

## Architectural Approaches to Upgrading Informal Settlements in Morocco

Argane Najlaa, MSc <sup>1</sup> (ORCID: 0009-0005-5576-6390),  
Nataliia Zdetovetska, Sr. Lect. <sup>1</sup> (ORCID: 0000-0001-7370-2001)

<sup>1</sup> Kyiv National University of Construction and Architecture, Kyiv, Ukraine

### ABSTRACT

This paper examines the architectural approaches to upgrading informal settlements (bidonvilles) in Morocco, focusing on the current situation, existing challenges, and creative design-based solutions. Informal settlements remain one of the country's most critical urban issues, reflecting social inequality, housing shortages, and rapid urbanization. Despite governmental efforts through the Villes Sans Bidonvilles (Cities Without Slums) program, many citizens continue to live in unsafe, overcrowded, and poorly serviced environments that fail to meet basic human needs. These settlements not only affect the daily lives of residents but also create larger urban, social, and environmental problems for Moroccan cities. This paper explores how architecture and design can contribute to sustainable upgrading strategies, emphasizing the importance of creativity, cultural understanding, and participatory design in shaping more inclusive and humane urban spaces.

*Keywords: Informal settlements, Morocco, urban upgrading, housing policy, affordable housing, sustainable architecture, urban planning, community engagement.*

### 1. INTRODUCTION

**Informal settlements** in Morocco remain a significant urban challenge, reflecting broader issues of social inequality, housing shortages, and rapid urbanization. To address this, the Moroccan government launched the Villes Sans Bidonvilles (VSB, "Cities Without Slums") programme in 2004, aiming to eliminate slums by providing decent housing, basic infrastructure, and public services to vulnerable populations. Despite these efforts, many households continue to live in precarious conditions, with inadequate access to clean water, sanitation, energy, and public amenities [3]. The **"measurable condition"** of these homes is often poor: thin walls or metal sheets, insufficient insulation, overcrowded rooms, and poor ventilation. Streets in informal areas are frequently narrow or unpaved, drainage is weak or absent, lighting is limited, and communal spaces such as markets, schools, and health clinics are insufficient or distant [1]. These conditions have wider implications for Moroccan cities. They contribute to health risks, social exclusion, and environmental degradation, while complicating urban planning and service delivery. Informal settlements can reduce overall liveability, exacerbate inequality, and constrain sustainable growth. Furthermore, challenges such as real estate speculation, unaffordable rehousing, and program delays sometimes force residents into housing that is unsuitable or inaccessible [4].



Figure 1. The slum of Douar Bouih in Casablanca, Morocco

### 2. EXISTING DESIGN & POLICY STRATEGIES

Morocco has implemented a range of strategies under the Villes Sans Bidonvilles (VSB) programme to improve living conditions in informal settlements and reduce slum areas. One major approach has been new housing construction, with over 347,000 families benefiting by mid-2024, representing approximately 74% of those identified as in need. These new housing projects aim to provide safe, durable, and habitable dwellings while integrating residents into the formal urban fabric [5]. In addition to housing construction, the programme has focused on infrastructural upgrades, including access to clean water, electricity, sanitation, road networks, and the integration of these neighbourhoods into municipal services. These improvements are intended to provide not only basic utilities but also a foundation for social and economic inclusion [3]. The Moroccan government has also introduced legal and procedural reforms to reduce real estate speculation, improve the transparency of beneficiary selection, and safeguard the rights of residents receiving housing. These measures are essential to ensure that the benefits of the VSB programme reach the intended populations and that newly constructed areas are legally and socially secure [4]. Finally, design and architectural initiatives have emerged alongside state efforts. Student projects and experimental housing schemes, such as the "Bayt" project by Abdessamed Azarfane, highlight the potential of vernacular models, flexible housing typologies, and participatory planning. These initiatives demonstrate how architecture can respond to local culture, social practices, and the need for adaptable, human-centered environments [6].

### 3. ARCHITECTURAL CHALLENGES & TENSIONS

Despite these strategies, informal settlement upgrading continues to face multiple tensions and challenges, which often persist across different urban contexts

*Affordability vs. Quality.* While state housing aims to be cost-effective, this sometimes leads to compromises in material quality, thermal comfort, and climate responsiveness. Furthermore, some rehousing units may be located far from

employment opportunities or social services, making them inaccessible or financially burdensome for residents [4].

*Standardization vs. Local Identity.* Many housing models rely on repetitive, standardized designs that may not reflect local culture, social norms, or vernacular architectural traditions. This mismatch can lead residents to make informal modifications, generate dissatisfaction, and reduce the sense of ownership and belonging [6].

*Top-down vs. Participatory Approaches.* State-led interventions often limit resident involvement in planning and design. Without community input, housing layouts, street networks, and public spaces may fail to accommodate daily routines, social practices, or communal needs, resulting in underutilized or misaligned urban spaces [5].

*Legal and Implementation Issues.* Problems with property rights, incomplete infrastructure, misuse or resale of units, and inconsistent oversight undermine the effectiveness of housing programmes. Even cities declared “slum-free” may still have areas with insufficient services or insecure tenure, leaving residents vulnerable to displacement or social exclusion [4].

#### 4. ARCHITECTURAL STRATEGIES FOR SUSTAINABLE UPGRADING

Architects propose that more effective and sustainable upgrading of informal settlements in Morocco can be achieved through integrated design strategies that combine flexibility, community engagement, environmental responsiveness, and legal safeguards.

##### **Hybrid Housing Typologies with Expansion Potential.**

Housing should begin with basic, affordable, and structurally sound core units that meet immediate safety and habitability needs. Residents can then expand these units over time—adding rooms, lofts, or extensions—based on household needs and income. Utilizing modular construction and locally available materials allows adaptability, reduces costs, and maintains cultural relevance.

##### **Participatory Mapping and Co-Creation.**

Engaging residents in the planning process is essential. Participatory mapping can document how people use space, daily routines, and social networks. Residents can co-design street layouts, public spaces, and community facilities, ensuring that the settlement plan reflects their lifestyle and social patterns.

##### **Climate-Responsive and Green Design.**

Incorporating passive design strategies—such as natural ventilation, optimal orientation, shading, rainwater harvesting, and use of local materials—can improve comfort, reduce energy demand, and minimize environmental impact. These strategies also help create resilient and sustainable living environments.

##### **Early Public Nodes and Micro-Infrastructure.**

Key community facilities, such as small health clinics, local markets, communal courtyards, and basic road networks, should be implemented early in the upgrading process. These public nodes act as anchors, foster social cohesion, and encourage residents’ sense of ownership while the housing development progresses.

##### **Legal and Tenure Safeguards Integrated with Design.**

Upgrading programmes must ensure secure tenure, transparent beneficiary selection, and enforceable standards for housing quality, spatial layout, and public space provision. Design codes should guarantee minimum access, light, ventilation, and

communal amenities, while also allowing vernacular expression to preserve cultural identity and resident satisfaction.

#### 5. CONCLUSION

The upgrading of informal settlements in Morocco represents a complex but critical challenge for urban development, social equity, and environmental sustainability. Addressing this issue requires more than housing provision; it demands an integrated approach that balances physical, social, and legal dimensions. Success depends on combining innovative architectural solutions, community participation and climate-sensitive design. When these elements work together, informal settlements can be transformed into vibrant, resilient neighbourhoods that reflect local culture, support social cohesion, and provide residents with safe, dignified living conditions. Ultimately, thoughtful design and inclusive planning have the potential to turn informal areas from spaces of vulnerability into sustainable, thriving communities that contribute positively to Morocco’s broader urban landscape.

#### References

- [1] Salhi, A. The general characteristics of urban slums in Morocco in terms of housing and facilities: Ain Sbaa-Lmkhalif district as a case study. *Journal of Social Sciences*, 2021. Vol. 5 No. 19. 607 p. URL: <https://journalsocialsciences.de/index.php/jss/article/view/339>
- [2] House of Auditors. Deficiencies in Morocco’s “Cities Without Slums” Program. *Morocco World News*, 2020. URL: <https://www.moroccoworldnews.com/2020/06/68627/hcp-outlines-deficiencies-in-moroccos-cities-without-slums-program/>
- [3] Morocco launches an action plan to promote decent housing. *Atalayar*. (2024). URL: <https://www.atalayar.com/en/articulo/politics/morocco-launches-an-action-plan-to-promote-decent-housing/20240715061000202700.html>
- [4] The End of Inclusive Resettlement: Experiencing Unaffordability within State Housing Programmes in Salé, Morocco. *Urban Forum*. 2024. Vol. 35. P.529-550. URL: <https://link.springer.com/article/10.1007/s12132-024-09517-2>
- [5] Jérôme Branchet. Une brèche participative dans le plan Villes sans bidonvilles (Larache, projet participatif). *Citego*. 2023. URL: [https://www.citego.org/bdf\\_fiche-document825\\_fr.html](https://www.citego.org/bdf_fiche-document825_fr.html)
- [6] Abdessamed Azarfane. Bayt: A Different View on Social Housing in Morocco. *urbanNext*, October 15, 2025. URL: <https://urbannext.net/bayt-a-different-view-on-social-housing-in-morocco/>