Middle Class Urbanism
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Strengthening Local Economies? Architectural Ceramics in Mozambique's Housing Construction

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As most countries in sub-Saharan Africa, Mozambique is characterized by an ongoing growth of its urban population.[1] In Maputo and other major cities in the region, this explosive growth leads to fast urban expansion and a persistent construction boom. A large proportion of new buildings is intended for the city's expanding middle class. The city's evolution results in a growing need for importing construction materials, but also offers new perspectives for the use of local products. Using locally made industrial and artistic ceramic products might help to strengthen the local building materials industry, provide jobs, and strengthen collective identification with the built environment.

Recommendations

1. Politicians and consultants involved in Mozambique's construction sector should pro-mote the use of local building materials that improve the ecological, economic, and social sustainability of construction activities.

2. Mozambique needs trained personnel for its building materials industry, including the ceramics industry. Therefore, it should improve the equipment for professional training facilities, including the Escola Nacional de Artes Visuais' ceramic department.

3. Mozambique should institutionalise networks between universities and art schools, con-struction companies, and the building materials industry.

4. International organizations should assist in conducting a market analysis for innovative architectural ceramics.

5. Artistic architectural ceramics could revitalise local building traditions. The Ministry of Industry and Trade could promote this through its "Made in Mozambique" campaign addressing upscale construction projects.

Mozambique has a rich history of both artisanal and industrial ceramics. Pottery has played (and still plays) an important role for the production of many common household articles. Clay is also a basic component of traditional building materials such as bricks and adobe that are produced on-site in many parts of the country.[2] The industrial production of ceramics, too, figured prominently in Mozambique's economic history. The late colonial period saw the foundation of several factories for ceramics products including architectural ceramics such as roof tiles, azulejos, floor tiles, and tubes and other parts for interior fittings, a result of the widespread use of ceramics in Portuguese architecture.[3] Many of these factories survived post-colonial economic difficulties and, together with new factories, constitute one of the country's most relevant present-day industries.

Ceramics is also an important material for the country's visual arts. Malangatana, Mozambique's most iconic visual artist, began to work intensely with ceramics at later stages of his career. Today, the uncanny oeuvre of autodidact Reinata Sadimba, the country's best-known ceramist, is drawing ever more attention to the local heritage of the material. Moreover, linking industrial and artistic means, ceramic art has also been used frequently for decorative purposes on buildings: Artists like Querubim Lapa or António Quadros used the material for Art in Architecture projects to incorporate artworks in buildings, often reinterpreting decorative visual traditions from Mozambique. Moreover, merging art and architecture, ceramics has been used extensively for the expressive tiles and brises-soleil structuring the façades of Mozambique's late colonial modernism.[4] Architectural historians have started to document this unique facet of the city. At the moment, ceramics plays a less important role for Art in Architec-

TAP/Montepio building, 1960, photograph: Lucian Fratila

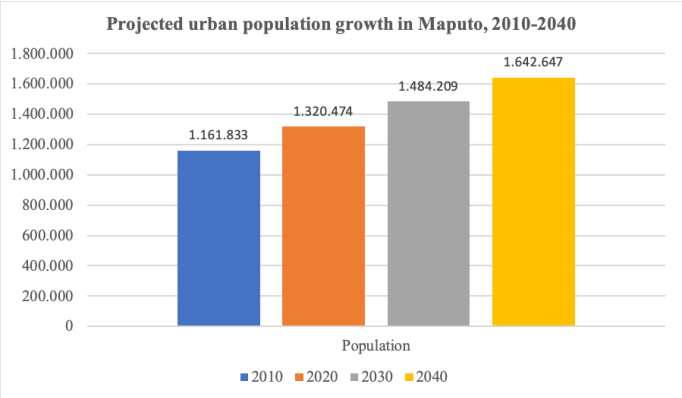
ture projects, but the material is seeing a renaissance on façades of middle and upper class apartment buildings.

The only school that offers a professional training for ceramists in Maputo is the state-run Escola Nacional de Artes Visuais (ENAV), where art students can choose ceramics amongst four possible fields of specialisation. The school's ceramics department is placed in a new building and has experienced teachers, but does not dispose of the financial means for the technical equipment necessary for an adequate training. The school is notoriously lacking clay, engobe, glazing, and basic tools. This is restraining the employability of ENAV's graduates. Still, many graduates make careers as artists or artisans or find jobs in the ceramics industry. Others apply to university to increase their employment outlook.

The need for building materials

Reconsidering the place of ceramics in Maputo's architectural history might allow for socioeconomic and cultural benefits in the context of the city's current urban growth. These opportunities will become more clear after taking a quick look at the conditions of Maputo's expansion.

The majority of Maputo's inhabitants is currently living in 'casas básicas'. These are usually self-built homes and charted as 'semi-permanent' by the city administration.[5] In 2017, Maputo had 1.076.805 inhabitants, with 672.699 of them currently living in casas básicas.[6] But although the city's current construction boom relies heavily on incremental self-built housing, the proportion of higher-quality 'permanent' housing is growing quickly. A first indicator for this tendency is the measurable housing standard: According to the Instituto Nacional de Estatística, 3.061 individual homes were under construction in 2017, including 880 casas básicas, 982 'casas convencionais completas' (conventional homes with indoor bathrooms), 848 'casas convencionais incompletas' (without indoor bathrooms), and 209 dwelling units in apartment buildings.[7] A second indicator showing the growing relevance of 'permanent' housing can be found in the changing financing models for housing construction. Generally, this field is still dominated by small-scale equity financing by home owners, ranging from incremental construction to upscale projects. 'Formal' low-cost housing



Projected urban population growth in Maputo (Provincia de Maputo Cidade), 2010-2040. Source: República de Moçambique, Instituto Nacional de Estatística, graph: author.

is mainly provided by European or UN-related development agencies. The public Fund for the Provision of Housing's (FFH) 'social housing' schemes (including both loans and the provision of housing) are de facto addressing rather affluent parts of the population. Many of the FFH's large-scale projects that are currently reshaping Maputo's urban landscape are engineered as joint ventures with Chinese architectural firms and construction enterprises. Finally, there are also professional developers investing in private housing construction. Private investors are often from Turkey, South Africa, or Brazil. Although data on financing models are missing, the impact of professional public and private property developers in Maputo is clearly growing.[8] This results in a vast typological spectrum, including detached houses, high-rise apartment buildings, and various types of gated communities. A third indicator is the growing use of conventional building materials, documented by the Instituto Nacional de Estatística. Despite the negative effects of the 2016 debt crisis on the construction sector and possible statistical errors, these indicators illustrate a trend towards higher investments in individual homes.[9]

This tendency indicates a growing impact of Maputo's middle class.[10] Middle class urbanism, defined as an uncoordinated but strategic practice of social differentiation driven by the aspirations of urbanites to claim formal rights and access to resources, can be found in many layers of the urban fabric, ranging from casas básicas to upmarket developments.[11] However, Maputo's recent urbanisation also shows the impact of the middle class defined as a particular socio-economic strata of the population. In fact, the middle class has been a key stakeholder in the city's urban transformations since the end of the civil war in 1992. In socio-economic terms, it is now largely identical with those who were close eough to the government in the 1990s to be able to purchase real estate during the privatization of the national housing stock.[12] This gave rise to a strong nexus between aspirations regarding housing and middle classness in Mozambique, where assets (including real estate property) tend to play a more important role than income for a person's identification with the middle class.[13]

"Only 15% of the upstream value chain in the field of building materials is produced in Mozambique."

The current construction boom and the growing relevance of 'formal' housing has induced an ongoing demand for building materials. Still, Mozambique's construction sector is largely depending on importation, mostly from South Africa, Portugal, or China. Maputo shows an even lesser concentration of building material companies than other parts of the country. Due to Maputo's harbour, building material companies in the city have to compete with cheap imports, a situation that is less prevalent in other parts of the country where transportation costs are higher and imports more expensive. Thus, many analysts call for a stronger local production of building materials. According to the Ministry of Public Works, only 15% of the upstream value chain in the field of building materials is produced in Mozambique.

Ceramics play an important role in this field for at least two reasons: 1. A crucial share of locally produced building materials are ceramic products including tiles, roof tiles, and tubing.[14] This is significant as the current use of architectural ceramics for façades and interior work in upmarket segments in particular are stimulating a growing demand for such products. But although local architectural ceramics are still

widely used in the country, our research suggests that a growing part of ceramic elements used in Mozambique's housing construction (both for interior fittingss and on façades) is being imported, especially from China and Turkey. Over time, this could lead to the destruction of one of the few functioning building materials industries in Mozambique. Thus, this industry should be enabled to remain a strong shareholder in the national construction economy. 2. The currently increasing use of architectural ceramics is opening up new perspectives for the involvement of local artists and their cooperation with the industry, for example regarding Art in Architecture projects or the design of façade elements. Recurring to the historical use of ceramic façades or local decorative traditions, the outcomes of such an involvement may fortify the urbanites' identification with the built environment. Such initiatives could be advanced by directly motivating builders of upmarket projects to consider the aesthetic and cultural impact of their projects.

Lessons from an experimental ceramics workshop

This second claim was tested in October 2019, when members of the MCU research project and the Dresden University of Fine Arts organized an experimental workshop for ENAV's ceramics students and students of architecture of the Universidade Eduardo Mondlane. It was the goal of the workshop to bring together students of both fields, to learn about ceramics as a part of Maputo's cityscape, and to collectively design prototypes for a simulated ceramic makeover of the façcades of existing buildings in the city. Two of the selected buildings are historical buildings, two are recent projects by Turkish construction enterprises. Cooperation with these enterprises allowed for access to the original plans of the buildings.

The workshop resulted in impressive results displayed in an exhibition at Maputo's Goethe Zentrum. It helped to promote new networks, to explore possible synergies between both professional groups, and to explore new professional spheres of activity. Considering the curiosity of international construction companies for artistic architectural ceramics made in Mozambique, the workshop also exposed the need for a market analysis. Especially the growing group of Turkish construction companies in Maputo is using ceramics for façades. The intensification of imports from Turkey has already caused a growing visibility of Turkish ceramic products both on local markets and in specialised stores (e.g. Turkmall). However, construction firm owners we interviewed underlined their explicit interest in integrating Maputo's building traditions in order to reflect the local context of their projects. This suggest a potentially significant market for local products including Art in Architecture and ceramics-based façade elements. Thus, artistic approaches to architectural ceramics in Art in Architecture projects, façade elements such as tiles, or brises-soleil might be an interesting way to strengthen local forms of artistic expression and to advertise the domestic construction materials industry.

However, the workshop also showed existing restrictions for architectural ceramics made in Mozambique: (1.) The insufficient equipment of ENAV's ceramics department is limiting the quality of the training. Apart from the industry, ENAV is holding one of the few ceramic kilns in the city, making it a pilgrimage site for the Maputo's artists. Still, this outdoor kiln is highly uneconomic and is only being used a few times every year. It does not reach a temperature of more than 1000°C, making many glazing processes impossible. Due to its dimensions, large-sized objects cannot be produced. Thieves stealing from the bricks the kiln is made of are another constant problem. The available electric kiln is out of function. (2.) There is a lack of institutionalised and private contacts between ENAV, the l

Workshop results, photograph: Su-Ran Sichling

cal architectural ceramics industry, and construction companies and architectural firms. The construction industry is not well informed about the availability of local expertise and creative energy in the field of ceramics. (3.) Both local and international entrepreneurs in the field of construction are not aware of the city's ceramic heritage.

Conclusion

The 2019 workshop confirmed some general observations regarding the potential of ceramics in Mozambique's construction sector at large. Clay and ceramics play an important role in the country for the industry, the production of handicraft, and artworks, and is a crucial factor for the country's formal building sector. In addition to this, Mozambique's ceramic products benefit from considerable occurences of good-quality clay, a functioning ceramics industry, and experienced teachers. At the moment, housing construction in middle class and upmarket segments provide new prospects for companies and individuals involved in the production of architectural ceramics for interior work or façades. Despite structural constraints, artistic approaches to architectural ceramics offer yet another interesting new perspective in this field. All in all, a strategic exploitation of the ceramics sector might contribute to a more sustainable[15] urbanisation in Mozambique, resulting in:

- Strengthening of local economies, including job perspectives for ENAV graduates
- Less import dependency of the building materials sector
- Advancement of sustainable and repairable building techniques
- Valuation of local traditions within the build environment

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Middle Class Urbanism

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