

ETHIOPIA'S LOW-COST HOUSING PROGRAM How Concepts of Individual Home-Ownership and Housing Blocks Still Walk Abroad

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Abstract

Addis Ababa's housing sector has been a long-standing challenge. For over a century the rapidly growing Ethiopian capital has been unable to provide adequate and sufficient housing, particularly for its low-income citizens. By the early 2000s, Addis Ababa's 4 million inhabitants stood against an accumulated housing backlog of 233'000 units. Against this backdrop, the Ethiopian government collaborated with the German Technical Cooperation (GTZ) to address the housing issue through a city-wide mass housing program. This paper follows the program's successive stages of implementation during the 2000s and addresses the social as well as spatial results along two of its main conceptual pillars: individual home-ownership through a mortgage system, and highly standardized housing block typologies. Whereas the program has created amounts of housing units unseen in Ethiopian history, it has also revealed substantial challenges on spatial and socio-economic levels: the program has failed to provide wide-spread affordable housing to the targeted low-income groups; it has generated spatial and social segregation; it has fostered dependency on imported materials; it lacks design features and spaces that reflect local lifestyles and daily needs; and it has accelerated the peripheral expansion of the city. In summary, the paper argues that the two described conceptual pillars of mortgage finance and standardized housing blocks have been key catalysts for the described challenges. Based on this, it seems obvious that effective low-cost housing concepts for Addis Ababa – whether as alterations or as new approaches – would have to specifically engage with design processes and funding schemes from more flexible, versatile and inclusive vantage points.

Keywords

Low-Cost Housing, Housing Policy, Development Cooperation, African Urbanization, Ethiopia

Biography

Sascha Delz holds a Master degree in Architecture and a Doctor of Sciences from ETH Zurich. After practicing as an architect in New York and Switzerland, he worked as design instructor and researcher at the Department of Architecture of ETH Zurich, and the Future Cities Laboratory in Singapore. While his dissertation investigated urban transformations under the premise of international development cooperation in Ethiopia, he currently collaborates on a research project exploring cooperative housing for low-income contexts.

Introduction

Addis Ababa's housing sector has been a long-standing challenge. For over a century the rapidly growing Ethiopian capital has been unable to provide both adequate and sufficient housing, particularly for its low-income citizens.¹ Reflecting the city's general housing history, a series of surveys conducted in accordance with Addis Ababa's master plan revision during the early 2000s, declared a massive shortage of housing units – particularly for low-income dwellers – and a generally poor condition of the existing housing stock.² Over 95% of total housing units were identified as single-story shelters, showing substantial deficits regarding sanitation, cooking, and personal hygiene facilities.³ These challenges have affected both peripheral and central areas: while an estimated 25% of units in the suburbs derive from squatting activities and thus mostly poorly built shelters, almost 60% of the units within the city center were identified as dilapidated, and thus in need of substantial upgrading or total replacement.⁴ The surveys also identified an existing housing backlog, and a future housing demand: as of 2000, the city had accumulated a housing backlog of 233'000 units and would be in need for additional 223'000 housing units by 2010.⁵ Against this background, the present government of the Ethiopian People's Revolutionary Democratic Front (EPRDF) reconsidered both past and existing housing policies. Within their most recent efforts of state-led economic development programs and poverty alleviation, the authorities installed – for the first time in the country's history – a full-scale and operational low-cost housing program.

Scale 1.0 – Low-Cost Housing (LCH)

However, the full-scale housing program was not established from the outset. It emerged from the government's preliminary exploration of more effective and affordable housing construction techniques in the late 1990s. During this search, Ethiopia found the German government as a partner and signed a bilateral agreement for technical assistance in 1999.⁶ Working with Germany's official development agency 'German Technical Cooperation' (GTZ), the collaboration's aim was to develop a "simple technology to promote housing construction (...)."⁷ While the subsequent 'Low-Cost Housing' project (LCH) eventually aimed at a larger scale, its first phase (1999-2002) was predominantly focused on testing housing construction through the so-called 'LCH technology', and was mainly implemented as two-storied buildings on test sites located in the regional state of Tigray and the city of Addis Ababa.⁸ The LCH technology's main measures to reduce costs and increase efficiency consisted of designing a new and cheaper hollow block size; creating columns without formwork by inserting reinforcement inside the hollow blocks, combining both strip and slab foundations, and introducing a pre-fabricated formwork-free slab system using beams and hollow blocks.⁹ Overall, this resulted in construction costs of ETB 500-800 (USD 59-95) per square meter, a 40% reduction of average building costs in Ethiopia at the time.¹⁰

¹ Before the present administration's efforts, both major preceding governments – Haile Selassie's Monarchy and Mengistu Hailemariam's 'Derg Regime' – failed to install a comprehensive, effective housing policy as well. See for example: Grima Kebbede, *The State and Development in Ethiopia* (New Jersey & London: Humanities Press International, 1992). p.45; Zelleke Zewdie, *A Review of Experiences in Low-Cost Housing Provision in Ethiopia* (Addis Ababa, 1997). pp.7-10.

² See: ORAAMP, *Structure Plan Housing Component - Improvement and Development Strategy: Guidelines, Regulations, Norms and Standards* (Addis Ababa, 2001). pp.1-2.

³ ORAAMP, *Assessment of Addis Ababa's Housing Sector - Key Areas of Intervention, Strategies & Policy Measures for a Housing Policy*. p.5.

⁴ ORAAMP, *Structure Plan Housing Component - Improvement and Development Strategy: Guidelines, Regulations, Norms and Standards*. p.18.

⁵ *Ibid.* p.18. For the calculations see: p.23.

⁶ See: GTZ and Ministry of Federal Affairs (Ethiopia), *Low Cost Housing - Technical Manual* (Addis Ababa: GTZ, 2003). p.4.

⁷ GTZ, "Low Cost Housing - Major Order for Housing Construction," in *Akzente - Working with GTZ / Special Issue - Urban Management, 2005* (Eschborn: GTZ). p.17. The GTZ has been renamed to GIZ (German International Cooperation) in 2007. Since all activities and documents regarding the Ethiopian housing program have occurred under this former name, the old acronym GTZ will be used throughout the text.

⁸ See: GTZ and Ministry of Federal Affairs (Ethiopia), *Low Cost Housing - Technical Manual*.

⁹ A hollow block is an extruded, air-dried cement brick, leaving large chambers hollow within the brick, and thus making it lighter and more affordable See: *ibid.* p.7.

¹⁰ See: *ibid.* p.7. Currency conversions are based on the average exchange rate of the corresponding year (historical exchange rates obtained from www.fxtop.com).

Scale 2.0 – Addis Ababa Grand Housing Program (AAGHP)

The ambition to extend these preliminary tests into a full-scale housing program was initiated during the second phase of the LCH project (2002-2006) and was partially due to a change in national development policy. In 2002, the EPRDF introduced the 'Sustainable Development and Poverty Reduction Program' (SDPRP), the first of a series of comprehensive economic development plans. The SDPRP, covering the period between 2002 and 2005, declared the need of 'formulating a housing policy', which should 'improve housing affordability via introducing appropriate housing standards that consider local resource capacities and requirements.'¹¹ In accordance with these directives and within the already running LCH project, the Ethiopian government, together with GTZ, launched a large-scale housing scheme, the so-called 'Addis Ababa Grand Housing Program'. While this step asked for new measures such as integrating the local construction industry, the construction technology itself was not fundamentally transformed. The AAGHP was officially launched in 2004 with the inauguration of its pilot project at the 'Bole-Gerji site, which extended the LCH technology to buildings of four to five stories, featured four newly designed prototypes that contained studio, one-bedroom, two-bedroom and three-bedroom apartments, and consisted of 696 units distributed among 28 housing blocks.¹² Following an ambitious pace however, the completion of the Bole-Gerji site was not only the beginning of a new phase: during the pilot project's construction, the GTZ – in collaboration with the local firm MH Engineering – already designed 20'000 units on 20 new sites and marginally adjusted the housing blocks' compositions into three basic types (an 'I-type', 'L-type' and 'T-type'). Also at the same time, the GTZ's operational subsidiary GTZ International Services (GTZ IS), the GTZ and MH Engineering also supported the newly established Addis Ababa Housing Development Project Office (AAHDPO) to plan and design the next 100 sites and 66'000 units.¹³ For the pilot project, the planners managed to remain within the upper range of the LCH project's costs, spending ETB 800-900 (USD 92-104) per square meter.¹⁴

Scale 3.0 – Integrated Housing Development Program (IHDP)

The next step of expanding the housing program was indicated within the subsequent economic growth framework 'Plan for Accelerated and Sustained Development to End Poverty' (PASDEP), which covered the period from 2005 to 2010. Based on the already tested and implemented housing sites in Addis Ababa, the government declared to design "a national integrated housing development program that involves a combination of government financing and construction of housing in large and medium-sized cities targeted at middle and low-income households."¹⁵ Following this assignment, renaming and scaling up the AAGHP to the 'Integrated Housing Development Program' (IHDP) in 2006 simultaneously marked the end of the LCH project's second phase and the official collaboration with the GTZ. Incorporating the construction efforts within the former AAGHP, the IHDP set ambitious 'five-year goals' for the period between 2004 and 2008, mainly targeting Addis Ababa. Apart from a reduction of slum dwellings by 50%, the program planned to build 150'000-200'000 housing units, create 60'000 jobs, give the basis for 2000 micro and small enterprises (MSEs), reorganize the existing training procedures for the domestic construction sector, broadly introduce the developed low-cost building technologies, raise ETB 5 billion (USD 573 million) for initial housing construction, develop 1'200 hectares of land, and therefore 'build an institutional capacity' that can oversee and implement an annual output of 50'000 housing units in the long run.¹⁶ With regards to design, the IHDP basically adopted the AAGHP's housing blocks, integrating only small variations and extensions of existing building types. In order to adequately introduce such an amount of building mass, the "provision of large scale housing should focus on conducive housing within conducive neighborhoods (...)."¹⁷ Although the initial IHDP documents assumed the

¹¹ FDRE, Ministry of Finance and Economic Development (MoFED), *Ethiopia: Sustainable Development and Poverty Reduction Program (SDPRP)*. (Addis Ababa: MoFED, 2002). pp.126-127.

¹² See: *ibid.* p.12.

¹³ See: *ibid.* p.13.

¹⁴ See: *ibid.* p.15.

¹⁵ FDRE, Ministry of Finance and Economic Development (MoFED), *A Plan for Accelerated and Sustained Development to End Poverty (PASDEP) 2005/06-2009/10 - Volume I: Main Text*. (Addis Ababa: MoFED, 2006). p.163.

¹⁶ GTZ, MWUD et al., *Integrated Housing Development Program, Volume I - Management Manual* (Addis Ababa: GTZ, 2006). pp.67-68.

¹⁷ *Ibid.* p.54.

same cost range as realized within the pilot project, the average costs increased successively during the implementation phase, resulting in ETB 1507 (USD 131) per square meter in 2009/2010.¹⁸ Despite clearly missing the aspired cost targets and quantities within the given time frame, as of 2010, a respectable amount of about 80'000 units had been built all over Addis Ababa.¹⁹

Normative Scale – Individual Home-Ownership & Privatization

Through the aspired 'integrated' approach, the IHDP became a key element within the overall poverty reduction and urban development objectives. Yet, while these measures were expected to provide adequate shelter, create job opportunities and strengthen local businesses, the scheme promised a far greater achievement for the whole of society: seeking comprehensive poverty reduction, the IHDP should "enable low-income residents to become house owners and thereby ensure fair distribution of income, and create [a] conducive environment for development."²⁰ In other words, based on individual home-ownership, the housing scheme was conceived as a mechanism that creates a more inclusive urban environment, both on a spatial and a socio-economic level.²¹ The introduction of individual home-ownership at such a large scale signified a radical departure from long-established habits and practices. Depicting a typical ratio for low-income countries, nearly two-thirds of Addis Ababa's citizens were still tenants as of 2007.²² Yet, in spite of the manifold reasons that underline such tenancy patterns, the IHDP opted for a system of individual ownership.²³ Even though Ethiopia's land policy does not allow private ownership of land, adopting this tenure system has triggered an overall privatization process of housing property. In essence, the IHDP creates – in the words of Elias Yitbarek – an 'indirect privatization': targeting the most precarious publicly owned housing stock, the housing program forces dwellers to either acquire the provided private property, or to leave their neighborhood.²⁴ By these terms, the program does not directly evict low-income residents, but – through the imposed model of privatized ownership – indirectly favors middle and upper middle class citizens who can afford the respective payments and therefore induces segregating effects in the long run. At the level of general affordability, privatization through individual home-ownership has also had an impact on construction costs by influencing how the IHDP's housing typologies and neighborhoods were conceptually designed and physically built: the established mortgage systems' need of a ready-made and standardized housing unit as collateral is directly linked to distinct conditions for housing standards and materiality. In the IHDP's case, the compliance to financial provisions of the bank has resulted in a housing typology that neither offers any incremental or intermediate stages of construction, nor allows the introduction of alternative material choices. This dependence on specific standards and materials has, among other things, substantially contributed to the rising construction costs and thus steadily increasing housing unit prices. Furthermore, the increased costs of construction – and thus down payments as well as mortgages – have caused an insuperable financial burden for many of the targeted low-income households. As a result, beneficiaries often have either not been able to pay the down payment, have additionally indebted themselves for financing the down payment, or could not cover the running costs of

¹⁸ Teshome Tefera, *Measuring the Affordability of the IHDP - The Integrated Housing Development Program in Addis Ababa* (Saarbrücken: LAP LAMBERT Academic Publishing 2011). p. 39.

¹⁹ See: UN-Habitat, *Condominium Housing in Ethiopia - The Integrated Housing Development Programme*. p.13.

²⁰ Ibid. pp.67-68.

²¹ To allow this envisioned widespread rate of ownership, the government negotiated a financial agreement with the state-owned Commercial Bank of Ethiopia (CBE): by issuing state bonds to the CBE, the government used the received funds to commission local companies to build the housing units in advance. At the same time, the CBE agreed to provide subsidized mortgages to the future unit owners. See for example: UN-Habitat, *Condominium Housing in Ethiopia - The Integrated Housing Development Programme* (Nairobi: United Nations Human Settlements Programme, 2011). p.17.

²² Central Statistical Agency Ethiopia (CSA), *The 2007 Population and Housing Census of Ethiopia - Statistical Report for Addis Ababa City Administration*. (Addis Ababa: CSA, 2007). p.161.

²³ In doing so, the program followed the historically powerful and perpetually promoted "assumption (...) that home-ownership represents the 'natural' tenure. Alan Gilbert, "Slums, Tenants and Home-Ownership: On Blindness to the Obvious," *International Development Planning Review (IDPR)*, 30, no. 2 (2008). p.i. Further see for example: UN-Habitat, *Rental Housing - An Essential Option for the Urban Poor in Developing Countries* (Nairobi: United Nations Human Settlements Programme, 2003). According to the 2007 census by the Central Statistical Agency of Ethiopia, 61.3% of citizens were living in some form of rental housing, while 32.6% of the units were owner-occupied. By mainly targeting to replace the 23.6% state-owned housing units, a full implementation of the IHDP would theoretically boost home-ownership to over 50%. See: Central Statistical Agency Ethiopia (CSA), *The 2007 Population and Housing Census of Ethiopia - Statistical Report for Addis Ababa City Administration*. p.161.

²⁴ Elias Yitbarek, "Between Renting and Owning - Saving and Cooperative Based Tenure Transformation in the Inner-City 'Slums' of Addis Ababa," in *Proceedings of the 16th International Conference of Ethiopian Studies*, ed. Svein Ege et al. (Trondheim: 2009). p.944.

interest rates and increased service costs for the new housing units. Confronted with these financial insecurities, many beneficiaries from the low-income group have rented out their units to more affluent citizens – mostly from the middle class. In turn, the unit owners either have never moved out of their original dwelling, or have returned to another precarious housing unit.²⁵

Formative Scale – Standardized Housing Blocks & Compound Design

Inevitably connected to these mechanisms of privatization, the corresponding building and urban designs have produced disputable spatial results, which can be observed at the unit, building, neighborhood, and urban scale. As a social housing program, the units are obviously planned within minimal spatial constraints. However, the conception that all units are built with fixed room divisions is a rather limiting measure. Despite of the potential adaptability that the chosen structural grid could allow, there is no room for beneficiaries to configure the units more flexibly; the strict subjection of room numbers to apartment sizes and income groups deploys axiomatic rules on the units' layouts. Moreover, the layouts with classic 'modern' kitchens and room divisions often fall short of providing a living environment demanded by the targeted low-income group (see image 1). On the architectural level, the rectangular, stand-alone buildings create two main distinct conditions: the street facade is fairly sealed on the upper levels but can be opened for commercial uses on the ground floor, while the back facade's open staircases and access balconies create a permeability for immediate outdoor activities. As it turns out, these zones are almost completely appropriated by daily activities such as laundry, cooking, drying spices, or are used as improvised storage spaces. Thus, the lack of suitable or well-defined additional areas for such activities contribute to cramped and often non-functional immediate outdoor spaces (see image 2). Regardless of such punctual appropriations, the buildings' principal design and materiality is not intended to absorb such daily needs and alterations (see image 3). At the neighborhood scale the given housing block typology stimulates a design strategy that can be called 'compound design'. Due to the resulting lack of spatial integration into the immediate urban environment, this strategy usually creates morphologically and programmatically disconnected 'urban islands' (see image 4). One of the main spatial deficits caused by this circumstance, is the large amount of undefined and neglected areas both within the neighborhoods, and at the neighborhoods' margins. In the context of a city like Addis Ababa, where a substantial amount of social, cultural and economic activities take place on the ground floor and street level, this spatial feature clearly misses a crucial opportunity to provide adequate room for such activities. What the compound design strategy entails for the internal arrangement of neighborhoods can be translated to the urban scale as well. Due to failed strategies to allocate substantial areas within the existing city fabric, a large amount of planned units has been merged into peripheral, large-scale sites. Reminding of satellite towns, compound design creates a spatial assemblage of disconnected autonomous neighborhoods (see image 5). The IHDP has thus created a situation where not a neighborhood design defines volumetric expressions of buildings, squares and streetscapes, but, on the contrary, the arrangement of stand-alone housing blocks determines how the urban design is organized. The therefore stimulated approach of compound design incorporates urban and neighborhood design as a mere technicality within a linear procedure. As a consequence, urban design's potential ability to create, sustain, and induce social as well as spatial qualities beyond mere building standards – a main precondition of an inclusive approach to city planning – has been strongly contested and has clearly failed the program's official directive to create both spatially and socially 'conductive' housing and neighborhood designs.

Conclusion

In summary, the housing program has revealed substantial socio-economic and spatial challenges. As argued above, both standardized housing block design (deriving from the LCH technology and scaled up with the AAGHP), and mortgage finance (fully introduced through the full-scale IHDP) have been key catalysts for the described problems. Thus, while this application of an extremely rigid design approach, and a highly exclusive funding paradigm has allowed to build respectable quantities unseen in Ethiopian history, it has simultaneously caused fairly questionable social and spatial outcomes. In view of these results, it is therefore obvious that both

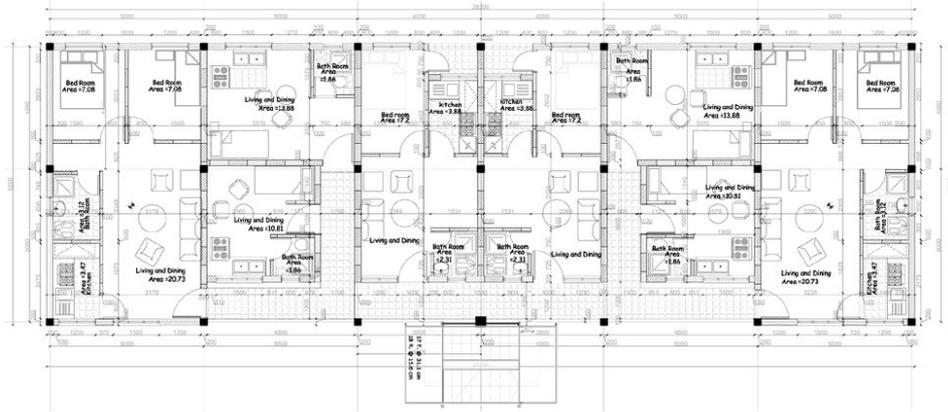
²⁵ See: Tegegne Gebre-Egziabher, *Livelihood and Urban Poverty Reduction in Ethiopia - Perspectives from Small and Big Towns* (Addis Ababa: Organization for Social Science Research in Eastern and Southern Africa (OSSREA), 2010); Tefera, *Measuring the Affordability of the IHDP - The Integrated Housing Development Program in Addis Ababa*. p. 53; UN-Habitat, *Condominium Housing in Ethiopia - The Integrated Housing Development Programme*. pp. 38-40.

future alterations of the existing program, as well as new and alternative approaches have to specifically engage design processes and funding schemes from more flexible, versatile and therefore more inclusive vantage points. Furthermore, within the investigated context of international development cooperation, this would also mean to depart from the applied and globally disseminated off-the-shelf solutions, and to propose new, contextually based frames of references for affordable housing.

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Image 1



IHDP housing block type T-16, typical floor plan
(source: AAHDPO, 2006)

Image 2



Immediate outdoor space appropriated by cooking, laundry, storage, and satellite dishes
(source: author, 2011).

Image 3



Stand-alone housing blocks with neglected outdoor spaces
(source: author, 2011).

Image 4



Compound design leading to neighborhoods as urban islands
(source: author, 2010).

Image 5



Collection of peripheral IHDP 'satellite towns'
(source: google earth / digital globe, 2014).