Metropolitan Public Realm Frameworks for Coastal East African Urbanization: The Case of Malindi Waterfront as Socio-Ecological Infrastructure

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Abstract East Africa is one of the least urbanized regions in the world, but living one of the fastest urbanization under the threat of climate change. This unprecedented uncontrolled phenomenon is producing hybrid metropolitan systems with inadequate infrastructure, polarized development, unsafety, socio-spatial inequality and environmental fragility. How to shape rapid growth towards original low-carbon and livable models in a context of informality, scarcity and misgovernment? Through a historical exploration and an overview on the contemporary situation, the chapter investigates the attempts to recentre the problem on the city as public framework, with an inclusive attitude towards whatever considered informal. A designed-based approach explores the role of socio-ecological envisioning scenarios, set on the strengthening of public/common assets, as decision-making tools to facilitate resilient urban processes. The resulting adaptive metropolitan frameworks integrate physical operations on continuous infrastructural systems and nodes, together with in/formality gradient patterns for their sustainable implementation and stewardship. The case study of a project for Malindi, Kenya, elaborated for an UN-Habitat competition in 2016, is discussed. The proposal to intend and design the waterfront of the city as socio-ecological infrastructure is reviewed according to preconditions, expectations, stakeholders, methodology, design and results, with emerging transdisciplinary issues.

1 Coastal East Africa Towards a Livable Low-Carbon Urbanism

East Africa is the world's least urbanized, but fastest urbanizing, subregion and most of its urban development happens informally (UN-Habitat 2014a). It shares common roots and urban history related to the Swahili culture, the British and German colonization, the East African Community political vision, and it is facing

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a decisive moment in its urban revolution. An interscalar and transdisciplinary urban design agenda is emerging in a context of uncertainty and socio-economical and ecological instability (Myers 2011).

Accepting the formal–informal dichotomy as 'based on the states definition of norms and standards' and the 'aspiration to regulate according to these' (Jenkins 2013), we can consider that in facts some 70–80% of East African urban population is living informally. Informal urbanism is the norm, with its different complex ordering patterns. Therefore, a different inclusive narrative has to be developed around these cities and new paradigms should be explored in the way to deal with their growth for an improvement of living conditions.

A relevant figure reported by Pieterse (2013) shows how in Africa, differently from 'the popular impression of megacity explosion', more than half of urban population in 2007 'lived in settlements with fewer than 0, 5 million people'. Hence, the role of intermediate cities appears extremely relevant in the composition of this new narrative. In coastal East Africa, the contemporary combination of megacities and smaller centres and their relationship with the rich ecological and agricultural context presents a multiplicity of interconnected issues with the potential to find a local way for a sustainable growth.

How to preserve local low-carbon lifestyle patterns while improving living standards? Is it possible to imagine a postmodernist inclusive and sustainable livable urbanism, rethinking sub-Saharan African urbanization (Swilling 2013; Cartwright 2015)? Moreover, setting the focus on physical urban development issues, how could architectural and urban design set the condition to trigger these processes?

2   East African Urbanism: Cosmopolitism and Inequalities

The origins of the peculiar urban history of coastal East African cosmopolitan urbanism date back in fifteenth century. Swahili urbanism—merging Persian, Bantu, Arab, Indian cultures and European interferences—flourished on the African coast facing the Indian Ocean thanks to fertile commercial exchanges. The birth of Swahili culture can be said to coincide with that of Kilwa Sultanate, whose power was fostered by a metropolitan maritime network extending from Mogadiscio to Mozambique. These rich commercial relations attracted the Portuguese first, and, at the end of the seventeenth century, the Omani Sultanate that strengthened its presence in the area at the point to definitely move on the African coast, settling the powerful Zanzibar Sultanate. The continuous blending of Eastern and Western cultural influences gave to Swahili port cities a unique urban character, with hybrid spatial frameworks mixing the Bantu value of void space as collective and symbolic and the Arab structure of commercial armatures as backbone for dense urbanization (Folkers 2010). Stephanie Wynne-Jones and Fleisher (2014) points out how, since their origin, Swahili towns were both planned and unplanned: dual

cities built in stone or wood/mud on a system of relational spaces, city as processes, with housing as ephemeral element of consumption.

Only at the end of nineteenth century, after the scramble for Africa at the Berlin Conference, the European colonizers started to settle permanently on the territories they were exploiting in this area. From this point on, local urban history can be periodized according to the evolving relations between sub-Saharan Africa and the global North, in a mutant modernist utopia leading to disillusion[1] (Frigerio 2016). The influence of modernist planning paradigms continued to produce unavoidable conflicts, layering globalized models on existent physical and cultural topographies. Planning efforts persisted in excluding local population and minor stakeholders with disregard of their rights (Nnkya 2008). This attitude replicated dynamics of segregation, producing socio-economic urban processes and spatial configurations to be called as informal, due to their condition of alterity; an alterity that, for numbers and scale, has become for local governments more and more difficult to ignore.

The urban result of a century of accelerated and unbalanced multiculturalism demonstrated the resilience of Swahili urbanism, but even the challenges that it has to face when scaled up to metropolitan dimensions and exposed to unpredictable environmental and economic changes, resulting in rising inequality patterns.

In the last decades of twentieth century, the actions to face the ever-growing urban critical issues in the area took different directions, with various models and scales of interventions on the built environment: formalization or site-and-service initiatives at the local level or great infrastructural projects by multilaterals. At different scales, they relied on infrastructure as urbanization driver, without a synergic enhancing of urbanity patterns and in a controversial lack of political urban vision.[2] At the same time, to face the consequences of ineffective, segregating or neglecting approaches, several bottom-up initiatives run by non-governmental organization started to take care of the informal world in a non-systemic way—often romanticizing its characters—promoting microprojects with various degree of success, but often a limited impact on a wider scale.

When everything seemed to have been tested in coping with rapid urbanization and its informal side effects—from full-designed to un-designed solutions—an apparent overcoming of the disillusion towards the role of comprehensive planning arose at the beginning of twenty-first century. A revival of total master planning—mostly replicating Western models and disregarding the informal soul of cities—

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[1]Overviewing planning attempts in the major cities, it is possible to note exploitation and segregation at the beginning than attempts of inclusivity—but still based on the imposition of an exogenous culture—to finally reach the independences—formally political, but only partially cultural—rapidly leading to the informal era, the birth of UN-Habitat (1978) and the multiplication of humanitarian and neocolonialist interferences, reassessing an idea of dependency still difficult to elaborate (Frigerio 2016).

[2]The recent project for the BRT (Bus Rapid Transit Infrastructure) in Dar es Salaam is a relevant example: high metropolitan relevance without any spatial integration design effort (Frigerio 2014).

took back the scene with a new plan in all the major East African cities[3] between 2012 and 2014 (Watson and Agbola 2013). Isolated experimental attempts, blending top-down and bottom-up approaches, traced a sustainable agenda based on a recombination of settling and densification strategies, sensible of existing relational patterns—as in the recent activities of the Department of Urban and Rural Planning of the Government of Zanzibar (DoURP 2014; Folkers 2016). This last seems a much more promising approach as, dealing with informality, it makes an attempt to move beyond erasure or remediation plans towards more inclusive strategies.

3   An Inclusive Perspective: Bringing Informality on the Map

To consider informality as part of systemic metropolitan and urban relations, it turned necessary to build a different awareness regarding its physical consistency (Jenkins 2013). After the formal recognition of 'informality' in the 70s, four decades of debates, policies and strategies produced a consistent amount of failures (Fiori 2014), mostly due, according to Fiori (2014) to the 'almost complete despatialization of the debate on the informal city and of the strategies for dealing with it'. Only at the end of the 90s, a renewed interest on the role of architectural and urban design in approaching the informal city opened a different path, with relevant experiences in Latin America (Gouverneur 2015). In the sub-Saharan context, the African Center for Cities at the University of Cape Town concentrated its research activity on this challenge, promoting multidisciplinary projects to explore the essence of sub-Saharan citiness through the investigation of existent sense of belonging, mapping significant relational patterns (Pieterse 2013).

Mapping is, in fact, a determinant keyword to address these issues from a spatial dimension perspective. Mapping is knowledge, awareness and a first step towards inclusivity. Data gathering through information and communication technologies (ICTs) is producing a relevant shift in understanding and coping with African cities and their not-acknowledged interdependence between formal and informal processes and spaces. Participatory GIS-based mapping experiments,[4] together with social networks data elaborations, are offering a different perspective on the real

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[3]Dar es Salaam in 2012; Kigali and Dodoma in 2013; Nairobi, Mombasa and Zanzibar in 2014; and others. .

[4]After the first experiments in Nairobi (Kibera, Mathare, Mukuru), on the coast, Dar es Salaam and Zanzibar explored ICT and drone-assisted mapping potentials, as tools to reinforce the awareness of local cultures and to set synergies between formal and informal socio-metabolic flows (Frigerio 2015). The project Dar Ramani Huria (which is Swahili for 'Dar Open Map') is a relevant example. It is a community-based mapping project, funded by the World Bank, involving university students and local community members to create highly accurate maps of the most flood-prone areas of the city, essential tools to develop culturally rooted patterns of metropolitan resilience (Ramani Huria 2016).

consistency of East African rapid urbanization and its informal urbanity, revealing qualitative, together with the usual quantitative, information (Sliuzas 2004). Furthermore, innovative uses of ICT allow a different approach to service provision (water, electricity) and economic exchanges in informal contexts. Progress in this field is fostering post-industrial and glocal solutions that are site-specific, but scalable, and able to produce original imaginaries; it influences the inventive use and perception of urban spaces, producing at the same time a relevant amount of data regarding these previously un-mapped patterns.

4 Public Realm Adaptive Frameworks: Socio-Ecological Infrastructure as Metropolitan Ordering Tools

Bringing informality on the map opens the way to urban projects that could explicitly include it in—or better set it at the centre of—multiscalar integrated frameworks of reconciliation. Several international experiences proved how accepting informal settlements as integrated parts of the city ecosystem and investing in the upgrading of their public spaces and facilities can produce positive effects in improving the overall urban quality (Gouverneur 2015).

In the transformative context of contemporary East Africa, the challenge to design integrated but adaptive urban and architectural spaces recalls the classic idea of order as relational process, more than superimposed model. Stability can be reached upon agreement on certain shared priorities (public, collective, common) that, spatially, takes shape in the domain of the public sphere: public/collective/ commons realm, assets, facilities, spaces.

UN-Habitat recent recommendations assess the role of streets and public spaces as drivers of urban prosperity.[5] The researches by the AA research cluster on Urbanism and the Informal City (Fiori 2014) and by David Gouverneur (2015) in his political and academic activities[6] are other prominent experiences to be quoted, as they both stress the relevance of the relationship between resilience, urban form and public space. Refocusing on the original public gene of the city poses the essential problem of the defendability of whatever defined as public, especially in contexts like the East African, where public spaces are not a common feature of contemporary urban fabric. Recalling landscape urbanism (Waldheim 2006) and ecological urbanism (Mostafavi 2010) intuitions, together with the readings of

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[5]Un-Habitat (2013) promoted researches and experimental project to test public space design as tool for urban transformations in slums. The explicit link between public space and quality of urban life has been stressed by the 'Global Public Space Toolkit', connected to the Global Agenda for Sustainable Urban Development (Un-Habitat 2014b, 2015) and has been echoed in discussion on the New Urban Agenda (2016).

[6]The concept of *informal armatures* by Gouverneur (2015) emphasizes this idea of 'a system of public spaces as placeholders for urban infill', an adaptive framework with morphological and performative implications.

similar Asian phenomena by McGee (2009), the relevance of geographical features emerges as possible robust structure.

Investing in the interscalar reconnection of public assets as socio-ecological infrastructure could confer de facto tenure security as first step towards recognition and legalization, could produce positive formal–informal interactions through local stewardships and could foster social and ecological improvements. The sub-Saharan debate on socio-ecological systems (Harrison et al. 2014) suggests 'to consider the many interactions among physical and non-physical aspects' to link social and ecological sustainability and practices, even through citizens' participation (Simone 2004) aiming at reaching multiple goals: low-carbon development, social inclusivity, fostering of local economies and productions, cultural rooting, climate change resilience, interscalar governance, urban quality.

In the framework of this inclusive paradigm, the architectural and urban project assumes an essential relational role, requiring a multiscalar toolbox of maps and operations for transparent decision-making and participatory processes.

5 Drafting a Methodology: Interscalar Mapping and Envisioning Scenarios

Few, but very different occasions give to architects the chance to intervene on public realm in the context of East African cities. The client can be a multilateral organization, or a public administration, a philanthropic organization, or a NGO, a private client, or academia involved in research or consultancy. In the inclusive socio-ecological paradigm rapidly drafted above, each project, at each scale, can be considered an urban project with the potential of a rhizomatic multiscalar effect. The research by design experiences carried on by the Measure and Scale of the Contemporary City Research Lab (MSLab) at the Polytechnic University of Milan investigated this field under the keyword of 'metropolitan architecture', with several project—in East Africa (Mozambique, Tanzania, Uganda, Kenya) and other developing countries—combining infrastructure of connectivity, ecological armatures, public facilities (culture, education and health) and public realm (Contin 2015). The methodology emerging from these experiences, as well as from the others previously mentioned, indicates the relevance of maps drafting as tool for reading the context at the various scales and producing envisioning scenarios as facilitating frameworks to build efficacious synergies among the stakeholders.

The base is geography. Territorial features are the robust elements to anchor any physical operation on the metropolitan structure, urban fabric, neighbourhood space. Urban biography is then matched with it, together with the living patterns of the city. From extra large to extra small, the mapping operation, gathering data from different disciplines and know-hows, goes through a metropolitan matrix, mental map for regional connectivity and density distribution (Ortiz 2014); maps of public protection, representing landscape armatures defined by natural risks and values;

maps of public porosity, through public accessibility networks, basic infrastructure provision and public facilities; maps of urban DNA, with morphological studies on the settlements, public spaces and buildings, to understand patterns of settling or densification; finally, an exploration of existing socio-ecological patterns (Alexander et al. 1977), mapping cultural and economic characteristic ways of interacting with space or providing to basic needs in relation to the local space of commons.[7]

This mapping effort produces an interscalar, complex framework of the metropolitan public realm, suggesting actions and operations on the continuous linear systems, as well as on their nodes. They give representation to urban design ecologies allowing a recombination of settling models (Shane 2011). Designing in this framework, with the aim of strengthening the robustness of the public structure of the city, is possible to operate on existing public assets through the main operations of urban metabolism, redefined with particular relation with the East African context, in a gradient from maintenance to transformation: protecting (ecological resources, built, natural and invisible heritage); strengthening (selection, enhancement, improvement of relevant public/common patterns); fixing (repairing by substitution assets at risk, i.e. floodable areas); acupuncturing (inserting public in hyperdense or privatized areas to improve accessibility and rights); founding (new designs for new settlements/expansion areas recombining and scaling local patterns). These operations allow to design impact and envisioning scenarios with in/formality gradient, related to specific urban and architectural issues and respective projects, as platforms for stakeholders' mobilization, public participation and negotiation.

6   A Case Study: Malindi Waterfront as Socio-Ecological Infrastructure

In 2016, UN-Habitat, in collaboration with the Urban Development Department of Ministry of Land, Housing and Urban Development of Kenya, organized the International Design Collaboration for Kenya (IDCK) competition looking for creative planning and design ideas for sustainable urban development (Un-Habitat 2016). Kenyan rapid urbanization will bring the country's urban population from the current 12 million to approximated 43 million by 2050, close to 50% of the country's total population (UN 2004), with a strong impact on secondary and intermediate cities. In the 2012–2015 period, UN-Habitat has provided 'Support to Sustainable Urban Development in Kenya' through various initiatives. Among

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[7]A report on the future of African cities by the Uongozi Institute, held in Dar es Salaam in 2015, stresses the importance of 'initiatives to reimagine and improve public spaces, can foster safer, more cohesive communities and contribute to job creation and local economic development' without requiring 'significant capital investments for infrastructure nor long lead times to construct'.

them, the support to the Kenya Municipal Program (KMP)—financed by the World Bank—is particularly relevant, as it led to the formulation of Integrated Strategic Urban Development Plans (ISUDPs) and Digital Topographical Mapping for nine selected secondary cities.[8] IDCK was intended as a way to involve local and international planning schools in this process, asking international and multidisciplinary groups to apply for one of the nine cities (Un-Habitat 2016). The author with a group of researchers belonging to the Measure and Scale of the Contemporary City Research Lab (MSLab) from the Polytechnic University of Milan, Department of Architecture and Urban Studies—in cooperation with Kenyatta University—applied for the Malindi site, facing the challenge to test the approach drafted above.

6.1 Malindi

According to Kenya National Bureau of Statistic Census, in 2009, Malindi metropolitan area houses around 200,000 persons and the town of Malindi around 85,000, with prediction of doubling by 2035 (CGK 2015). Land is mostly dedicated to agriculture or ecological assets, and it is largely undeveloped, with anthropization pressure concentrated on the fragile coastal environment, mostly privatized.

Malindi is one of the most important coastal cities of Kenya, head of Kilifi County, and it has a metropolitan area geographically defined by the Indian Ocean in the east, the Arabuko Sokoke forest in the west, Mida Creek in the south and Galana River in the north. Its strategic position is a key issue for its urban history since the thirteenth century, when it is already witnessed as existent Swahili settlement. Its fortune evolved in accordance with East African history, knowing Portuguese influence, a gradual decline, the refoundation by Zanzibar Sultanate, and at the end of the nineteenth century British colonial administration, with a progressive opening to the global north and the birth of the tourist industry (Martin 1973). The recent evolutions of the international scenario are posing relevant issues regarding its role as international destination and stressing the need to improve economic diversification.

Malindi's Integrated Strategic Urban Development Plans 2035[9] (ISUDPs) are anyway built on the vision statement: *Developing Malindi as an international tourist destination with world class infrastructure and vibrant economy* (CGK 2015) than drafting a multifunctional economy that could strengthen the existing farming and fishing sectors and introduce knowledge and leisure services.

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[8]The nine cities (2015 population in brackets) were Embu (60.673), Kitui (155.896), Machakos (150.141), Malindi (207.253), Mombasa (939.370), Nakuru (286.411), Naivasha (91.993), Nyeri (133.346) and Thika (136.576).

[9]ISUDP Malindi 2035 has been produced between 2014 and 2015 by Kilifi County Government with the consultancy of Intercontinental Consultants and Technocrat Pvt Ltd (New Delhi) in association with Geodev K, Otieno Odongo & Partners and Runji & Partners (Nairobi).

Fig. 1 Project aimed at designing Malindi waterfront as a socio-ecological infrastructure, able to answer to the environmental challenges related to climate change and natural hazard and, at the same time, to provide an interactive platform for social inclusivity, economical enhancement and cultural empowerment—by designing the central area facing Shella as main metropolitan interface

Considering the whole metropolitan region, the nuclear development of the settlements is seen as an opportunity to develop a decentralized polynuclear system, according to a radial growth pattern for a low-density green development (CGK 2015). Investments in public, social and ecological infrastructure are expected, especially in denser areas and informal settlements. The ISUDP provides samples for detailed Action Plans for the implementation of some residential, commercial and recreational priority projects.

6.2 The Competition Proposal

With the aim of enhancing the urban design component of the ISUDP, the IDCK's bid for Malindi proposed to work on the Action Plan for the redevelopment of the waterfront—a system of spaces with an important social vocation but strongly degraded—framing it in an overall strategy for the coastline at a wider scale (Un-Habitat 2016). In Malindi, uncontrolled urbanization, mainly boosted by the tourism economy and its side effects, favoured dynamics of privatization of the coastline, with a concurrent rapid growth of formal and informal settlements lacking proper infrastructure and collective spaces, as well as a hazardous pressure on the fragile ecosystem. In this situation, the project set the challenge to reclaim to the waterfront its role: not limited to its 'public space' vocation, but extended to its 'public good' dimension. The project aimed at designing Malindi waterfront as a socio-ecological infrastructure, able to answer to the environmental challenges and, at the same time, to provide an interactive platform for social inclusivity, economical enhancement and cultural empowerment. The project proposed a general environmental and infrastructural strategy for the whole Malindi waterfront (Fig. 1) and then investigated in detail the design of the central area facing Shella—a dense historical informal settlement—as main metropolitan interface.

Metropolitan mental map and issues. Looking at a wider scale, the project suggested the definition of a metropolitan growth strategy for the city organized on a reticular framework rooted to the regional geographical features—differently from the radial model suggested by the ISUDP—with the aim of avoiding an increase of congestion in the centre and allowing the definition of a better integrated strategy for the waterfront. To control the future of the coastline (affected by sedimentation and erosion processes), urgent actions should be undertaken at an even wider scale, considering the entire Galana river basin.

An eco-armature adapting to landscape metabolism. The waterfront is intended and designed as an eco-armature working for the ecological metabolism of the region. To protect and expand the fishing and tourism economies on Malindi Beach, the project proposed to control the sedimentation process through the protection of two mooring and docking areas with deepwater. To defend Casuarina Beach from erosion, a necklace of artificial islets was designed along the coast to foster natural sedimentation processes for beaches accretion. Their position and
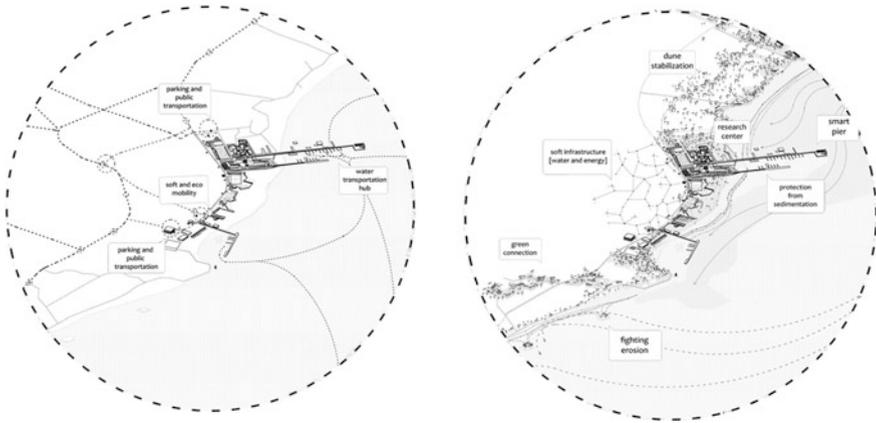
Fig. 2 Accessibility and ecological strategies: parkings for private cars and public transportation stops are located in specific accessibility nodes, while the whole waterfront is only accessible to bicycles and electrical mini-cars (tuk-tuk) managed by local cooperatives. Energy is harvested throughout the waterfront area (Shella included) thanks to spread energy patterns providing also public lighting and Wi-fi connection and, in certain case, able to harvest rainwater for different uses. Moreover, the double pier is imagined as a testing ground for tidal power production

character are linked to an enhanced public accessibility to the beach in selected points (Fig. 2).

Expanding the public lattice. The design effort aims at providing an urban and architectural adaptive platform as ordering device that interprets the existing local urban pattern and the relational logic of its open spaces. The coastline contour line is redefined as a lattice (Alexander 1966) that assembles built and void spaces in a system of scenes. The platform is imagined to be implemented over time, and it integrates multiple patterns with various in/formality interactions between spaces and agencies. The proposed patterns are a sample of a possible multitude that should be developed through participative processes and involve even Shella's existing open spaces to foster its integration with the waterfront and to enhance living conditions in the settlement. The need to improve public accessibility to the waterfront offering it as public space is combined by the project with a low-carbon strategy including solutions for slow and eco-mobility and promoting off-grid and innovative energy-water patterns (Figs. 3, 4).

Promoting knowledge economy and cross-cultural short circuits. The challenges that all the Kenyan and East African coastline is facing in terms of climate change and ocean protection suggested to propose Malindi as preferred location for a research centre devoted to these topics,[10] merging research, education and dissemination activities. The research centre is designed in connection with the new

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[10]Possibly a branch of the Kenya Marine and Fisheries Research Institute and/or with other international partnerships.
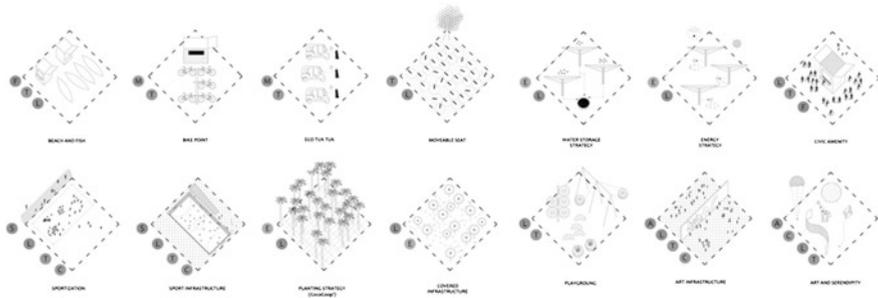
Fig. 3 Public platform is imagined to be implemented over time, and it integrates multiple patterns with various in/formality interactions between spaces and agencies. Ecological and accessibility issues are hybridized with economic interactive cycles (related to fishing, tourism, commerce) and non-economic drivers (heritage, collective events, intangible values and personal stories). The presented patterns imagine for the waterfront a wide set of events and activities with various scales and formality gradient: sport, leisure, music, culture, festivals, commerce, fishing, agriculture, tourism, memory, education, co-working, art, etc., for a vibrant urban environment

double pier harbour, within the main metropolitan waterfront node. This is located where the fish and tourist market already are and it is imagined to become the new symbolic reference for the city, triggering unexpected interactions and cross-cultural short circuits between citizens and visitors.

The project as a process, towards a better resilience. The project aimed at offering a dynamic structure, resilient and robust in assessing its public dimension, durable and temporary at the same time, according to the scale and nature of the urban phenomenon. The resulting adaptive public realm framework set the basis for further expected interactions with stakeholders at the different scales, to drive actions and investments for the sake of a common result. This process of agreement on priorities could be a contribution to the definition of local publicness, and it is in itself a tool to improve the city resilience to social, economic, environmental changes.

6.3   Results and Remarks

The described project was selected as best proposal for the Malindi site with equal merit with another. All the shortlisted projects, for the nine cities, were exhibited and presented at the Nairobi United Nations Headquarter in June 2016. The event represented an occasion for an open and transversal dialogue. The urban visions were discussed with the local government officials and the academic partners from local universities and will be taken in consideration for the review of the Integrated Strategic Urban Development Plans (ISUDPs). The role of urban design scenarios as trigger for participation processes and synergic decision-making was repeatedly underlined as powerful tools by the representatives of public administrations.

Fig. 4 Coastline contour line is redrawn and built as public adaptive platform that assembles built and void spaces in a system of scenes, opening the city to the beach through a permeable system. The double piers, the research centre, the aquarium and the oceanic centre with its spaces for sports and culture, the new fish and crafts markets with food stalls and bars and the marine park for contemporary art build a metropolitan node of interaction between citizens and visitors and the related economies

7 Challenges

High expectations seem to be back on urban (and city) design in its evolving interscalar, interdisciplinary attitude to shape physical space, with the ambitious aim of 'harnessing urbanization' for a 'climate-smart', 'inclusive' growth (Cartwright 2015). Open urban scenarios and projects can produce mental maps for a different imageability of East African complex metropolitan systems. In this perspective, challenges for metropolitan architects include the need to cope with implementability issues as part of the design process; the challenge to extend the design results to ecological and social responsibility and local economic enhancement through un-common solutions; the charge to negotiate and engage with local institutional decision-making habits; the development of a non-ideological approach towards informality; the opportunity to involve non-physical patterns allowed by ICT. The attempt itself represents a part of the path towards what Pieterse (2008) calls the 'relational city', as cited by Myers (2011): 'a model of urban development where the broad and "variegated" collection of urban actors in urban development engage with one another across divides between formal and informal, symbolic and concrete, collaborative and contestatory'.

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