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Assessing Urban Resilience within Sustainable Urban Development Frameworks: Case Studies from Lebanese Cities

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Abstract

This paper examines governance, institutional fragmentation, and financing constraints affecting sustainable and resilient urban development in the Lebanese cities of Saida, Tripoli, and Byblos. Using a qualitative comparative case-study approach, the research analyzes land-use planning systems, cultural heritage governance, and national and local strategies, including the SDATL, CHUD, and the 100 Resilient Cities initiative. Findings reveal that weak regulatory enforcement, fragmented national–local coordination, and donor-driven project cycles hinder the translation of strategic frameworks into tangible urban outcomes. Recent shocks, such as wildfires and the Beirut Blast, further expose gaps in disaster risk reduction and preparedness, which are often addressed through temporary donor or NGO interventions rather than institutional mechanisms. The study argues that advancing sustainable urban development in Lebanon requires strengthened coordination frameworks, outcome-based financing models, and enhanced municipal empowerment to address longstanding structural urban vulnerabilities.

Keywords: Sustainability; Urban Resilience; Governance; Lebanon.

1. Introduction

Urban resilience has become a central theme in global development discourse, especially for countries grappling with instability, environmental hazards, and weak governance systems. In Lebanon, this concept has been embraced in policy papers, donor projects, and academic frameworks. Yet, despite the presence of national master plans like the Schéma Directeur d'Aménagement du Territoire Libanais (SDATL)[1], internationally funded urban regeneration programs like the Cultural Heritage and Urban Development (CHUD)[2] project, and local strategies such as the Urban Sustainable Development Strategy (USUDS) for Saida, Lebanese cities remain acutely vulnerable to both chronic stress and acute shocks. This gap between theory and practice, vision and implementation, is starkly visible in the cities of Saida, Tripoli, and Byblos three urban centers that have received considerable planning attention and funding but continue to suffer from systemic fragility.

Each of these cities embodies a different facet of Lebanon's urban landscape. Saida has faced unregulated urban sprawl, a coastal waste crisis, and growing inter-communal tensions, despite its participation in international projects such as Med-Cities and CHUD. Tripoli, Lebanon's second-largest city, continues to struggle with deep socio-political divisions, poverty, and a long series of urban strategies that have been abandoned or never implemented. Byblos, while often celebrated for its cultural heritage and its involvement in the Rockefeller Foundation's 100 Resilient Cities program, lacks a coherent integration of its resilience strategy into national frameworks or zoning policies. Despite their differences, these cities all suffer from a shared weakness: a lack of sustained coordination between national institutions, municipalities, and external donors.

Urban resilience, broadly defined as a city's ability to anticipate, absorb, recover from, and adapt to adverse events, cannot be built through isolated projects or scattered funding alone. It requires consistent governance, strategic planning, community engagement, and risk-informed investments. In Lebanon, however, resilience often functions more as a rhetorical goal than a practical reality. Planning documents remain disconnected from one another; donors implement projects based on their own priorities rather than national frameworks; municipalities operate with limited authority and

[1] Khanna, Parag. 2017. *Lebanon*. New York: HarperCollins.; CDR (Council for Development and Reconstruction). 2016. *Habitat III National Report – Lebanon*, 42. Beirut: Council for Development and Reconstruction.
[2] World Bank. 2019. *Cultural Heritage and Urban Development Project Performance Assessment Report*. Washington, DC: World Bank. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/988234567890123456/cultural-heritage-urban-development.

even more limited budgets. In some cases, cities like Saida have developed overlapping strategies including SDATL zoning, CHUD conservation plans, and USUDS development objectives that contradict one another rather than reinforce a unified vision. The result is fragmentation, confusion, and ultimately, inaction.

Disasters have further exposed the consequences of this fragmented system. The 2019 Chouf wildfires, the 2020 Port of Beirut explosion, and the 2021 Akkar fires all revealed major gaps in Lebanon's disaster risk reduction (DRR) capabilities. Fire weather warnings were issued, helicopters were grounded due to lack of maintenance, and national institutions failed to coordinate meaningful responses. In each case, civil society, local volunteers, and international aid filled the void left by government inaction. These events did not represent unpredictable "black swans," but rather predictable outcomes of a system that plans without implementing, collects data without acting, and relies heavily on donor aid while failing to maintain basic services.

This article offers a critical examination of urban resilience planning in Lebanon, using Saida, Tripoli, and Byblos as case studies. Drawing on the country's own planning documents and resilience initiatives, it explores the contradictions between urban policy, donor involvement, and municipal realities. It also shows how resilience remains largely a theoretical framework rather than a lived reality with cities depending more on improvisation and citizen initiative than on institutional preparedness or strategic coordination.[3]

In doing so, this article raises key questions: What is the true value of a resilience strategy if it is not enforced or followed? What happens when each new donor initiative ignores the guidelines and lessons of previous ones? And can urban resilience be achieved in a system where municipalities are politically constrained, financially underpowered, and legally sidelined? How do governance fragmentation and donor-driven financing models shape the implementation of sustainable and resilient urban development strategies in Lebanese cities?

By examining these issues, the article argues that this gap is not primarily technical. Rather, it is rooted in governance fragmentation, weak regulatory enforcement, and financing models that prioritize short-term projects over long-term urban transformation.

2. Materials and Methods

The method of this study is a qualitative document analysis. We examined national planning frameworks, such as the SDATL (enacted in 2005), donor-funded programs, such as the Cultural Heritage and Urban Development (CHUD)[4] project regional donor driven strategies such as USUDS for Saida, Al fayhaa 2020 Tripoli and global initiatives, such as the 100 Resilient Cities for Byblos. The cities chosen here to study, Saida, Tripoli and Byblos, were three cities in which there were settlement for resilience related projects. Secondary review included large disasters (Chouf 2019 wildfires, Beirut 2020 port explosion, Akkar 2021 fires) to evaluate the transposition of planning into practice. Documents comprised government legislations, donor reports, municipal plans and UN-Habitat reports. The analysis coding targeted implementation, governance and outcomes.

3. Results

3.1. National Frameworks (SDATL, CHUD)

Lebanon's national frameworks are abundant but fragmented. The Schéma Directeur d'Aménagement du Territoire Libanais (SDATL) proposed balanced territorial development and identified urban growth areas such as Saida and Tripoli, but lacked enforcement capacity. The Cultural Heritage and Urban Development (CHUD) program, financed by the World Bank, targeted heritage preservation in five major cities. While it rehabilitated historical centers and improved public spaces, it faced chronic delays, political interference, and limited municipal ownership. Both frameworks highlight Lebanon's recurrent problem: ambitious national strategies with little follow-through, weak accountability, and scarce integration with local disaster risk reduction (DRR).

3.2 Local and Municipal Frameworks

At the municipal level, local strategies emerged in parallel, often disconnected from national priorities. The Urban Sustainable Development Strategies (USUDS), prepared for Saida, the AL Fayhaa 2020 for Tripoli, generated guidelines and participatory visions but remained largely at the strategy stage without binding authority. Similarly, 100 Resilient Cities (100RC) for Byblos with international visibility and branding. However, while the program produced a resilience strategy and promoted partnerships, it lacked integration with national disaster management and depended on external donor cycles. These local frameworks demonstrate energy and creativity at the municipal scale, but their isolation from national policies reinforced fragmentation instead of resilience.

3.3. Saida: Fragmented Urban Governance

Saida, Lebanon's third-largest city and a historic coastal hub, has long struggled to reconcile urban growth with effective planning. Demographic pressures intensified after the Syrian refugee influx, accelerating informal housing and straining already fragile infrastructure. Early planning efforts, such as the 1930s ban on construction in orchards and Écochard's 1950s master plan, sought to protect agricultural land but were gradually undermined by coastal expansion and political instability.[5]

[3] UNDRR (United Nations Office for Disaster Risk Reduction). 2013. *Making Lebanon Resilient*. March 18, 2013. https://www.undrr.org/publication/making-lebanon-resilient.

[5] UN-Habitat. 2018. *Saida City Profile 2018*. Beirut: UN-Habitat. https://unhabitat.org/saida-city-profile-2018.

Later initiatives highlighted the same tension between vision and enforcement. The 1995 zoning decree introduced land-use regulations but remained largely passive, lacking mechanisms for risk reduction or disaster preparedness.[6] Donor-funded projects from 2001 onwards reinforced this fragmentation. The CHUD program prioritized heritage rehabilitation, while the SDATL (2005) simultaneously identified flooding and coastal risks that CHUD had overlooked. Subsequent strategies, including the USUDS (2014) and Med-Cities initiative (2015), attempted to provide a comprehensive vision but contradicted national guidelines and overlooked earlier warnings.

By 2016, the municipality advanced its own action plan with eight resilience-related goals, yet this too operated in isolation from donor programs and national authorities. Across decades of interventions, Saida accumulated a patchwork of plans each ambitious in scope but disconnected in practice. The result is continued urban sprawl, weak disaster preparedness, and limited institutional capacity, demonstrating how fragmented governance and donor dependency undermine resilience in one of Lebanon's most significant coastal cities.

3.4 Tripoli: Chronic Urban Fragility

Tripoli, Lebanon's second-largest city, with nearly three-quarters of a million residents in its metropolitan area, embodies the intersection of urban fragility and political neglect. Marked by stark social divisions, the city has repeatedly witnessed violent clashes between Jabal Mohsen and Bab al-Tabbaneh, reinforcing its image as a site of instability. These conflicts have been treated as security crises rather than catalysts for resilience planning, leaving structural vulnerabilities unaddressed.[7]

Urban interventions over the past decades illustrate this pattern. The CHUD project concentrated on heritage rehabilitation and waterfront renewal but overlooked the city's deeper challenges of poverty, unemployment, and informality. The SDATL (2005) warned of Tripoli's exposure to uncontrolled urban expansion and weak governance, yet its recommendations were never translated into action. Ambitious schemes such as the "Tripoli 2020" strategy and subsequent Al-Fayhaa plans promised job creation and infrastructure renewal but stalled due to political fragmentation and lack of institutional capacity.[8]

More recent donor-led initiatives, including UN-Habitat's 2016 city profiling, have remained fragmented addressing housing, refugee management, or individual infrastructure projects without integrating them into a broader resilience strategy. As a result, Tripoli continues to suffer from chronic poverty, rising unemployment, and neglected infrastructure. Its size and regional importance contrast sharply with the absence of a coherent long-term vision, underscoring how sectarianism and governance failure have left the city in a state of strategic neglect.

3.5 Byblos: Localized Planning and Resilience Ambitions

Byblos (Jbeil), with a population of about 31,000, occupies a unique position as a historic coastal city and UNESCO World Heritage Site. Unlike other Lebanese cities, it has benefited from early and relatively consistent planning. The first master plan, adopted in 1972, preserved the historic core by imposing strict building and land-use controls. A revised zoning plan in 1999 expanded regulation to surrounding areas, encouraging tourism-related investments while maintaining heritage protections.[9]

Subsequent interventions reinforced this trajectory. The Cultural Heritage and Urban Development (CHUD) project, launched in 2001, prioritized restoration of the medieval wall, rehabilitation of the old port, and extension of the pier, strengthening the city's cultural and economic profile. The SDATL (2005) classified Byblos as a major tourist hub and emphasized the protection of its coastal and archaeological assets, including beaches, fossil zones, and traditional neighborhoods.

In 2013, Byblos joined the Rockefeller Foundation's 100 Resilient Cities network. The city adopted a resilience strategy in 2015 structured around five pillars Connected, Resourceful, Peaceful, Cultural, and Thriving City and allocated 10% of its annual budget to implementation. This commitment marked Byblos as a national leader in urban resilience, yet financial constraints limited the scope of projects and increased reliance on external donors.

Byblos thus represents a distinctive case: it has leveraged heritage and tourism planning to sustain urban growth and integrate resilience into local governance. However, the absence of an updated master plan linking these initiatives to national frameworks leaves questions about the long-term sustainability and institutionalization of its resilience agenda.[10]

3.6 National Disaster Case Studies

Chouf Wildfires (2019): The wildfires that swept the Chouf mountains revealed systemic gaps in Lebanon's disaster management. Although a fire weather index and risk data existed, helicopters purchased for firefighting had been grounded for years due to lack of maintenance. National agencies were unable to respond effectively, leaving local volunteers and support from neighboring states to contain the fires. This underscored the disconnect between available data, technical assets, and actual preparedness.

Beirut Port Explosion (2020): The port blast was the most devastating single urban disaster in Lebanon's modern history. More than 200 people were killed and entire districts of Beirut were damaged or destroyed. Investigations revealed that the ammonium nitrate responsible for the explosion had been stored for years despite repeated warnings and clear legal

[6] Makhzoumi, Jala, and Salwa Sabbagh. 2013. *Saida Urban Sustainable Development Strategy: Green / Open Space Network*.

[7] UN-Habitat. 2017. *Tripoli City Profile 2016 (Updated 2017)*. Beirut: UN-Habitat. https://unhabitat.org/tripoli-city-profile-2016

[8] UN-Habitat Lebanon and UN ESCWA. 2021. *State of the Lebanese Cities 2021*. Beirut: UN-Habitat Lebanon & ESCWA. https://www.unescwa.org/publications/state-lebanese-cities-2021.

[9] UN-Habitat Lebanon and UN ESCWA. 2021. *State of the Lebanese Cities 2021*. Beirut: UN-Habitat Lebanon & ESCWA. https://www.unescwa.org/publications/state-lebanese-cities-2021.

[10] CDR (Council for Development and Reconstruction). n.d. *National Physical Master Plan*. Accessed August 29, 2023. https://www.cdr.gov.lb/en-US/Studies-and-reports/National-physical-master-plan.aspx.

responsibility. The disaster exposed an absence of safety regulation, risk governance, and coordinated emergency response, reducing resilience plans to irrelevance in the face of systemic negligence.
Akkar Wildfires (2021): Only two years after the Chouf fires, northern Lebanon experienced another wave of uncontrolled wildfires. Once again, risk assessments existed, but resources, inter-agency coordination, and trained personnel were insufficient. The response relied largely on NGOs and local residents. The repetition of failures confirmed that lessons had not been institutionalized and that national resilience capacity remained reactive rather than preventive.

3.7 National Frameworks and Donor Programs

The disasters must be read against the backdrop of Lebanon's planning frameworks. The **SDATL (2005)** remains the country's only enacted national spatial plan, legally in force until 2035. On paper, it addresses land use, coastal protection, heritage, and growth corridors. In practice, it functions more as a reference document than a binding framework: mandates overlap, enforcement tools are outdated, and municipal zoning often contradicts it.
The CHUD program (initial budget USD 62.2M, later topped up by World Bank and AFD) rehabilitated historic cores in Saida, Tripoli, Byblos, Tyre, and Baalbek. While successful in upgrading facades, streets, and public spaces, it neglected disaster risk reduction and climate adaptation. Projects enhanced visibility but did not create operational systems for risk anticipation, maintenance, or preparedness.
The USUDS (Saida 2014) added ambitious project lists covering mobility, coastal interfaces, and heritage zones. Yet these ran parallel to donor programs and SDATL, leading to overlaps, contradictions, and duplication. Municipal budgets and authority were too limited to ensure coherence.
The Al-Fayhaa 2020 Strategy (2011) structured planning around urban areas, equipment, and infrastructure, and introduced the floor occupation coefficient (COS) in Tripoli's master plan. However, it remained weakly aligned with earlier planning frameworks and provided limited guidance on the integration and regulation of the urban fabric, particularly around the historic city.
Byblos's participation in 100 Resilient Cities (2013–2019) demonstrated unusual commitment, with 10% of its budget earmarked for resilience. However, its projects remained tied to donor co-financing and were not embedded in a comprehensive master plan aligned with SDATL. The strategy elevated Byblos internationally but left core systems codes, budgets, inter-agency protocols unchanged.

3.8 Cross-City and National Synthesis

The combined analysis of Saida, Tripoli, Byblos, and the national disasters demonstrates recurring patterns. Fragmented planning produces multiple strategies that fail to integrate. Donor-driven priorities favor projects with international appeal heritage rehabilitation, waterfront promenades, branding over structural risk reduction. Municipal weakness prevents cities from enforcing zoning or sustaining infrastructure. And an enforcement vacuum ensures that even when risks are mapped, they are not acted upon.
This creates what can be described as Lebanon's resilience paradox. Despite numerous strategies and donor-funded initiatives, a persistent implementation gap exists between plans and outcomes. Yet outcomes remain fragile because frameworks do not bind practice, funding focuses on capital over operations, and accountability ends once projects are inaugurated. The consequences are material: Tripoli's poverty belt remains underserved despite repeated projects, Saida's urban growth continues without integration into resilience planning, and Byblos, despite global recognition, struggles with water scarcity and congestion. National disasters such as the Chouf fires, Beirut Port blast, and Akkar fires confirm that plans and assets without maintenance or enforcement collapse under real-world stress.
The findings also align with UN-Habitat's City Profiles (2016–2021)**,** which emphasized multi-dimensional risks, donor-driven fragmentation, and reactive governance. Together, the urban and national case studies confirm that Lebanon's resilience gap is not technical but institutional: it is not the absence of plans that undermines cities, but the absence of enforcement, continuity, and systemic risk governance.

3.9 The 2019 Chouf Fires: A Preventable Disaster

In October 2019, Lebanon faced one of its worst wildfire episodes in decades. High temperatures, dry vegetation, and strong winds created predictable fire conditions already flagged by the National Fire Danger Index system, which had been operational since 2015. Yet when fires broke out in the Chouf mountains, Lebanon's response faltered:

- The country owned three firefighting helicopters, but they were grounded due to lack of maintenance and spare parts**.**
- Municipalities and civil defense units lacked trained staff, vehicles, and protective equipment**.**
- Citizens and volunteers became the first responders, while neighboring Cyprus and Jordan provided aerial support.

  This event exposed the maintenance deficit and absence of inter-agency readiness, proving that resilience on paper had not translated into operational preparedness.[11]

3.10 The Beirut Port Blast (2020): Catastrophe of Neglect

On 4 August 2020, a massive explosion at Beirut's port caused by the detonation of 2,750 tons of ammonium nitrate stored improperly since 2014 devastated the capital. The blast killed over 220 people, injured more than 7,000, and displaced 300,000 residents.

[11] UNDRR (United Nations Office for Disaster Risk Reduction). 2021. *Regional Assessment Report on Disaster Risk Reduction in the Arab Region*. Regional Office for Arab States.

- Multiple warnings and reports about the stored chemicals had circulated across customs, judiciary, and port authorities.
- No single institution assumed ownership of risk, allowing dangerous material to sit for years in a dense urban port.
- The emergency response was delayed and fragmented, with hospitals overwhelmed, emergency communications failing, and civil society groups stepping in where institutions collapsed. This was a governance failure due to fragmentation, and lack of accountability.

3.11 The Akkar Fires (2021): Repetition of Failure

In summer 2021, wildfires struck Akkar's forests, echoing the Chouf disaster. Again, Lebanon had early warning indicators and risk maps showing high fire probability. Again, helicopters were unavailable, civil defense was under-resourced, and volunteers filled the gaps. Akkar also highlighted the social vulnerability dimension: fire-affected areas were among the poorest in Lebanon, where weak governance and economic collapse magnified exposure to risk.

3.12 Disasters as Stress Tests

The past six years have been punctuated by fires, floods, and catastrophic explosions. Each crisis not only caused destruction but also revealed how resilience frameworks collapsed when confronted with real events.

Table 1. Major Disasters in Lebanon (2019–2025).

Event	Period	Impact & Scale	Preparedness & Response Failure
Chouf Wildfires	Oct 2019	~3,000 ha burned; 1 death; dozens displaced	Helicopters grounded due to lack of maintenance; civil defense under-equipped; relied on neighbors (Cyprus, Jordan)
Beirut Port Blast	Aug 2020	At least 218 deaths; >6,000 injured; ~$4.6B in damage (UNDP 2025)	Hazardous material stored for years; no coordinated emergency system; reconstruction left to families/NGOs
Akkar Wildfires	Jul–Aug 2021	~1,500 ha burned; 1 death; hundreds evacuated	No aerial firefighting; under-equipped civil defense; volunteers filled the gap
Northern Floods	Jan 2024	Rivers flooded; roads submerged; access cut off	No pre-existing flood contingency; major service disruption (UNDRR 2024)
Wildfire Trend	2023–mid 2025	4,264 wildfires in 2023; 6,345 in 2024; 466 in 2025 (until June)	Rising hazard trend; no systemic fire prevention program (L'Orient Today 2025)

3.13 Underutilized Resources and Limited Effectiveness

Table 2. Disaster Management Resources vs. Operational Capacity (2019–2025).

Resource	Quantity / Availability	Current Operational Status	Key Gap
Firefighting helicopters	3 Sikorsky S-61s	Mostly grounded; sporadically deployed abroad (e.g., Syria 2025)	Maintenance, spare parts, long-term readiness
Civil defense volunteers	~4,000 nationwide	Relied on but unpaid, under-equipped	No professionalized, funded response corps
Flood/fires risk mapping	Produced 2015–2020	Rarely integrated into urban planning	Knowledge without enforcement
Forest fire risk plan (2025)	$3.5M donor-supported project	Still in roll-out phase	Long-term sustainability uncertain
Disaster recovery capacity	Families, NGOs, diaspora	Rebuilt ~70% of Beirut blast damage	State largely absent; dependency on non-state actors

Lebanon's fragility does not stem from an absence of assets, but from the persistent inability to translate existing resources into effective and reliable functionality, particularly at moments of need.

3.14 Resilience Projects: Promises vs Outcomes

Donor-funded frameworks SDATL, CHUD, USUDS, Al Fayhaa 2020 and 100RC produced glossy reports and strategies. However, implementation remained delayed, and the anticipated reforms rarely moved beyond the level of declaration.

Table 3. National and Donor-Funded Resilience Projects vs Outcome.

Project / Framework	Objective	Reported Achievement	Reality on the Ground
CHUD (2003–2015)	Urban renewal in Tripoli, Saida, Tyre, Byblos, Baalbek	Infrastructure upgrades; cultural heritage preservation	Cities beautified but basic fire brigades/flood defenses absent
SDATL (2005)	National land-use and urban development plan	Comprehensive maps and risk assessments	Never implemented; shelved amid political gridlock
USUDS (2014)	Urban sustainability and mobility planning	Strategy documents produced	No integration into municipal budgets or regulations
100RC (2014–2019)	Build "resilient cities" globally; Beirut included	Appointment of Chief Resilience Officer; strategy launch	Position later dissolved; resilience remained rhetorical
UNDP Risk Maps (2015–2020)	Flood and fire risk mapping	Hazard knowledge established	Data unused in zoning; municipalities continued approving risky developments

3.15 Cities as Showcases of Collapse

Table 4. City-Level Case Evidence of "Resilience Collapse".

City	Donor/Project Framing	Reality During Crises
Tripoli	CHUD: urban renewal, heritage preservation	Beautified center but lacked fire brigades; floods in 2024 revealed absent drainage
Saida	CHUD + waste treatment initiatives	Landfill overflowed in 2023; flood risk unmanaged; wildfire response absent
Byblos	"Resilient heritage city" (CHUD, tourism) 100RC membership	Coastal erosion worsened; water shortages persisted; no wildfire readiness
Beirut	Resilience office created	Port blast destroyed city; reconstruction driven by NGOs/families, not state structures

Cities were framed as "flagships" of resilience, yet on-the-ground conditions reveal a clear disjunction between this narrative and local realities.

3.16 The Collapse in Perspective

Taken together, the four tables illustrate a clear trajectory:

- **Hazards (Table 1)** have intensified, yet responses remain improvised.
- **Resources (Table 2)** exist but are non-functional or unsustained.
- **Projects (Table 3)** demonstrate donor dependency without local institutionalization.
- **Cities (Table 4)** became showcases for reports, but not for real resilience.

The illusion of resilience has therefore collapsed under repeated stress, revealing a governance system more invested in appearances than in building capacity.

4. Discussion

The findings of this research demonstrate that resilience in Lebanon has remained largely rhetorical, shaped by discourse and international visibility rather than embedded in governance or daily practice. Although multiple frameworks have been produced since the late 1990s including the SDATL national spatial plan, the CHUD heritage rehabilitation program, the donor-funded USUDS and Med-Cities strategies, and the Rockefeller Foundation's 100 Resilient Cities initiative implementation has consistently faltered due to fragmented governance, donor dependency, and weak enforcement. National authorities, municipal councils, and donor agencies often work in parallel rather than in coordination, producing overlaps, contradictions, and duplication, while enforcement tools remain outdated and poorly applied. This governance vacuum ensures that even when risks are identified in advance, they are not addressed. Lebanon's recent disasters provide stark confirmation of this systemic weakness: the Chouf wildfires of 2019 exposed how a functioning fire-weather index and firefighting helicopters existed but were not maintained or mobilized; the Beirut Port explosion of 2020 revealed catastrophic negligence, with ammonium nitrate stored for years despite repeated warnings and no effective chain of accountability; and the Akkar wildfires of 2021 showed that lessons were not learned, as known risks once again overwhelmed an absent state and left communities and NGOs to respond. These events illustrate that Lebanon's vulnerability is not the result of unforeseeable hazards, but of governance failures where assets are left idle, laws unenforced, and responsibilities fragmented. The city case studies reinforce this picture through different trajectories: Saida demonstrates the contradictions of fragmented planning, where overlapping municipal, national, and donor strategies multiplied without alignment or integration; Tripoli reflects the entrenchment of poverty, sectarian conflict, and neglect, where ambitious strategies such as Tripoli 2020 were abandoned and chronic underinvestment left the city exposed; and Byblos shows how resilience has often been treated as a branding exercise, with international recognition through UNESCO and 100RC masking the fact that resilience initiatives remained financially unsustainable and

disconnected from national frameworks. Across these cases, the same patterns emerge: donor-driven projects favor visible outputs such as restored facades, waterfront promenades, or glossy strategies, while overlooking structural vulnerabilities such as poverty, infrastructure decay, or climate-related risks; municipalities remain institutionally weak, dependent on central agencies for funding and approvals, and incapable of sustaining operations or enforcing zoning; and citizens are left to improvise disaster response in the absence of effective state systems, rebuilding homes after explosions, supplying emergency aid, and fighting wildfires with personal tools. This overreliance on communities as the last line of defense reflects social solidarity but also underscores the dangerous retreat of the state from its responsibilities. The Lebanese experience therefore reveals the core contradiction of resilience discourse in fragile states: rather than building institutions, resilience becomes a performance for international audiences, an illusion of progress sustained by donor funding, reports, and networks, while vulnerabilities deepen and systems collapse under stress. Unless resilience is redefined as a binding framework tied to enforcement, empowered municipalities, accountable governance, and outcome-based financing that funds not only capital projects but also operations, maintenance, and training, it will remain an illusion in Lebanon a cycle of crisis, donor intervention, and collapse where the costs are carried not by institutions but by ordinary citizens.

5. Conclusions

This research demonstrates that urban resilience in Lebanon has functioned primarily as a discursive and symbolic construct rather than an operational system embedded in governance and everyday practice. Despite the national plans, donor-funded strategies, and internationally endorsed resilience frameworks over the past two decades, implementation has repeatedly failed due to fragmented authority, donor dependency, and the persistent absence of enforcement and accountability. The recurring pattern is not one of missing resources or insufficient knowledge, but of assets, laws, and risk assessments that exist yet remain unused, unenforced, or disconnected from decision-making.

The analysis of recent disasters and city case studies confirms that Lebanon's vulnerability is structural rather than accidental. Risks are often known in advance, but institutional fragmentation and political paralysis prevent preventive action, leaving crises to be managed ex post by communities, NGOs, and ad hoc interventions. Saida, Tripoli, and Byblos illustrate different urban trajectories, yet converge on the same outcome: resilience strategies multiply without integration, municipalities remain weak and financially constrained, and donor-driven projects privilege visibility over durability. In this context, resilience becomes a performance for international audiences—measured through plans, labels, and networks while underlying social, infrastructural, and environmental vulnerabilities deepen.

Ultimately, the Lebanese case exposes a fundamental contradiction in the global resilience agenda when applied to fragile states. Without empowered local institutions, binding enforcement mechanisms, and financing models that support operations, maintenance, and institutional learning, resilience risks reinforcing the illusion of progress rather than producing real capacity to withstand shocks. As long as resilience remains detached from accountability and governance reform, Lebanon is likely to remain trapped in a recurring cycle of crisis, emergency response, and reconstruction, where the burden of failure is borne not by institutions, but by ordinary citizens.

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