

HYBRID HERITAGE GOVERNANCE: THE TRANSFORMATION OF BANDUNG'S LOCAL REGULATION (2009–2025) IN THE CONSERVATION OF COLONIAL BUILDINGS IN THE ASIA-AFRICA DISTRICT

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ABSTRACT

The Asia–Africa Conference heritage complex in Bandung is a tropical colonial heritage area with historical, architectural, and symbolic significance. However, site management still faces fundamental challenges: from 2009 to 2025, regulatory revisions have not been fully translated into physical protection, adaptive reuse principles, community participation, or science-based technical guidelines, creating a persistent gap between legal norms and conservation practice. This study analyzes Local Regulation No.19/2009, Bandung City's cultural heritage policy No.7/2018, and No.6/2025 on authenticity, integrity, significance, and adaptive reuse. UNESCO HUL, Kyoto, Barcelona, and George Town were selected because they share comparable historic urban landscapes, colonial or layered heritage contexts, governance complexity, tourism–creative economy pressures, and conservation-management frameworks. Using document review, content analysis, deductive thematic coding, and descriptive benchmarking, the study identifies a shift from protectionist regulation toward a holistic-participatory hybrid model integrating incentives and technologies. Given its documentary design, this study does not empirically validate Bandung as a global laboratory; rather, it proposes Bandung as a potential conceptual test bed for tropical heritage governance, contingent on legal certainty, substantive participation, science-informed guidelines, and future field-based validation.

Keywords: *Adaptive Regulation, Conservation Technology, Hybrid Tropical Heritage, Substantive Participation*

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INTRODUCTION

The Asia-Africa District in Bandung is a representation of tropical colonial architecture that holds historical, architectural, and symbolic value. Research on urban imagery and branding underscores the role of the historic Braga–Asia-Africa as a key element linking the city’s identity to that image (Aprillia and Rochimah 2021, Wulandari 2021, Suripto and Ernawadi 2024). The Asia-Africa district of Bandung must reconcile colonialism and modernity. The 2009–2025 cultural identity conservation measures of Bandung are criticized in worldwide urban heritage disputes (Andiyan & Wihardyanto, 2026). Cultural heritage conservation theory emphasizes three main principles: Authenticity, Integrity, and Adaptive Reuse. The first principles, authenticity is preserving the original materials, forms, and meanings of a building. This approach suggests that authenticity is a social construct that involves local communities in defining cultural values and the identity of their place (Kalakoski and Thorgrimsdottir 2022, Ragheb and El-Ashmawy 2022, Suscal and Ullauri 2023). The conservation process includes documentation, classification, and physical restoration (Utami, Nasution, & Santosa, 2019). The second principles is integrity, which is maintaining the relationship between buildings, areas, and the socio-cultural context. The last principles is adaptive reuse, which is integrating new functions without losing historical value. Several studies emphasize the importance of cultural integrity, community identity, and a sense of ownership in the adaptive process (socio-cultural integrity as part of heritage value) (Dell’Ovo, Dell’Anna, Simonelli, & Sdino, 2021; Mazzetto, 2024; Mérai & Kulikov, 2023).

The literature review reveals that in the case of urban heritage conservation, conserving colonial buildings must be seen not only as maintaining their physical appearance but also as a governance process linking value (historical), function (contemporary), identity (community), and environmental sustainability. The principle of authenticity requires the overall preservation of a building's original materials, form, and meaning; the principle of integrity positions the building as part of a larger network of neighborhoods, landscapes and social life; while adaptive reuse allows historic buildings to stay vital through new functions while retaining their cultural values. In this historic Urban Landscape framework Conservation also requires a blend of guidelines, people engagement, creative economy and science-based technical tools. So this research will place Bandung’s inherited policy not only as a legal product but more an arena to engage conservation theory discourse, governance practice in addition to updating the need for technological innovation toward tropical colonial district survival.

The local regulatory framework shows a significant evolution, where Local Regulation No. 19 of 2009 emphasizes protection and initial management, in line with the principles of authenticity. Local Regulation No. 7 of 2018 expands on utilization aspects, particularly tourism, but risks reducing integrity if not balanced with technical conservation. Regulation No. 6 of 2025 strengthens preservation, incentives, compensation, and community participation, opening opportunities for the application of technology-based adaptive reuse.

However, these regulations still lack science-based technical guidelines (e.g., daylighting, ventilation, CFD simulation), resulting in a gap between legal standards and field practices. This gap poses challenges for designers, engineers, and policymakers when

implementing sustainable designs that meet health, comfort, and energy performance standards (Clarke & Hensen, 2015; Tokbolat, Tokpatayeva, & Al-Zubaidy, 2012).

The research objectives are to analyze the evolution of Bandung's cultural heritage regulations from 2009 to 2025; to link colonial heritage conservation theory with specific provisions in the local regulation; to propose Bandung as a global model for the conservation of tropical colonial areas; and to identify implementation gaps and propose technology-based and theory-based approaches.

The research contributes to the global literature on tropical colonial conservation through the case study of Bandung. It provides evidence-based recommendations for local governments and conservation practitioners. It positions Bandung as a benchmark for other colonial cities.

However, this study also has research gap, that there is no comprehensive analysis of the development of Bandung's cultural heritage regulation from 2009 to 2025 related to tropical colonial conservation principles, comparative global governance; community participation and science-based technical guidelines. Previous studies are mostly limited to either the image, history, tourism or physical conservation of buildings in the area and thus have not provided a framework for how local regulatory change can be translated into a model of adaptive, participatory & evidence-based conservation governance. In contrast to previous studies, this article provides a comparative historical analysis of the 2009, 2018 and 2025 Bandung Regional Regulations in relation to the principles of authenticity, integrity and adaptive reuse and highlights lessons learnt from UNESCO's Historic Urban Landscapes (HUL) approach Jakarta: Kyoto – Barcelona – George Town Author Zhu Rixin PhD University Putra Malaysia Background Historic cities contain an artistic work with the cultural heritage value preserved by their laws. The novelty of this research is its formulation of a model for "hybrid heritage governance" that combines regulatory protection, substantive participation, conservation incentives, with the emerging opportunities enabled by technological advances in areas such as digital twins, the Internet of Things (IoT), performance-based simulations. Therefore, this study not only contributes to the literature on the conservation of tropical colonial heritage but also offers a policy framework that can help local governments, practitioners and managers of cultural heritage sites implement more sustainable and measurable conservation practices.

METHODS

This study uses a qualitative-comparative method by observing the changes on local regulation in sites of cultural heritage governance in Bandung from 2009 – 2025. It is followed second for the normative aspect of regulations examined by how the purposively attempt to understand these regulatory changes as a deeper paradigm shift in regulating conservation towards colonial buildings in the Asia-Africa region. The analysis emphasizes three disciplinary perspectives: a normative analysis of Local Regulation No. 19 of 2009, Local Regulation No. 7 of 2018, and Local Regulation No. 6 of 2025; an international comparative study including UNESCO's Historic Urban Landscape (HUL) framework and conservation practices in Kyoto, Barcelona, and George Town; and a theoretical synthesis that connects authenticity integrity principles adaptive reuse with Bandung local regulations context.

Data on research were extracted from three sources: local legal documents, scholarly literature regarding colonial heritage conservation and urban heritage management, and international reference documents concerning how historic districts can be conserved. Regulatory documents from Bandung were the main sources to identify changes in policy orientation, while academic literature and international documents are used as baseline to position Bandung within global conservation discourse. Therefore, the analyzed data are not of merely legal-formal nature but fall within a larger framework of conservation theory, community participation, adaptive reuse and sustainable heritage areas.

The analysis process was performed in several interconnected steps. The first step consisted of analyzing the main provisions regarding norms, objectives, protection mechanisms, forms of use and public participation opportunities in the local regulations. Stage two focused on thematic coding, the classification of articles and regulations into the domains of authenticity, integrity and adaptive reuse. To display trends over each of the regulatory periods whether focusing on physical protection altogether, which may also incorporate site connectivity and socio-economic use in some way. In the third phase, the following were laid out: science-based technical guidelines; legal consistency on conservation approaches; and substantive participatory mechanisms in conservation practice.

In order to make the results of the analysis clearer, this study uses a coding matrix, visual encoding, along with a synthetic heat-map. The link between the regime and conservation principles can be derived by means of a coding matrix, which serves to conclude a systematic understanding of the relation between legal norms and conservation theory. Visual coding illustrated trends in development of regulation over time, such as the visible shift from physical protection to a more integrative and governance-oriented participatory approach. A synthetic heat map was then used to show degrees of intensity with which conservation principles were applied and regulated in each regulatory period, such as whether authenticity, integrity or adaptive use were dominant, strong, weak or nearly absent.

The subsequent phase situated Bandung into a clearer international benchmarking context against UNESCO's Historic Urban Landscapes (HUL), Kyoto, Barcelona and George Town as comparative contexts to evaluate regulatory congruence, physical protections of historic buildings, socioeconomic coherence and community engagement and evidence-based technical guidelines for tropical colonial heritage management. Kyoto refers to regulatory consistency and the physical protection of historic districts; Barcelona refers to cultural heritage integration with the creative economy and tourism while George Town serves as a case about community engagement as the predominant actor in heritage governance. This comparison is not meant to equate the context of Bandung with these cities but to highlight what lessons may be relevant for shaping a more adaptive, participatory and evidence based approach to tropical heritage governance.

The analytical part of benchmarking was conducted in four principal phases. In particular, a thorough systematic review was conducted of Bandung's regulatory documents from 2009, 2018 and 2025 in order to identify norms, objectives, protection instruments, utilization mechanisms for non-motorized mobility transitor corridors and incentives/objectives opportunities for public participation. Second, these results were

Table 1. Methodological Framework Table

Research Stages	Data Input	Analysis Method	Output
Regulatory Documentation	Local Regulations 2009, 2018, 2025	Content analysis, thematic coding	Regulatory evolution
Academic Literature	Conservation theory, urban heritage	Theoretical analysis	Theoretical Framework
Global Benchmarking	UNESCO HUL, Kyoto, Barcelona, GT	Comparative, analysis table	Bandung's global position
Theoretical Synthesis	Results of regulatory & theoretical analysis	Normative–theoretical integration	The Bandung Model as a Global Laboratory

(Source: Developed by the authors based on regulatory-document analysis and synthesis of UNESCO HUL (Turisme de Barcelona, 2023; UNESCO, 2011; UNESCO World Heritage Centre, 1994, 2008), ICOMOS authenticity principles (ICOMOS, 1994), the Burra Charter (Australia ICOMOS, 2013), and comparative heritage-governance references (Bandung City Government, 2009, 2018, 2025))

assigned into three overarching conservation principles—authenticity, integrity and adaptive reuse—and subsequently connected to five benchmarking criteria: regulatory coherence, physical safeguarding of heritage structures, socio-economic viability, community engagement and backing from evidence-based technical guidelines. Third, Bandung was compared with UNESCO's Historic Urban Landscapes (HUL), Kyoto, Barcelona and George Town – not direct comparisons of identical cases but rather the modelling of alternative governance discourses: for example, HUL could speak to an integrative approach; Kyoto as agency-based regulatory consistency and physical protection; Barcelona a blended heritage-creativity-tourism environment and George Town community-driven governance. Fourth, these comparisons will be explained by means of a thematic matrix and syntheses heat map to determine whether each of the conservation principles articulated in Bandung regulation is strong, weak or nearly absent. In this process, benchmarking is not used to directly reproduce the models in other cities but rather to assess Bandung's own position and hence outline points of implementation gaps and opportunities for development towards a more adaptive/ participatory/ and evidence-based tropical heritage governance model.

The results of the normative approach, thematic coding and cross-case comparison were synthesised into Bandung's emerging “hybrid heritage governance”. This model is interpreted as an integrated strategy that can balance regulatory protection, community engagement, incentives for conservation, integration of the creative economy and opportunities for para-use performance-based technologies such as digital twins, IoT Internet of Things; environmental simulations. First, the paper aims to develop a concept or framework of hybrid heritage governance in Bandung by adopting normative evidence from regulatory documents, past academic literature and international benchmarking. It is not a frame for empirical proof of successful implementation in practice, but rather conjectural on the ground for relationship-building and clarifying policy directions, identifying cheap-fix; opening an agenda for further research from practical open interviews/FGDs/field observations/expert validation.

The methodological framework presented in Table 1 was developed by the authors to operationalize the qualitative-comparative design of this study. It was not reproduced from a single previous framework; rather, it was synthesized from three categories of sources: Bandung's local regulatory documents, namely Local Regulation No. 19/2009,

Local Regulation No. 7/2018, and Local Regulation No. 6/2025; international conservation references, including UNESCO's Historic Urban Landscape Recommendation, the Nara Document on Authenticity, and the Burra Charter; and comparative urban-heritage governance references from Kyoto, Barcelona, and George Town. This framework is therefore used to clarify the relationship between research stages, data inputs, analytical methods, and expected outputs.

RESULTS AND DISCUSSION

Global Benchmarking: Bandung's Position in the International Landscape

In a normative-comparative manner, the changes made to Bandung's cultural heritage regulations on the period of 2009-2025 are characterized against UNESCO's Historic Urban Landscape in Kyoto, Barcelona and George Town. The three comparisons are ordered according to indicators relating to the focus of policy intent, regulatory consistency, community participation, integration with wider development agendas and implications for governance concepts for tropical heritage adaptation, as presented in Table 2.

Table 2 was a document-based, normative-comparative procedure to clarify the analytical basis for international benchmarking. The main documents used is the Bandung Regional Regulation (Perda Kota Bandung) 2009, 2018, and 2025 for local context, UNESCO Historic Urban Landscape (HUL) background as international framework; and policy paper & literature examining conservation practice in Kyoto, Barcelona & George Town. Rather than equating the context of Bandung with that of these cities, the comparative cases presented have been selected in order to understand where Bandung sits on a continuum with regard to approaches to heritage governance. Kyoto serves to evaluate the coherence of heritage regulation and physical protection of historic districts; Barcelona illustrates the relationship between heritage, tourism, and creative economy; George Town evaluates how much community participation is in play; while the HUL framework provides a holistic scheme linking all physical, social, economic, cultural and environmental domains.

The comparative indicators from Table 2 via deductive derivation based on the research objectives and principles of heritage conservation, specifically: policy focus, regulatory consistency, community participation, integration with development and global/conceptual implications. The analysis for each indicator was carried out in three phases. First, existing regulations in Bandung were extracted and classified according to physical protection, adaptive use, incentives and participatory. Secondly, the literature and reference documents were summarised on key features of each comparative case. Third, it places Bandung interpretively within the comparative cases so as to discern strengths and weaknesses in existing governing frameworks and opportunities for how tropical heritages might be governed. Accordingly, Table 2 cannot be interpreted as a ranking in quantitative terms but rather serves as an analytical matrix for Bandung from the perspective of international heritage conservation discourse.

This paper keeps two levels of analysis mindfully separate so as not to conflate research findings with policy implications. First, research findings are those results derived

directly from this research's independent analysis of regulatory documents, thematic coding and normative comparisons—such as an observed shift in regulatory orientation away from physical protection toward socioeconomic integration but continued scarcity of science-based technical guidelines, and an expressed expansion of public participation into recent regulations. Second, Policy implications and alternatives refer to the analysis-based consequences of these findings e.g., regulatory congruence, bolstering of substantive participation channels with guidelines on tropical conservation strategies including technical principles, while facilitating supporting technologies (e.g., digital twins, IoT, environmental performance simulation). With this differentiation, the findings of this research are not asserted to be conclusively proven practice in the field but instead provide a normative foundation for a more adaptive, participatory and evidence-based policy orientation in Bandung's heritage conservation.

Importantly, this analysis aims to be as transparent as possible: the results and discussion formed below should not be interpreted as an empirical verification of in situ conservation practice, but rather a document-based, normative-comparative synthesis. The units of analysis are important articles in the Bandung Regional Regulations 2009, from 2018 to 2025, particularly those related to physical protection for buildings, land use (article XII), incentives for conservation, participation in the community (Chapter IV) and technical guide support. Thematic coding was applied deductively based on authenticity, integrity, adaptive reuse, consistency with the regulatory framework (IFRA), community involvement, and technical guidance. Based on these three indicators, each of the principles was scored: first, if the principle is directly included in the regulations; second, if there are instruments or mechanisms for implementing it in practice provided by the regulations; and third, if there are operational support elements (incentives technologies guidelines participation etc.). Thus, you are not comparing Bandung with UNESCO HUL or Kyoto or Barcelona or George Town but trying to identify where does Bandung fit in on a continuum of relative positioning, what are the policy gaps facing and the conceptual lessons learnt pertaining to tropical colonial heritage governance.

a. Evolution of Policy Focus

At Bandung's Local Regulations collection, the transition of vernacular paradigm on heritage management can be seen in not only the terminology but also through its normative substance, instruments, and orientation. As an example in Local Regulation No. 19 Year of 2009 articles 3 and 7 emphasize on physical protection, preservation of original forms and the relationship between buildings with its surroundings. This orientation reflects a conservation model that still is largely preservationist, and material authenticity-focused for colonial artefacts. Articles 5 and 12 of Regional Regulation No. 7 of 2018, area into the regulation one are capable of expanding its focus beyond just the conservation function to involve the use (or exploitation) of the area primarily through tourism as well as management functions. Yet the process of expansion has not yet been matched with strong technical and participatory mechanisms, which poses risks to the integrity of the region. On the other hand, by connecting physical protection and conservation incentives with public involvement, Regional Regulation No. 6 of 2025 can be classified as hybrid-oriented legislation with a specific focus on greater organization via provisions for compensation

for building owners and adaptive reuse. In sum, therefore, the assertion of a paradigm shift in this article rests on an analysis of the contents of selected key articles—specifically, from regulations focused on physical protection toward integrative, bottom-up and adaptive conservation governance. Yet, this change, is still framed as a normative shift within regulatory texts—not evidence that all of these principles have been sufficiently somehow operationalised in practice on the ground.

This result is according to the Historic Urban Landscape (HUL) approach, where urban heritage is considered as a system or integrated whole containing physical, social/cultural/economic and environmental dimensions rather than just individual buildings (UNESCO 2011). In Indonesia, Utami, Nasution and Santosa also stress that to revitalize urban heritage areas the development of true buffer zones, spatial character analysis and community participation are required so that design interventions do not limit themselves to physical aspects but are therefore able to enable revitalization on a wider scale in terms of heritage areas (Utami et al., 2019). Therefore, it must be understood that the Bandung as a model of hybrid heritage management is an intersection between colonial building preservation, socioeconomic sustainability, community involvement and evidence based technical guidelines.

Collectively, the analysed documentary evidence positions Bandung as an idealised contender or an archetype for a conceptual tropical heritage policy laboratory rather than as a globally empirically validated laboratory. It is this potential which stems from Bandung's policies indicating spatial protection, social integration, conservation incentives and finally community participation. Nonetheless, this status could be enhanced by regulatory harmonisation, technical guidelines based on sound science and field-based research to validate the practices. The results of this analysis also suggest that in addition to the aspects of governance, conservation on the tropical colonial buildings is found to need practical technical guidelines in Bandung. Yacub and Salleh further support this notion, stating that heritage buildings in tropical climates are prone to bio-deterioration from moisture-mediated deterioration such as damp walls, mold and paint peeling. The implications of the results produce a dilemma between conservation of source materials and methods of technical mitigation that are appropriate to the conditions in tropical climates (Yacub & Salleh, 2025). Based on the above there are two simultaneously important aspects that should not be separated in order to formulate buildings policy regulations in Bandung, besides being based solely on physical protection and adaptive reuse, also supplemented with evidence-based technical guidelines (moisture control, ventilation, conservation materials or assessment of environmental performance).

b. Regulatory Consistency

Bandung face a legal uncertainty, such as the weakness of regulation and repealing 2018 Local Regulation. In comparison, Kyoto and Barcelona are consistent at a high level, while George Town speaks to community-based areas of consistency. One of the basic principles addressed by UNESCO HUL is policy sustainability.

This means that Bandung must improve its policy monitoring and evaluation mechanisms to ensure that regulations are not only in harmony but also adaptive to socio-economic changes.

c. Community Participation

George Town puts the community at its centre, while community participation is only more robust in Bandung in 2025 Local Regulation. Barcelona's community places is in the context of the creative economy and participation becomes a key principle for UNESCO HUL.

Because of the normative-comparative character of this research, it is not being claimed either that there has already been a full scale transition from formal to substantial participation in Bandung. This claim is better characterised as a policy prescription based on an analysis of regulatory documents. Regional Regulation 2025 shows potential in which efforts to improve the role of the community as a main actor in conservation are possible, mainly in generating the operational aspects such as consultation forums that accommodate the opinion of citizens affected by policy issues; heritage community involvement in drafting conservation guidelines, transparency by authorities regarding decision-making processes and periodic evaluations on policy implementation. So, substantive participation in the context of Bandung is understood as a guideline for future strengthening conservation governance, rather than an empirically confirmed conclusion. Such participation need to be validated by more research from either interviews / FGDs or field observations and also by stakeholder validation.

This substantial participation approach is similar to the research by (Utami et al., 2019), which proves that the revitalization of heritage areas can run well if the community participates in mapping potential, spatial character interpretation, and design guidelines in buffer zones. This is relevant for Bandung in that the Asia-Africa area embodies both architectural and historical significance as well as a socially active space constantly understood and renegotiated by (local) inhabitants.

d. Development Integration

The repeal of Bandung City Regional Regulation No. 7 of 2018 is not only a sign of legal uncertainty, but also an important indicator for the dynamics of heritage conservation governance in Bandung. Bandung City Regulation No. 6 of 2025 Normatively Repeal on the Basis of Bandung City Regulation No. 7 2018 because the previous regulation are no longer fully in accordance with developments, needs and legal requirements of the community. First, the issue of legal harmonization needs to be addressed; regulations related to cultural heritage sites should align with the evolving national legal context regarding local governance and their increasingly complex management requirements. Another important aspect is the change of policy aims: if we look to the 2018 regulation, it refers to "cultural heritage management" much more than today; rather than managing or administering purposes under chemical principles and philosophy, the 2025 regulation states explicitly that it will address ideas into "management and preservation", comprising protection-utilization-development-incentive-compensation funding-supervision-control-implementation findings. The third factor is, as with the earlier two, a need for more robust operational instruments: legal status cannot be sustained by law alone; there also need to be clear mechanisms of enforcement among custodians such as building owners (and local governments), planning authorities and heritage tourism operators. The last one is due to

the way the populace interacts with, and reacts to regulation, especially since any alteration of a list or definition or means for setting something aside as heritage could change legal certainty and therefore also influence how well people believe in a sustainable mode of heritages protection. Thus, the revocation of 2018 Local Regulation finds an important place: Bandung heritage conservation governance is currently in a transition period from (i) regulation on inventory and legally formal protection to (ii) an adaptive model, but not yet consistently tested in term of legal certainty, substance participation and physical protection over colonial buildings.

Bandung also has the opportunity to create its own model of integration to heritage tropical by fostering sustainable development—by achieving social, culture and economics.

e. Global Implications

Now while from an academic standpoint, this study has more global (conceptual) than empirical significance to show Bandung as a model of global practices in the managing of tropical heritage native Bandung can be used as a single case study on how conservation in the face of climate change has started to become more integrated, participatory, and adaptive since the colonial age with tropical conservation policies away from physical protection toward such an evolving framework; supported by regulatory documents, thematic coding and descriptive benchmarking. But these data are not enough to draw conclusions that implementation is going smoothly on the ground. Therefore, Bandung's global significance comes from its capacity to provide a preliminary paradigm for other tropical colonial cities in designing heritage management practices more sensitive to the requirements of legal certainty; participatory processes; conservation incentives; and science-based technical guidelines. Field observations, stakeholder interviews, focus group discussions (FGDs), expert validation and evaluations of real-life conservation practices are still needed for broader validity.

Academically, Bandung has its potentiality as a model for the tropical heritage management, however this remains normative and could not have been taken empirically substantive conclusion yet. The findings suggest that Bandung can adopt regulatory consistency from Kyoto; creative economy integration from Barcelona; and community participation strengthening through George Town; while, HUL UNESCO provides a more holistic approach. Nevertheless, the confirmatory global validity of Bandung model still requires validations in implementation studies, field observations, stakeholder interviews, expert validation and focus group discussions (FGDs). The conceptual lessons from international benchmarking can be summarized as follows:

1. Kyoto: the importance of regulatory consistency and the physical protection of historic areas.
2. Barcelona: opportunities for the controlled integration of cultural heritage with the creative economy and tourism.
3. George Town: the importance of community participation as part of heritage management.
4. UNESCO HUL: the need for a holistic approach that connects the physical, social, economic, cultural, and environmental dimensions.

Table 2. Comparative Global Benchmarking

Aspect	Bandung (Regulation 2009–2025)	UNESCO HUL	Kyoto (Japan)	Barcelona (Spain)	George (Penang)	Town
Key Focus	Physical protection → social integration & incentives	Holistic: physical, social, economic, environmental	Strict regulations on traditional buildings	Integration of heritage with tourism & the creative economy	Community participation as the core	as the
Consistency regulations	of Transitive: The 2018 Local Regulation was repeal by the 2025 Local Regulation for no longer be relevant, consistent with current developments, demands and legal needs of the community. This establishes the need for harmonization, periodic assessment and clarification of cultural heritage sites protection.	Emphasizes policy sustainability	Very consistent	Consistent, adaptable to the economy	Community-based consistency	
Community participation	Beginning to be strengthened in the 2025 Regional Regulation	HUL's core principles	Limited, more top-down	Exists, but more focused on the economic sector	Very strong, community-based	
Integration Development	of The 2025 Regional Regulation is becoming integrative	Core of HUL	Focus on physical conservation	Integration with the creative economy & tourism	Social & cultural integration	
Global Implications	A conceptual contribution to the governance of tropical heritage; it still requires empirical validation and consistent implementation.	International standards	Traditional city model	Global creative city model	Community-based heritage city model	

(Source: Personal Analysis, 2026)

Coding Matrix for Articles of the Bandung Regional Regulation

This section of the analysis operates with selected articles as units of analysis in order to prevent overly broad interpretations. In this work, each article is coded with respect to three questions: 1) what principle of conservation appears (or not) explicitly or implicitly in the provision, 2) what regulatory instruments are either provided or allowed by virtue of enforcement for each principle and finally 3) whether it is a declarative provision or provides an operational mechanism (incentives, participation, area management/technical support). This procedure could give an explanation of the shift in the assumptions behind regulation based on document content rather than narrative interpretation.

In other words, the actual units of analysis in this coding are key articles under the Bandung Regional Regulations in 2009, 2018 and 2025 that directly relate to cultural heritage building protection, area management, new land-use designations (substance), conservation incentives and community participation. Each article is placed into a category of authenticity, integrity, or adaptive reuse based on what their most dominant normative substance is. The “authentication” section is applied to an essay that desires the preservation of the form, materials, architectural characteristics and historical aspects of a colonial structure. The integrity classification denotes a provision that governs the site-scaled relationship of a structure to its surroundings, environmental context, management system, or continuity of cultural values. In the meanwhile, there are cases that be considered adaptive reuse where some provisions allow the building to serve new functions, tourism, creative economy and community usage (agri-tourism), or various innovative uses of buildings without diminishing their heritage value. In this procedure, the coding in Table 3 is not to be treated as a qualitative judgment but interpreted through a process trackable through each provisions’ substance and respective conservation principles along with the analytical notes.

Table 3. Justification for Coding and Analysis Notes

Regulations & Articles	Principles of Conservation	Thematic Coding	Justification for Coding and Analysis Notes
Local Regulation No. 19/2009, Article 3	Authenticity	Protection of Original Materials and Forms	If its content focuses on conserving the form, character and value of cultural heritage buildings then this article receives the code “authenticity”. The emphasis continues to be on the physical preservation of colonial structures, while socioeconomic elements are not yet a primary focus.
Local Regulation No. 19/2009, Article 7	Integrity	Relationship with the Surrounding Environment and Cultural Context	The article is featured in the “integrity” category due to a perception of cultural heritage buildings as being part of an extensive space and surroundings. This categorization is based on a relational concern with the ties between buildings and with their wider context, although participatory mechanisms have not yet been well specified.
Local Regulation No. 7/2018, Article 5	Adaptive Reuse	Use for Tourism	The adaptive reuse of heritage buildings or areas for tourism and economic activities has coded this article. However, this use-oriented vision is accompanied by a warning note since it can compromise the integrity of the territory if technical conservation guides are not followed.
Local Regulation No. 7/2018, Article 12	Integrity	Area Management	It may be not about preserving one building or the other, but rather how they all fit best together to govern an area: integrity is being coded in this

Regulations & Articles	Principles of Conservation	Thematic Coding	Justification for Coding and Analysis Notes
Local Regulation No. 6/2025, Article 4	Authenticity Integrity	+ Conservation Incentives	article as (Related). The strength of its coding is also deemed only to a limited extent because the 2018 regulation was repealed, leading to legal uncertainty as regards the continued protection of the area. This article is classified as belonging to authenticity and integrity, since incentive or compensation schemes exist to promote owners of the buildings – that were not adapted (historically & architecturally valuable buildings)– to preserve their physical value and historic site connection. Therefore, this article does not only provides protection for architectural elements but also contributes to support the sustainability of area management. The article is entitled adaptive reuse, the significance here being its emphasis on our communities to bring back a diverse function that can potentially set precedent for new use functions more attuned with context. The change represents a movement away from formalized protections and towards more participatory governance, but this implementation still needs to be tested in the field.
Local Regulation No. 6/2025, Article 9	Adaptive Reuse	Community Participation	

(Source: Personal Analysis, 2026)

Visual Coding Diagram of the Regulatory Transformation of Heritage Conservation in Bandung

The visual coding diagram figure 1 ensures the relationship between thematical conservation principles, namely authenticity–integrity and adaptive reuse and its substantive developments that formulated on Bandung Regional Regulations in the years of 2009, 2018, and public response by year of 2025. This diagram is not quantitative, but just an analytical tool to show how each regulatory period stresses a distinct policy orientation. The 2009 Regional Regulation is dominated by a code concerning Physical Protection Stage which puts importance to the origin of materials, forms of buildings and Conservation Areas Preservation. The 2018 Regional Regulation is encoded as a transitional phase because it occurs the option to utilize estimated efforts, especially in tourism and creative economy grounds, although this policy ran too cursory. The 2025 Regional Regulation is then categorized as the hybrid phase Because it has underwent a transition stage between data protection, conservation incentives, community involvement

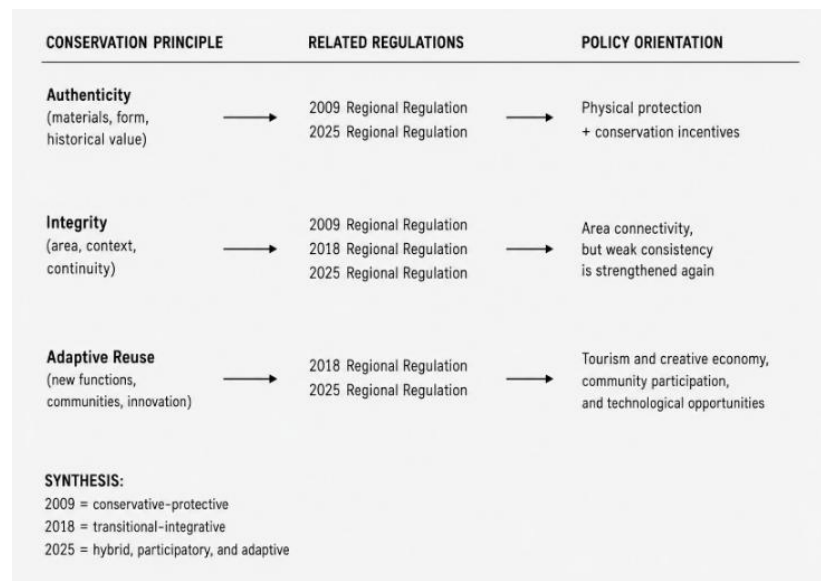


Figure 1. A visual diagram illustrating the transformation of Bandung's heritage conservation regulations from a conservative-protective approach to a hybrid-participatory model.
(Source: Personal Analysis, 2026)

and adaptive re-use. Hence this diagram allows one to backtrack the grounding for the categorisation more clearly, from thematic categories all the way through to an interpretive proposition of a transformative shift in Bandung's heritage governance away from a conservative-protective model and towards a more integrative participatory trend.

Figure 1 Visualising conservation principles, regulatory periods and orientations across the data to illustrate results from thematic coding. Knowing the coding was not arbitrary, but rather derived from the relationship between one article type and others about conservation principles and policy direction (for that regulatory period), this visualization provides a moment for readers to grasp these facts.

Heatmap Synthesis of Bandung Local Regulation Conservation Principles

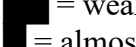
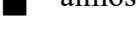
The heatmap depicted in Table 4 was developed as a visual synthesis tool to demonstrate the extent to which conservation principles were represented in regulatory documents, not the outcomes of quantitative measurements performed in the field. The level of intensity was based on an ordinal scale determined by the directness of reference to the principle, strength of regulatory instrument, and whether there is a mechanism for implementation. The category "almost nonexistent" is used when a principle is merely hinted at or absent in any noticeable way; "weak" when a principle only receives cursory mention with no overt mechanisms of effectiveness; "moderate" when a principle has been acknowledged but limited in its promulgation; "strong" if a kind of principal underpinning policy instruments exists and where it's supported by laws, whilst the term domination means that it works within the guidance of what principles will guide — thereby serving as the main determining constitutive features of regulatory substance. This then qualifies the heat map as an interpretative tool of disclosure, not a scientific assertion about the efficacy of policies in practice. Table 4 shows the intensity of the application of the three conservation principles during each regulatory period in Bandung.

Table 4. Heatmap summarizing the conservation principles of the Bandung local regulation

Conservation Principle	2009 Regulation	2018 Regulation	2025 Regulation
Authenticity	 (Dominant)	 (Weak)	 (Strong again with incentives)
Integrity	 (Moderate)	 (Disrupted, regulations repealed)	 (Strengthened through participation & incentives)
Adaptive Reuse	 (Virtually none)	 (Dominant, tourism-focused)	 (Integrative, community- and technology-based)

(Source: Personal Analysis, 2026)

Intensity legend:

-  = very dominant
-  = strong
-  = weak
-  = almost nonexistent

Regulatory Focus Evolution Diagram

2009 —► Authenticity dominant (physical protection)

2018 —► Adaptive Reuse dominant (tourism, creative economy)

2025 —► Hybrid: Authenticity + Integrity + Adaptive Reuse (holistic, participatory, incentives)

Visual Interpretation

- 2009: Conservative regulation, emphasizes physical authenticity of colonial buildings
- 2018: Adaptive reuse (tourism) instead of preserving the essence
- 2025: An evolved hybrid model is born fusing authenticity, integrity and adaptive reuse with community engagement & incentives.

Analysis Synthesis

In this case, Table 5 presented not as a 'normative statement' in itself but rather as a synthesis that arises from the previous result of the analysis. The dimension of "regulation" is derived from the results of preliminary benchmarking (Table 2) which shows that Bandung has weaker regulatory consistency compared to Kyoto and Barcelona; further supported by Tables 3 and 4, showing disruption of regulatory integrity due to repeal of Local Regulation 2018. The next sub-dimension is "participation" (P), compared with George Town and UNESCO HUL in Table 2, and the coding of Article 9 of Regional Regulation 6/2025, as shown in Table 3 to reveal that there are plenty of space for public participation, however starting from formal participation towards substantial participation. The dimension of "integration" comes from the results where some protection, incentives, adaptive use, and technological opportunities can be started to integrate in 2025 Regional Regulation (Table 3 and heat map Table 4). In turn, the dimension "cultural identity" reflects a change within regulatory orientation from (2019) static emphasis on physical protection to regenerative (2025), emphasizing connections and interrelations between

Table 5. Analysis synthesis

Dimension	Global Benchmarking	Bandung (Local Regulation)	Challenges	Opportunities
Regulations	Consistency (Kyoto, Barcelona)	Weak (2018 repealed)	Legal uncertainty posed by regulatory transitions, changes in protection mechanisms, the need to harmonize cultural heritage status and all inclusive public good incentives vs adaptive reuse and community participation are to be taken into consideration.	Adaptive regulatory reform
Participation	Community (George Town, HUL)	Newly strengthened 2025	Formal participation	Substantive participation
Integration	Holistic (HUL), creative economy (Barcelona)	Beginning of integration in 2025	Implementation	Sustainable tropical heritage model
Cultural Identity	Dynamic (HUL, George Town)	Static (2009), dynamic (2025)	Conservative Paradigm	Dynamic social construction

(Source: Personal Analysis, 2026)

authenticity-identity-integrity-adaptive use. The "challenges" and "opportunities" columns in Table 5 therefore provide a synthesis of the literature, rather than normative prescriptive input without analytical foundation.

CONCLUSIONS

Subsequent regulations on the cultural heritage of Bandung (2009-2025) demonstrate a shift in normative orientation from a conservative view (preservation focused mainly on physical protection) to a more adaptive, integrative and participatory approach. These findings are not offered as empirical proof that this change in governance is actually taking place — however, only because the study relies on document analysis, thematic coding and descriptive benchmarking. These updates are tangential to notion of Bandung and bond as a global laboratory rather its possible conceptual framework or initial potential for the study of tropical heritage governance. This potential exists because regulatory documents in Bandung have started to incorporate aspects of physical protection, conservation incentives, socioeconomic integration and community participation. To realize this potential, however, there remain challenges to harmonizing laws and internal policies at the national and institutional level, developing scientific-based technical guidelines, and conducting field validation via stakeholder interviews, observations of building conditions, focus group discussions (FGDs) and validation from experts. Consequently, this study primarily contributes to the establishment of a normative-conceptual framework (a system) for tropical heritage governance that can underlie empirical research and conservation policies in Bandung for its next phase.

Policy Implications and Contributions

1. Policy: Bandung should set an effective and adaptive local regulation with a more community-centric approach.
2. Practice: Find other spot which can have example of a holistic participatory adaptive practice for sustainable tropical heritage city with the case study of Bandung.

3. Academic Contribution: The Analysis strengthens the body of literature on tropical heritage policy development in heap urban spaces, while also providing a contribution to international discourses around urban heritage.

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