

ABSTRACT - 5. DISASTER AND CONFLICT RESILIENT HERITAGE - CULTURAL HERITAGE IS INCREASINGLY VULNERABLE TO DISASTERS AND CONFLICTS AND SUBJECT TO RAPID DESTRUCTION, AS EVIDENCED BY THE RECENT FIRES, FLOODS, EARTHQUAKES AND ESCALATING ARMED CONFLICTS IN DIFFERENT PARTS OF THE WORLD. AT THE GENERAL ASSEMBLY 2023 IN SYDNEY, ICOMOS ADVISORY COMMITTEE APPROVED THE THEME OF "DISASTER AND CONFLICT RESILIENT HERITAGE - PREPAREDNESS, RESPONSE AND RECOVERY" AS THE THEME FOR THE TRIENNIAL SCIENTIFIC PLAN 2024-2027. IN KEEPING WITH THE SPIRIT OF OPEN, INNOVATIVE, CONSTRUCTIVE INTERGENERATIONAL DIALOGUE, AND THE STRATEGIC FOCUS, THIS SUB-THEME WILL ADDRESS THE SUITABILITY OF THE VENICE CHARTER WITH THE THEME OF DISASTER AND CONFLICT-RESILIENT HERITAGE, EMPHASIZING ITS BROADER IMPLICATIONS FOR HERITAGE DISCOURSE, DEVELOPMENT MODELS, AND RESILIENCE STRATEGIES.

**ENHANCING CLIMATE RESILIENCE IN MARRAKECH'S JEMAA EL-FNAA:
EXPLORING INTEGRATING TRADITIONAL MOROCCAN ARCHITECTURAL
TECHNIQUES**

Abdullahi Adamu (arcdayar@gmail.com)

Xin Cao (shuiyunjv@foxmail.com)

Ge Xingyan (ge.xingyan@qq.com)

Pham Duc Long (phamlong.hau@gmail.com)

This study explored the integration of traditional Moroccan architectural techniques to enhance climate resilience in Marrakech's historic Jemaa el-Fnaa, a UNESCO World Heritage site and the vibrant cultural and economic core of the city's medina. Prompted by the recent seismic devastation from a 6.8-magnitude earthquake, the research emphasized the urgency of preserving both tangible and intangible cultural heritage. Through an extensive literature review and comparative analysis with case studies like the Ksar of Ait-Ben-Haddou and the Medina of Fez, the study evaluated traditional construction methods such as rammed earth and riads, alongside adaptations of wind catchers. These methods were compared to techniques used in similar arid and seismically active environments like ancient Babylonian cities and Al-Balad, Old Town of Jeddah. The research employed a detailed spatial analysis to assess vulnerabilities and model the impact of traditional architectural features that promote natural cooling and seismic resilience, such as high ceilings, thick walls, and courtyards. The study also analyzed the recent earthquake's impact on Marrakech, highlighting the structural damages to significant landmarks such as the Koutoubia Mosque and the implications for the broader urban fabric. This approach underscored the potential of traditional methods, enhanced with modern interventions, to improve the structural integrity and climate resilience of heritage sites. The findings demonstrated Jemaa el-Fnaa's potential transformation and its role in sustaining traditional crafts, music, and culinary practices contribute to the site's resilience against environmental and human-made threats. The study proposed a comprehensive framework that leverages age-old techniques for contemporary applications, suggesting broader applicability in similar cultural and climatic contexts. The results not only emphasized the integration of seismic reinforcement techniques but also advocated for policies that enhance the resilience capacities across the medina, ensuring that Jemaa el-Fnaa remains a vibrant public space resilient to both natural disasters and climate change.

Palavras-chave: traditional moroccan architecture; climate resilience; sustainable strategies; cultural heritage; jemaa el-fnaa.