fragile state experiencing outside intervention, local ownership is both a personal and political activity. It entails a degree of participation from the recipient community in hopes of engaging both their trust as well as long-term stewardship to ensure sustainability of a given project. In this regard, participation is both a process and an outcome of the emancipatory peacebuilding agenda.[16] Peace is engaged as a cultural

14 Thiessen, *Local Ownership of Peacebuilding in Afghanistan*, 31.

15 Ibid., 33

16 Ibid., 3.

space, giving voice and agency to local populations, addressing root causes of conflict, and facilitating contextually appropriate human development.[17] Participation additionally resurrects the social networks and social capital that underlie community solidarity and resilience, moving away from the perpetual dependence that has characterised present development practices, to lay the foundation for effective civil society.[18]

In Afghan society, where the identity of the individual is intimately linked to the family, community participation in both development projects and ritual practice enables self-sufficiency, independence, and strengthens local identity. This is most evident with regard to participation in construction and building processes. Referencing Abdelhalim's model of the 'Building Ceremony,' the thesis posits that participation of the community within the building process will effectively "balance the economic growth of the community with the vitality and creativity of its people; the accumulation of capital, knowledge, and authority with the regeneration of identity, creative energy, and the solidarity of the community."[19] That is, the activity of building becomes a setting for dialogue between formal and informal, a "medium for reinforcing the social order and facilitating constructive communication between people," to integrate production and culture.[20]

Ritual and building as a process of peace also has roots in the history of Islam. The rebuilding of the Kaa'ba during the time of the Prophet Muhammed produced an opportunity for collaboration and reconciliation between disputing tribes: when it came time to raise the Black Stone in its place, the Prophet had all the clan elders lift the cornerstone together on a cloak, ensuring that honour and dignity were bestowed equitably to each tribe.[21] In so doing, the act of building was made ceremonious, an assertion of the identities of each member. The engagement of all groups, moreover, ensured communal investment and pride in the completed project, a shared sense of responsibility in the future of their community. This is a sentiment

17 Richmond, *Failed Statebuilding*, 134.

18 Daniel P. Aldrich and Michelle A. Meyer, "Social Capital and Community Resilience," *American Behavioral Scientist* 59, no. 2, (2015): 259. Social capital identifies how involvement and participation in groups can have positive consequences for the individual and the community in that the social structures of relationships can be actualised into concrete resources for use by individuals.

19 Abdelhalim Ibrahim Abdelhalim, "The Building Ceremony" (PhD diss., University of California Berkeley, 1978), 13.

20 Ibid., 231.

21 Alfred Guillaume, *The Life of Muhammad: A translation of Ishaq's 'Sirat Rasul Allah,'* (Oxford: Oxford University Press, 1955), 84-87. The Black Stone is a rock set into the eastern corner of the Kaa'ba, and is revered as a relic dating back to the time of Adam and Eve.

that is further corroborated by participation theory in architecture.[22]

Architecture is an embodiment of knowledge. Through its interaction with the life of people who inhabit it, architecture speaks to a way of life, and to an organic relationship with life. It is a means of making spatial the forces present on a site, and therein can bridge the gap between these forces. Where present peacebuilding practice distances communities from their cultural and ecological heritage, community participation in building processes offers a balance of new technology with historical models of behaviour and knowledge. Especially in volatile and sensitive contexts such as Afghanistan, mechanisms for participation acknowledge and validate existing civilisation, restoring dignity to the people, and strengthening human relationships. In the case of Bamyan, architecture brings together ecology, infrastructure, and culture, choreographing existing relations between water and women, to create a space for 'positive' peace.

A Washing House

Immediately north of Bamyan bazaar, where the channelized section of Bamyan River is used for weekly and annual washing activities, the networked system proposes a cluster of physical, social, and ecological infrastructures that can support sustainable urban growth (fig. 3.13). This includes the following components: rooftop harvest, permeable pavement, retention basin, storage cistern, water access, and indigenous gardens. Capitalising on the prevalent presence of washing activities here, the thesis proposes the design of a washing house and gathering space adjacent to the existing bus

22 Seminal works in the twentieth century by N. John Habraken (*Supports, An Alternative to Mass Housing,* 1972), Hassan Fathy (*Architecture for the Poor: An Experiment in Rural Egypt*, 1976), John F.C. Turner (*Housing by People: Towards Autonomy in Building Environment,* 1977), and Christopher Alexander (*A Pattern Language: Towns, Buildings, Construction*, 1977) recognise the role of the community in the decision-making process, advocating for an expanded role of the architect, and increased engagement of the users in their built environment as a means of self-help and empowerment. This involves making design visible and tangible for the community, drawing attention to the importance of understanding local culture as mechanisms for sustaining human solidarity and creativity in the context of design and development processes. Moreover, in conflict-sensitive settings, participation in architecture and urban planning can additionally be a peacebuilding process as advocated by Esther Ruth Charlesworth (*Architects without Frontiers*, 2006) who reimagines the post-conflict city as an opportunity to rethink architecture, and specifically the relationship between architects and communities.


upper-middle catchment
lower-middle catchment
flood plain
lower-middle catchment
north communities
UNESCO cultural heritage buffer zone
bazaar
south communities
Bamyan hospital
Bamyan University
womens bazaar
metal-works bazaar
Bamyan Peace Park
mosque
flood water
stormwater
snow / rain
stormwater
snow / rain
stormwater
infrastructures
physical
ecological
social
existing
water harvest
community garden
storage cistern
washing
permeable paving
retention basin
water access
design site
stakeholder
water quality:
potable
contaminated
material palette:
hand-crafted metal
mud-brick
river rocks



proposed stakeholder relations:

- *hashar* — *communual labour supply system*
- *community*
- *shura* — *community development councils based on traditional governance models set up by the National Solidarity Program*
- *local government* — $ — *national government*
- $ — *foreign agencies*



concrete

resources:

- *local labour*
- $ *financial capital*
- * *specialised skill*
- *community solidarity*

- *output*
- *input*
- *primary pedestrian circulation*
- *secondary pedestrian circulation*

Figure 3.13
Design site photo.

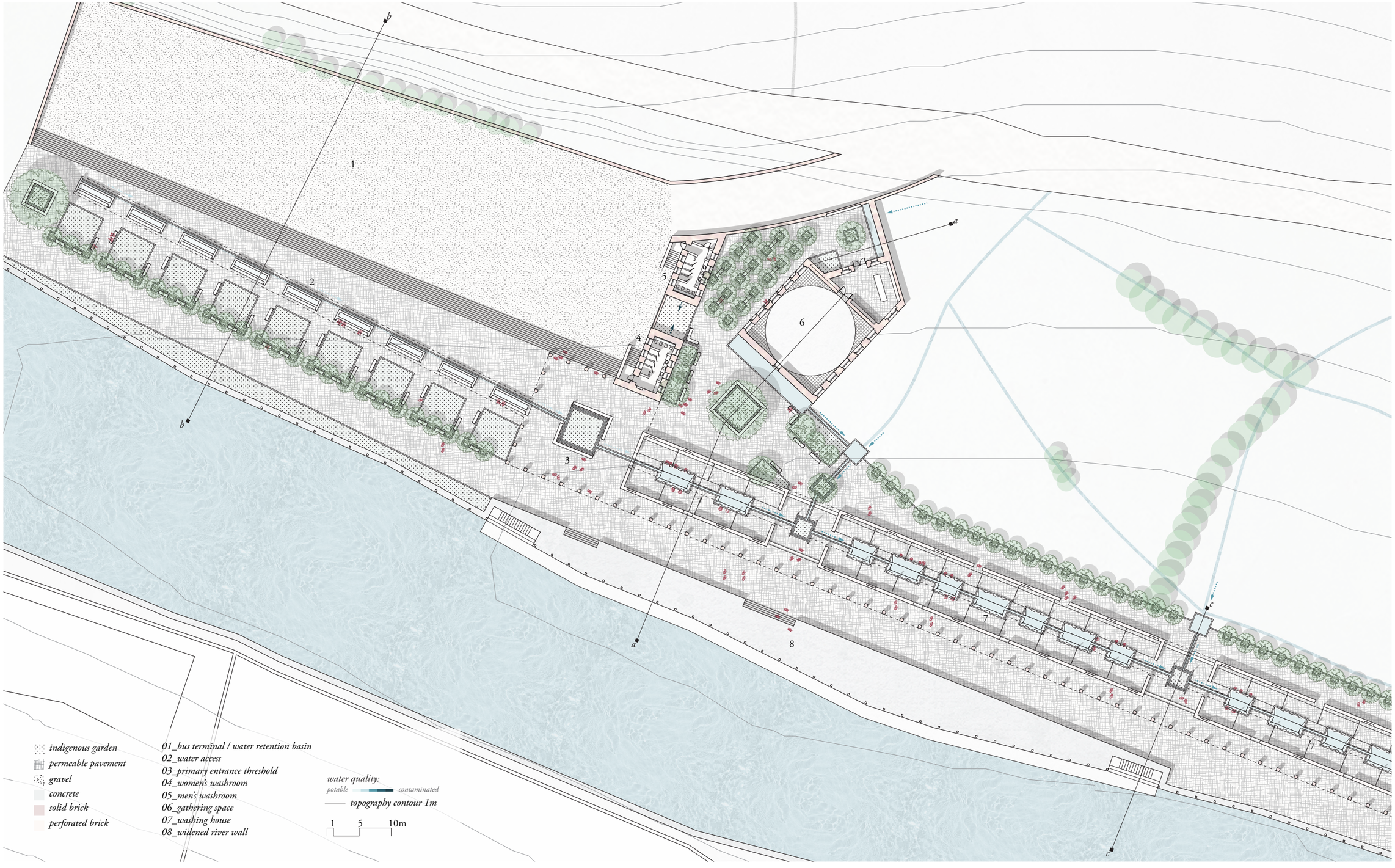


Figure 3.14
Washing house and complex, plan.

terminal (fig. 3.14). Community eco-sanitation toilets[23] serve the program of the bus terminal, which is repurposed to act additionally as a retention basin during flooding or heavy rain events. Placement of these components creates a series of courtyards of varying degrees of enclosure, which serve as an organising morphology through the site. The interiority produced fosters a welcoming atmosphere, necessary for spaces to engage with diversity and plurality. Each courtyard is planted with local vegetation, and offers seating, moving from greater public interaction to areas of more intimate reflection as the courtyards scale down in size, towards the entrance of the gathering space. The gathering space is designed to accommodate multiple functions, capable of facilitating social and cultural events (fig. 3.15). Orientation of the gathering space aligns with the *qibla*, the direction of prayer towards the Kaa'ba in Mecca, allowing the space to additionally serve religious function when necessary.[24]

Water plays a prominent role in each of these spaces. It is collected on site through rooftop rainwater harvest, and stored below grade, providing additional water resources during the dryer summer months. Water collection stations south of the bus terminal collect and filter their own water, providing closer access points especially for residents of Bamyan's northern communities (fig. 3.16). In the washing houses, multiple basins provide significant surface area for domestic washing activities. As elsewhere in Bamyan, water continues to flow throughout the site, moving from water collection, through the washing houses and eventually off site into agricultural fields, and subsequently, wetland bioremediation cells (see network design), before re-entering Bamyan River at the eastern end of Bamyan bazaar. Permeable paving used throughout the site allows surface water to infiltrate back into the landscape, to rebuild the land's natural water retention capacity, further enhanced by multiple areas of community gardening.

The washing house and surrounding complex exists as an example of an infrastructural cluster, one particular component of the larger composite network. Although the design is simple in programme, it meets an immediate and basic need for the people of Bamyan. The ritual and importance

23 UNEP, *Eco-Tech Handbook*. (Kabul: United Nations Environment Programme, forthcoming). Eco-sanitation (eco-san) toilets are waterless composting toilets. The separation and collection of urine is a key component, usually accommodated through separate openings in the floor. Urine, when mixed at a ratio of one part urine to ten parts water, makes for excellent liquid fertiliser. Faeces are collected separately in an enclosed pit where they are given time to compost before being added to subsoil in garden plots.

24 Particularly as many weekly washing activities at Bamyan River take place on Fridays when most men are at the local mosque, the gathering space offers an interior space for women to come together for prayer or socialising. Accordingly, ablution stations are provided inside the washrooms.

surrounding washing activities is a staple of human life. The link of water with spaces for women means that these activities are increasingly culturally appropriate spaces for families and larger communities to convene, formally and informally. As such, the programme's simplicity ultimately fosters social interaction. Moreover, through its construction and maintenance, detailed subsequently, the design engages the community as necessary stakeholders. In so doing, the washing house becomes itself an infrastructure for human activity, the setting for human life and civil society, "combining the provision of social good with the equitable representation of private and public bodies that work to protect and enhance quality of life."[25]

Material Palette

The design makes use of local mud-brick in combination with concrete to highlight the beauty of Bamyan's readily available material palette. The use of vernacular construction techniques alongside modern technologies supports a building vocabulary that fosters dialogue between change and permanence. Primary use of local materials ensures project completion, minimal financial resources, and use of local labour. Pressed mud, *Pakhsa*, and sun-dried brick are the primary indigenous building materials in Bamyan. Mud needed for *Pakhsa* walls is obtained on site: a pit is dug in which earth is mixed with water and straw, and allowed to stand overnight. It is subsequently trampled by people and/or animals until the mixture is malleable, and then thrown forcefully into place using melon-sized lumps, to create a horizontal wall of material in 500 millimetre tiers, each of which is allowed to dry before the next layer is added.[26] This technique is used for the perimeter walls in the design site.

Elsewhere, mud-brick is used; bricks are formed from the same mixture and laid out to dry in the sun. in the gathering space and washrooms, mud-brick walls are double layered, coated on the exterior with a protective layer of mud mixed with goat hair and reed fibre, and on the interior with a local paint made from yogurt and egg-whites. One metre in thickness, these walls use the embedded thermal mass of the material to regulate diurnal temperature changes. Niches are carved into these walls, providing areas for seating and material storage. Double-glazed windows, the most specialised component of the design, are screened by stacks of perforated brick that enable light and natural ventilation, while maintaining modesty and privacy.

25 Homi K. Bhabha, "From Public Space to Public Sphere," in *Architecture is Life*, ed. Mohsen Mostafavai (Lars Muller Publishers, 2013), 341.

26 Szabo and Barfield, *Afghanistan: An Atlas of Indigenous Domestic Architecture,* 139.

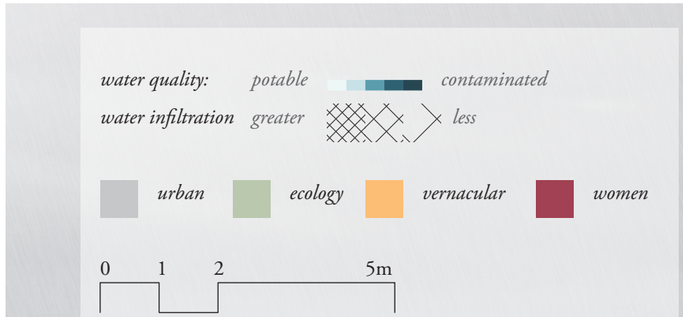
Perforated brick is additionally used in the washing houses which remain open to the elements while retaining a degree of enclosure, reminiscent of the traditional courtyard building typology. The courtyard is thus reproduced at several scales throughout the design. The material palette, in conjunction with this building typology, exaggerates thresholds in the sequential movement through space, which provide additional moments for social encounter (fig. 3.17). Metal, sourced locally from the nearby metal-works bazaar, is used for the roof of the washing houses, and enhances the sound of falling water in the spring. The vernacular stone foundation is replaced with concrete, a material of growing prevalence in the valley. Though not produced locally, it is used commonly in Bamyan, and provides increased seismic resistance. This will additionally protect the mud walls from erosion produced by capillary action of groundwater.[27]

The design of the washing house and surrounding complex arises from enduring social, physical, and tectonic conditions. It is an investigation into the sensitive role of architecture and design within the peacebuilding context. Water for basic human need and ritual activity, and the spaces this supports for communities to come together, is used to mitigate Bamyan's rural-urban interface, and conflicting needs of the international and local communities. Where urban design in the BCMP exists to serve a singular goal of archaeological conservation, and development projects correspondingly emerge to meet these needs, the thesis instead identifies root causes of insecurity and proposes multifaceted solutions that do not overhaul existing environmental or social mechanisms. Simultaneously, however, the thesis does not seek to dismiss ongoing development projects.[28] Rather, it sets an example for future sustainable development, aspiring to cultivate, in the local psyche, a sense of community solidarity that not only brings people together, but also connects them back to their ecological and cultural identity. Herein, the proposed design, as a method of engaging in 'positive' peace, distances itself from the narrative of dependency perpetuated by liberal peacebuilding, to instead increase local self-sufficiency.

Shared spaces for water, very simply, create informal platforms for community interaction and togetherness. The methodology is reminiscent of Abdelhalim's 'Building Ceremony,' which claims that "in building…events

27 Ibid., 135.

28 While the site may seem controversial, placed as it is in the flood plain and designed to work with the channelized river walls, it was specifically chosen for this purpose: it recognises that life goes on during and after conflict, that the post-conflict setting is not a blank slate, but necessities working with existing and essential forces on site, including newly implemented hard-infrastructural solutions.



Bamyan River

higher water levels in the spring from glacial runoff and precipitation render the river inaccessible for washing activities.

extended river wall

solar lamps light the river wall in the evenings.

permeable paving allows water to percolate back into the landscape.

washing house

traditional mud-brick construction capitalises on local labour and knowledge.

metal roof, sourced from local metal-works bazaar, directs rain water into the washing basin.

laundry is hung to dry on support structure.

niches carved into mud-brick wall provide spaces for sitting and children's play.

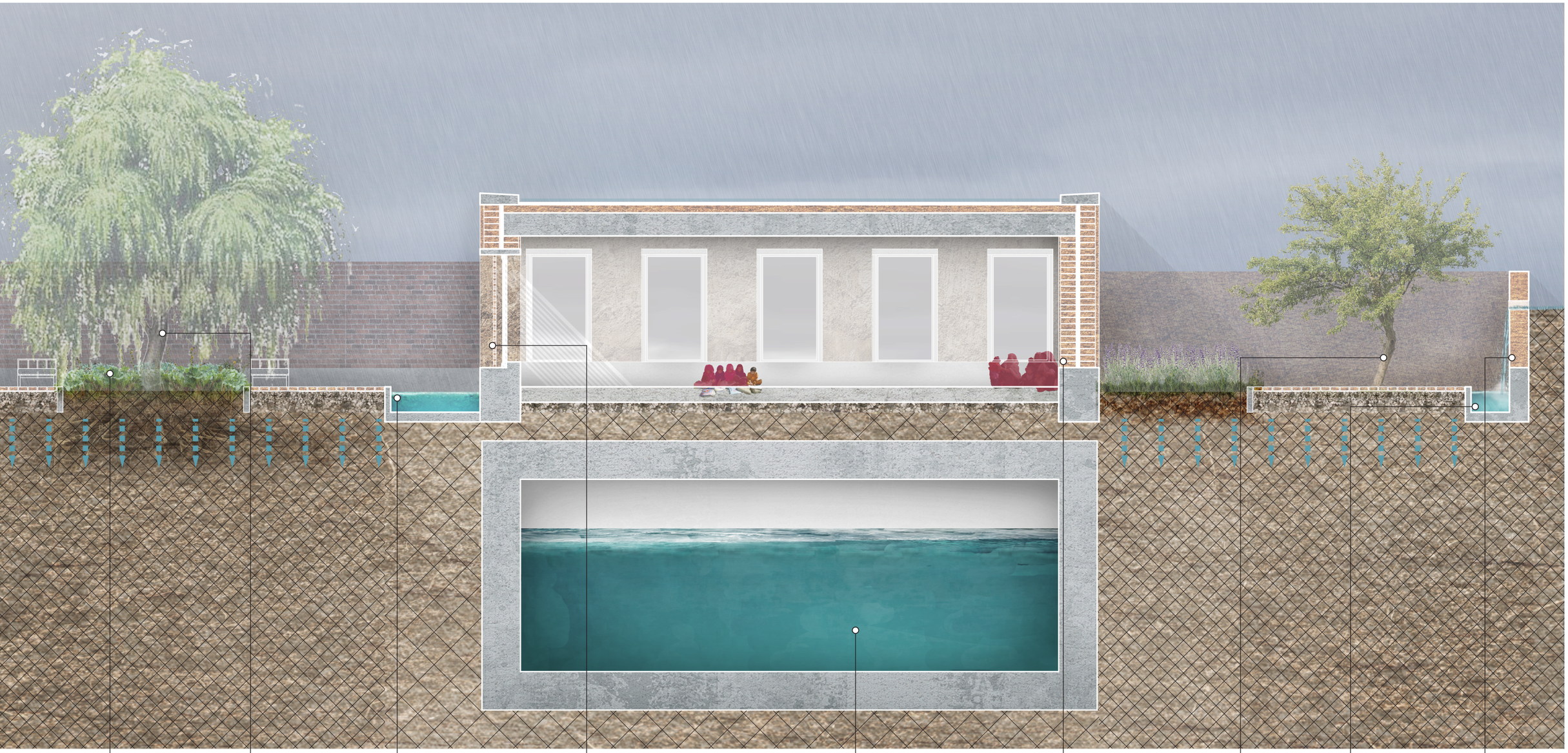
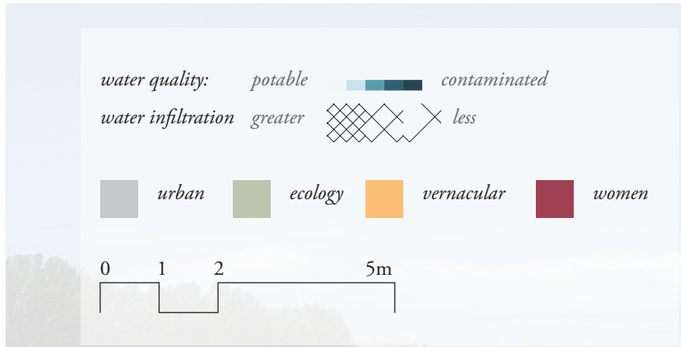


Figure 3.15
Section through washing house and gathering space.



Bamyan River

river promenade

community garden

water collection

solar lamps light the river wall in the evenings.

sunken garden beds allow stormwater to filter into the ground and evoke the impression of walking on a floral carpet.

permeable paving allows water to percolate back into the landscape.

apple trees are an indigenous species in Bamyan. their cultivation will additionally support local economy.

precipitation is filtered and stored in small cisterns below grade for easy water access.

solar panels collect energy for use in lighting the complex.

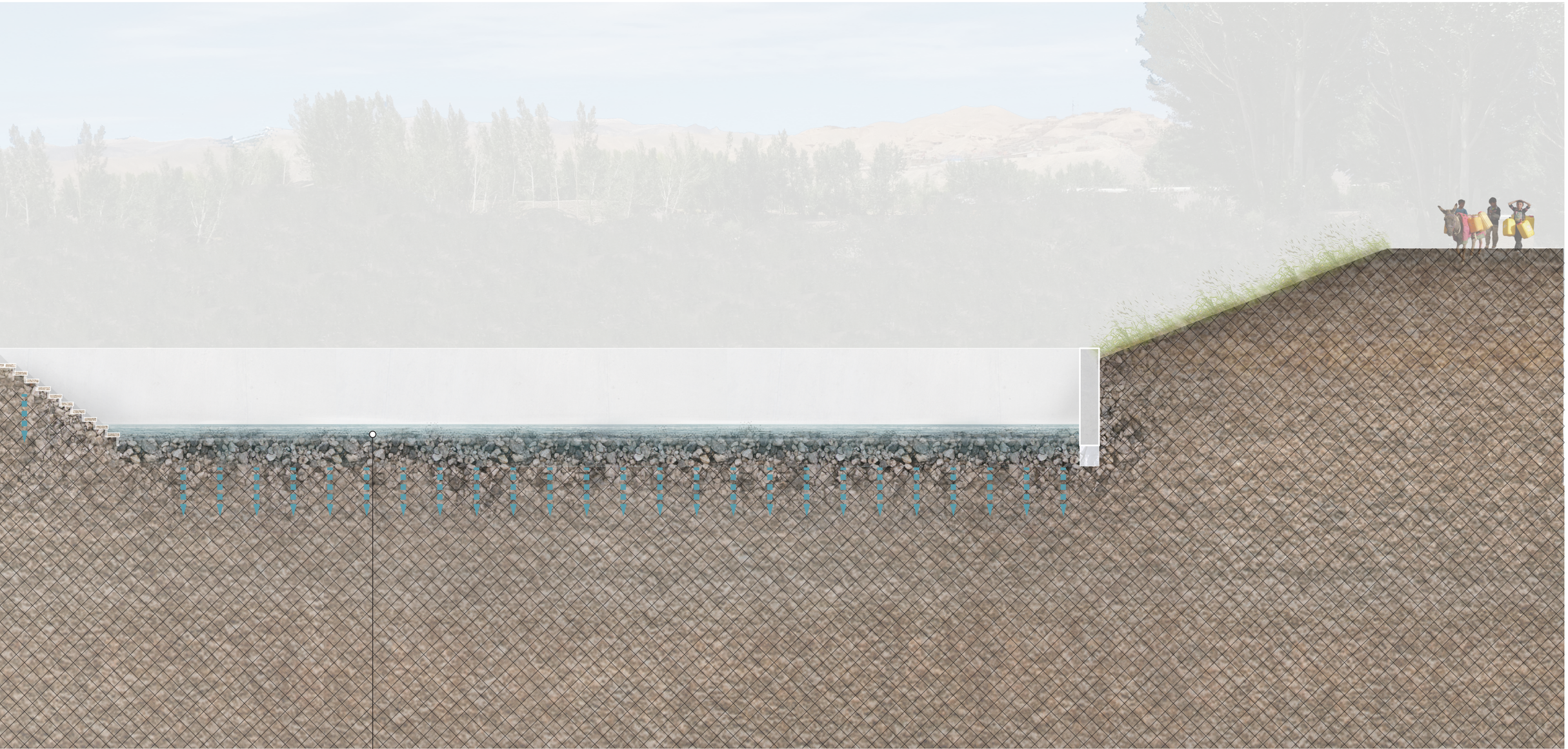


Figure 3.16
Section through water collection and bus terminal.

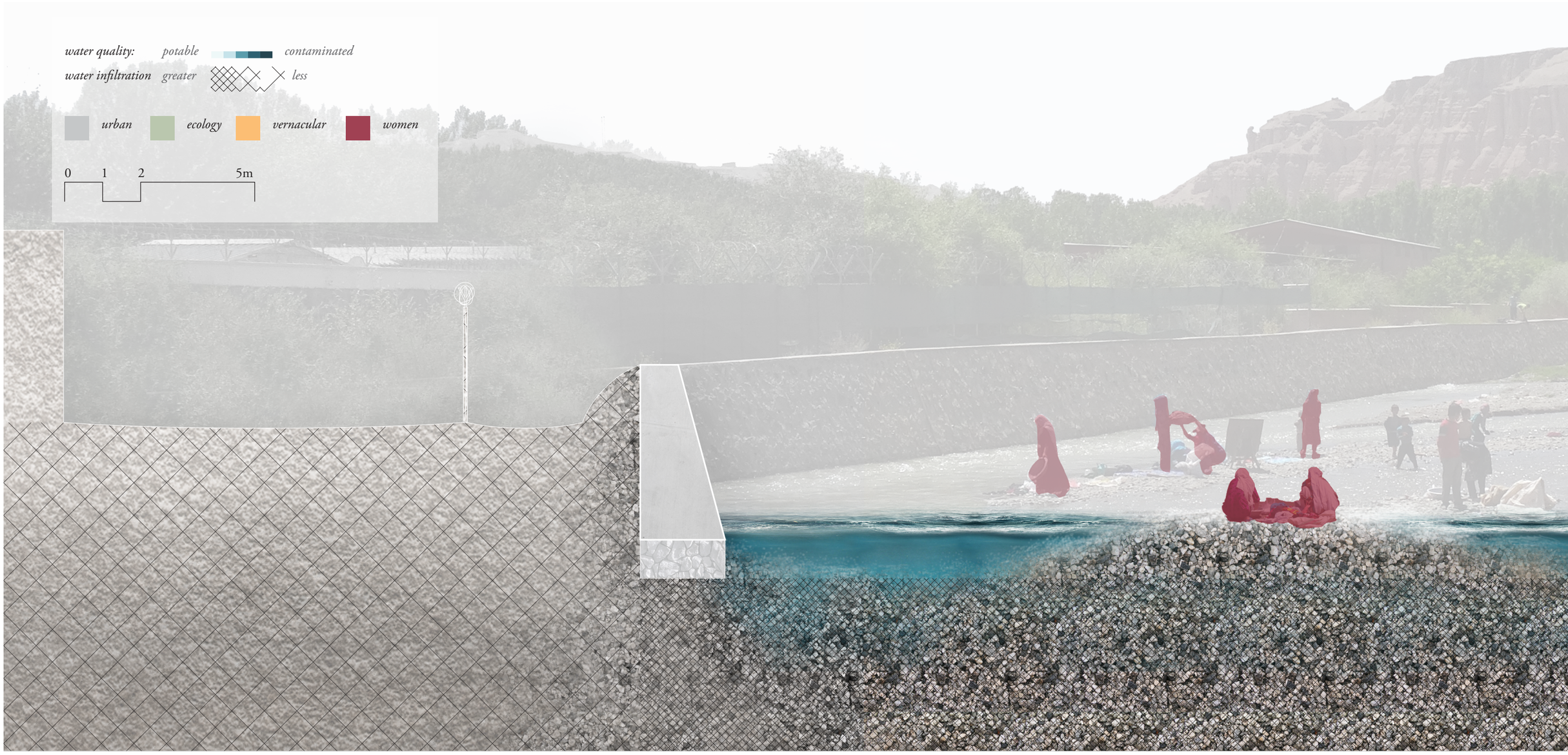

water quality: potable contaminated
water infiltration greater less
urban
ecology
vernacular
women
0 1 2 5m
industrial (private)
Bamyan River



Figure 3.17
Section through river access stairs and washing house threshold.

such as the definition of boundaries [enclosure], establishment of the centre [courtyard], the growth of the building, or its connection to the community and the environment," revitalise the cultural identity of the people.[29] The design proposal is thus modest, tangible, and culturally appropriate. Through its engagement with specific programmatic and situational conditions, the design transcends liberal peacebuilding's formal and typological limits. By recognising and making spatial the ecological and cultural value of water in Afghan society, the ritual of washing is used as an ordering and organising mechanism to build community capacity, supporting a robust sense of identity and security. Understanding the "built environment as an ongoing, unfolding relationship between materials and humanity, between technology and psychology, between ethics and the environment," architecture is made a force of unification, bridging cultural and ecological relationships to improve quality of life.[30]

29 Abdelhalim, "The Building Ceremony," 10.

30 Homi K. Bhabha, "Architecture and Thought," in *Intervention Architecture: Building for Change*, ed. Aga Khan Award for Architecture (London: I.B. Tauris & Co., 2007), 6.





Conclusion

The River is for Washing Carpets is a thesis about understanding, and finding opportunity in, the inherent relationships between ecological and cultural systems on a given site. It unearths a means of understanding existing conditions and essential mechanisms in a society, and the implications this can have for long-term sustainability and resilience in that society. Water and women are universal constructs of life. Their socio-spatial organisation transcends time, space, and difference, and ultimately supports the formation of liberal society, in the truest sense of the word. Yet the manner in which water and women operate as agents and mediators respectively of 'positive' peace in Bamyan emphasises the dialogue that must be developed between the universal and the particular, the global and the local, for successful peacebuilding interventions.

The process of engaging with site is thus at the crux of this thesis: the intersection of water and women as opportunity for 'positive' peace in Bamyan emerged through an iterative process of engagement, directly and indirectly, with the site. This enabled a response to local conditions of Bamyan that could effectively mobilise community solidarity, empower cultural and ecological identity, and build human dignity. Herein lies evidence of the agency of design in such sensitive and volatile environments. Just as this thesis advocates 'positive' peace as a process, and not an outcome, so too design is understood as a way of thinking, a systems-based methodology through which interventions can be appropriately implemented. The marriage of ecology with infrastructure and architecture enables a sensitivity to context and a pattern for incremental growth that is responsive to changing local conditions, socially and environmentally. This hybridity fosters an energetic engagement with diversity that is not divisive, to cultivate solidarity in the face of future uncertainty. Juxtaposition of multiple functions enables spaces of encounter and dialogue, and the coupling of cultural and ecological systems empowers a grounding of local identity and ownership. In turn, this strengthens local economies, community relations, and capacity for civil

Figure 4.01
[Previous] Construction site in west Bamyan of a hotel and restaurant built using vernacular construction techniques.

society, embedding a sense of self-sufficiency within the local psyche.

Such engagement inevitably requires time. Interventions are not meant to be quick-impact, but are designed incrementally, focusing first and foremost on building relationships with local peoples. This mediates the ongoing concern that, even in this methodology, any foreign intervention ultimately remains an outsider's perspective. Specifically, direct encounter with local conditions and communities, embeds a sense of humility and integrity within the approach; there is a cyclical sharing of expertise, local and international, that additionally fosters lasting connections of good-will and solidarity. Design therefore becomes a means of negotiating the distance between formal and informal, between rural and urban, between tradition and modernity. Necessarily, the thesis itself is rooted in an ethic of pluralism, seeking a common ground for the interaction of global and local forces in the context of peacebuilding. It aspires to design the context that can facilitate 'positive' peace, and as such, does not exist as an end in itself. Rather, the thesis forms the premise for a practice of design that, by addressing root causes of insecurity, endeavours to meet enduring outcomes of 'positive' peace in fragile states.

Bibliography

Abdelhalim, Abdelhalim Ibrahim. *The Building Ceremony*. PhD diss., University of California Berkeley, 1978.

Abirafeh, Lina. *Afghanistan Gozargah: Discourses on Gender-Focused Aid in the Aftermath of Conflict*. PhD diss., London School of Economics and Political Science, 2008.

Abirafeh, Lina. "An Opportunity Lost? Engaging Men in Gendered Interventions: Voices from Afghanistan." *Journal of Peacebuilding & Development* 3, no. 3 (2007): 82-87. doi:10.1080/15423166.2007.369594243172.

Adlparvar, Naysan. *When Glass Breaks, it becomes Sharper: Deconstructing Ethnicity in the Bamyan Valley, Afghanistan*. PhD diss., University of Sussex, 2014.

Aldrich, Daniel P., and Michelle A. Meyer. "Social Capital and Community Resilience." *American Behavioral Scientist* 59, no. 2 (2015): 254-69. doi:10.1177/0002764214550299.

Belanger, Pierre. "Redefining Infrastructure," in *Ecological Urbanism.* Mohsen Mostafavi and Gareth Doherty, eds. Zürich: Lars Müller Publishers, 2010.

Bianca, Stefano. *Urban Form in the Arab World: Past and Present*. London: Thames & Hudson, 2000.

Blair, Sheila S., and Jonathan M. Bloom, eds. *Rivers of Paradise: Water in Islamic art and Culture*. London: Yale University Press, 2009.

Blumel, Holger. "Qualitative and Quantitative Screening of the Water Situation in Bamiyan Valley," in *Bamiyan Cultural Master Plan.* UNESCO, ACDC, NRICP, Ministry of Urban Development, and Ministry of Information, Culture, and Tourism, eds. Report. Germany: RWTH Aachen University, 2007.

Brnic, Ivica, Florian Graf, Christina Lenart, and Wolfganga Rossbauer, eds. *Venturing Permanence: The ETH House of Science in Bamiyan*. Zürich: Gta-Verlag, 2012.

Brown, Oli, and Erin Blankenship. *Natural Resource Management and Peacebuilding in Afghanistan*. Nairobi: United Nations Environment Programme, 2013.

Burns, Carol, and Andrea Kahn, eds. *Site Matters: Design Concepts, Histories, and Strategies*. New York: Routledge, 2005.

Clark, Emma. *The Art of the Islamic Garden*. Wiltshire: The Crowood Press, 2004.

Dodge, Toby. "Intervention and Dreams of Exogenous Statebuilding: the Application of Liberal Peacebuilding in Afghanistan and Iraq." *Review of International Studies* 39, no. 05 (2013): 1189-212. doi:10.1017/s0260210513000272.

Easterly, William. *The White Man's Burden*. New York: Penguin Books, 2006.

Erwin, E., and Michael Petzet, eds. *The Giant Buddhas of Bamiyan: Safeguarding the Remains 2010-2015*. Vol. 2. Munich: ICOMOS, 2016.

Fagan, Brian M. *Elixir: a History of Water and Humankind*. New York: Bloomsbury Press, 2011.

Falkenmark, Malin, and Johan Rockstrӧm. *Balancing Water for Humans and Nature: The New Approach in Ecohydrology*. London: Earthscan, 2004.

Galtung, Johan. "An Editorial." *Journal of Peace Research* 1, no. 1 (1964): 1-4.

Galtung, Johan, ed. *Peace, War and Defense: Essays in Peace Research*. Copenhagen: Ejlers, 1976.

Ghani, Ashraf, and Clare Lockhart. *Fixing Failed States: A Framework for Rebuilding a Fractured World*. New York: Oxford University Press, 2009.

Goodhand, Jonathan, and Mark Sedra. "Who Owns the Peace? Aid, Reconstruction, and Peacebuilding in Afghanistan." *Disasters* 34 (2010). doi:10.1111/j.1467-7717.2009.01100.x.

Gorbachev, Mikhail. "Foreword," in *Water and Post-Conflict Peacebuilding*. Erika Weinthal, Jessica Troell, and Mikiyasu Nakayama, eds. New York: Earthscan, 2013.

Gruber, Ernst, and Michael Klein, "Kabul - An Archaeology of Modernization," in *Venturing Permanence: The ETH House of Science in Bamiyan.* Ivica Brnic, Florian Graf, Christina Lenart, and Wolfganga Rossbauer, eds. Zürich: Gta-Verlag, 2012.

Guillaume, Alfred. *The Life of Muhammad: a Translation of Ishāq's Sīrat Rasūl Allāh*. Oxford: Oxford University Press, 1955.

Hatch Dupree, Nancy. "The Family During Crisis in Afghanistan." *Journal of Comparative Family Studies* 35, no. 2 (2004): 311-31.

Hesford, Wendy S., and Wendy Kozol. *Just Advocacy? Women's Human Rights, Transnational Feminisms, and the Politics of Representation*. New Brunswick: Rutgers University Press, 2005.

His Highness the Aga Khan IV. "Award Ceremony for the 12th Cycle of the Aga Khan Award for Architecture." Speech, Award Ceremony for the 12th Cycle of the Aga Khan Award for Architecture, Portugal. September 6, 2013. Accessed October 27, 2013. http://www.akdn.org/speech/his-highness-aga-khan/award-ceremony-12th-cycle-aga-khan-award-architecture.

Hoby, Hermione. "Interview with Khaled Hosseini." *The Guardian*, June 1, 2013. https://www.theguardian.com/books/2013/jun/01/khaled-hosseini-kite-runner-interview .

Hosseini, Khaled. *And the Mountains Echoed*. Toronto: Penguin Group, 2013.

Hynek, Nik, and Péter Marton, eds. *Statebuilding in Afghanistan: Multinational Contributions to Reconstruction*. Abingdon: Routledge, 2012.

Islamic Republic of Afghanistan, ed. *Socio-Demographic and Economic Survey Bamiyan*. Report. Kabul: Central Statistics Organisation, 2013.

Jensen, David, and Steve Lonergan, eds. *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding*. New York: Earthscan, 2012.

Kay, James J. "An Introduction to Systems Thinking," in *The Ecosystem Approach: Complexity, Uncertainty, and Managing for Sustainability*. Waltner-Toews, David, James Kay, and Nina-Marie E. Lister, eds. New York: Columbia University Press, 2008.

Kazimee, Bashir A., and Ayad B. Rahmani. *Place, Meaning, and Form in the Architecture and Urban Structure of Eastern Islamic Cities*. New York: The Edwin Mellen Press, 2003.

Khalaf, Roseanne Saad., and Samir Khalaf. *Arab Society and Culture: An Essential Reader*. London: Saqi Books, 2009.

Klimburg-Salter, Deborah. *The Kingdom of Bamiyan: Buddhist Art and Culture of the Hindu Kush*. PhD diss., Istituto Universitario Orientale, 1989.

Lancaster, Carol. *Foreign Aid: Diplomacy, Development, Domestic politics*. Chicago: Univ. of Chicago Press, 2007.

Lenart, Christina. "Interview: Planned Uncertainty," in *Venturing Permanence: The ETH House of Science in Bamiyan.* Ivica Brnic, Florian Graf, Christina Lenart, and Wolfganga Rossbauer, eds. Zürich: Gta-Verlag, 2012.

Lockhart, Claire. "The Failed State We're In." *Prospect Magazine*, 2008.

Lohmann, Daniel. "Inventory of Historical Monuments in the Bamiyan Valley," in *Bamiyan Cultural Master Plan*. UNESCO, ACDC, NRICP, Ministry of Urban Development, and Ministry of Information, Culture, and Tourism, eds. Report. Germany: RWTH Aachen University, 2007.

Margolis, Liat, and Aziza Chaouni, eds. *Out of Water: Design Solutions for Arid Regions*. Germany: Birkhäuser, 2015.

Mariani, Claire. *Linking Relief, Rehabilitation and Development Programme (LRRD) in Afghanistan: Is Building a City an Appropriate Response to Development Issues in Bamiyan?* Report. Groupe Urgence Rehabilitation Developpement. 2006.

McCarthy, Jennifer, and Daanish Mustafa. "Despite the Best Intentions? Experiences with Water Resource Management in Northern Afghanistan." in *Water and Post-Conflict Peacebuilding*. Erika Weinthal, Jessica Troell, and Mikiyasu Nakayama, eds. New York: Earthscan, 2013.

Ministry of Rural Rehabilitation and Development, ed. "Provincial Profile for: Bamyan." *Regional Rural Economic Regeneration Strategies*. http://afghanag.ucdavis.edu/country-info/Province-agriculture-profiles/bamyan.

Morgan, Llewelyn. *The Buddhas of Bamiyan*. London: Profile Books, 2012.

Mostafavi, Mohsen, and Gareth Doherty, eds. *Ecological Urbanism*. Zürich: Lars Müller Publishers, 2010.

Newman, Edward, Roland Paris, and Oliver P. Richmond, eds. *New Perspectives on Liberal Peacebuilding*. New York: United Nations University Press, 2009.

Polman, Linda. *The Crisis Caravan: Whats Wrong with Humanitarian Aid?* New York: Picador, 2010.

Power, Matthew. "The Lost Buddhas of Bamiyan." *Harper's Magazine* 310, no. 1858 (2005): 67-75.

Reardon, Betty A. *Women and Peace: Feminist Visions of Global Security*. New York: State University of New York Press, 1993.

Reineke, Thomas. "Environmental Assessment of the Bamiyan Valley in the Central Highlands of AFghanistan," in *Bamiyan Masterplan Campaign.* UNESCO, ACDC, NRICP, Ministry of Urban Development and Housing, and Ministry of Information, Culture, and Tourism, eds. Report. Germany: RWTH Aachen University, 2005.

Richmond, Oliver P. *Failed Statebuilding: Intervention and the Dynamics of Peace Formation*. New Haven: Yale University Press, 2014.

Roll, Dominik. "Present Urban Development in the Bamiyan Valley," in *Bamiyan Masterplan Campaign.* UNESCO, ACDC, NRICP, Ministry of Urban Development and Housing, and Ministry of Information, Culture, and Tourism, eds. Report. Germany: RWTH Aachen University, 2005.

Roll, Dominik. "Registration of Cultural Zones and Traditional Architecture in Bamiyan Valley," in *Bamiyan Cultural Master Plan.* UNESCO, ACDC, NRICP, Ministry of Urban Development, and Ministry of Information, Culture, and Tourism, eds. Report. Germany: RWTH Aachen University, 2007.

Rout, Bob. *How the Water Flows: A Typology of Irrigation Systems in Afghanistan*. Report. Applied Thematic Research into Water Management, Livestock and the Opium Economy. Afghanistan Research and Evaluation Unit, 2008.

Ruggles, D. Fairchild. "From the Heavens and the Hills," in *Rivers of Paradise: Water in Islamic Art and Culture.* Sheila Blair and Jonathan Bloom, eds. London: Yale University Press, 2009.

Skaine, Rosemarie. *Women of Afghanistan in the post-Taliban era: How Lives Have Changed and Where They Stand Today*. North Carolina: McFarland & Company, 2008.

Smith-Ferri, David. "Building Bamiyan Peace Park." *Counterpunch*, October 21, 2010. http://www.counterpunch.org/2010/10/21/building-bamiyan-peace-park/ .

Suhrke, Astri. "Waging War and Building Peace in Afghanistan." *International Peacekeeping* 19, no. 4 (2012): 478-91. doi:10.1080/13533312.2012.709759.

Szabo, Albert, and Thomas J. Barfield. *Afghanistan: an Atlas of Indigenous Domestic Architecture*. Austin: University of Texas, 1991.

Thiessen, Chuck. *Local Ownership of Peacebuilding in Afghanistan: Shouldering Responsibility for Sustainable Peace and Development*. Lanham, Maryland: Lexington Books, 2014.

Thompson, Kyle J., Karen S. Henry, Janet P. Hardy, and Adam M. Chalmers. *Snow Harvesting: A Potential Water Source for Afghanistan*. Report. Washington: US Army Corps of Engineers, 2009.

Troell, Jessica, and Erika Weinthal. "Shoring up Peace: Water and Post-Conflict Peacebuilding," in *Water and Post-Conflict Peacebuilding*. Erika Weinthal, Jessica Troell, and Mikiyasu Nakayama, eds. New York: Earthscan, 2013.

Toubekis, Georgios. "Introduction," in *Bamiyan Cultural Master Plan.* UNESCO, ACDC, NRICP, Ministry of Urban Development, and Ministry of Information, Culture, and Tourism, eds. Report. Germany: RWTH Aachen University, 2007.

UN-Habitat, ed. *The State of Afghan Cities*. Vol. 1. Kabul: UN-Habitat, 2015.

UN-Habitat, ed. *The State of Afghan Cities*. Vol. 2. Kabul: UN-Habitat, 2015.

UNEP, ed. *Factsheet Bamyan: Building Community-Based Resilience to Climate Change and Natural Disasters*. Kabul: United Nations Environment Programme, 2016.

UNEP, ed. *Eco-Tech Handbook*. Kabul: United Nations Environment Programme, Forthcoming.

UNESCO. *The Cultural Dimensions of Development: Towards a Practical Approach*. Paris: UNESCO, 1995.

UNESCO, ACDC, NRICP, Ministry of Urban Development and Housing, and Ministry of Information, Culture, and Tourism, eds. *Bamiyan Masterplan Campaign*. Report. Germany: RWTH Aachen University, 2005.

UNESCO, ACDC, NRICP, Ministry of Urban Development, and Ministry of Information, Culture, and Tourism, eds. *Bamiyan Cultural Master Plan*. Report. Germany: RWTH Aachen University, 2007.

Waldheim, Charles. "Weak Work," in *Ecological Urbanism.* Mohsen Mostafavi and Gareth Doherty, eds. Zürich: Lars Müller Publishers, 2010.

Waltner-Toews, David, James Kay, and Nina-Marie E. Lister, eds. *The Ecosystem Approach: Complexity, Uncertainty, and Managing for Sustainability*. New York: Columbia University Press, 2008.

Weinthal, Erika, Jessica Troell, and Mikiyasu Nakayama, eds. *Water and Post-Conflict Peacebuilding*. New York: Earthscan, 2013.

Wyndham, Constance. "A Short Study Investigating Values Ascribed to Heritage Sites in Bamyan by Residents of the Bamyan Valley," in *The Giant Buddhas of Bamiyan: Safeguarding the Remains 2010-2015*. Vol. 2. Erwin, E., and Michael Petzet, eds. Munich: ICOMOS, 2016.

Yu, Kongjian. "The Big-Foot Revolution," in *Ecological Urbanism.* Mohsen Mostafavi and Gareth Doherty, eds. Zürich: Lars Müller Publishers, 2010.