

Building just resilient coastal futures: Revisiting the role of climatopias and the equity gap in adaptation

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Perry World House Workshop:
On Imagine a Just and Climate-Resilient Transboundary Region
University of Pennsylvania
30 September 2022

As climate change continues to unleash untold misery on human populations by increasing the frequency and intensity of hazards, communities and cities across the world seek new ways to adapt. Who can adapt, where we invest adaptation dollars, and how we adapt has significant ramifications for climate justice and social equity. As an urban political ecologist and social activist, I am concerned not solely about how climate change impacts populations or how we adapt but about three crucial issues: 1) how climate adaptation strategies are being used to reshape the metabolism and social fabric of cities often in ways that reproduce a mix of colonial, post-colonial, and neoliberal legacies of injustices. 2) how elite and state-sponsored adaptation programs undermine the everyday adaptation and resilience of marginalized populations; and 3) how communities can collectively create new visions and praxis of just adaptations whether it involves relocation, migration to new regions, or building new habitable cities.

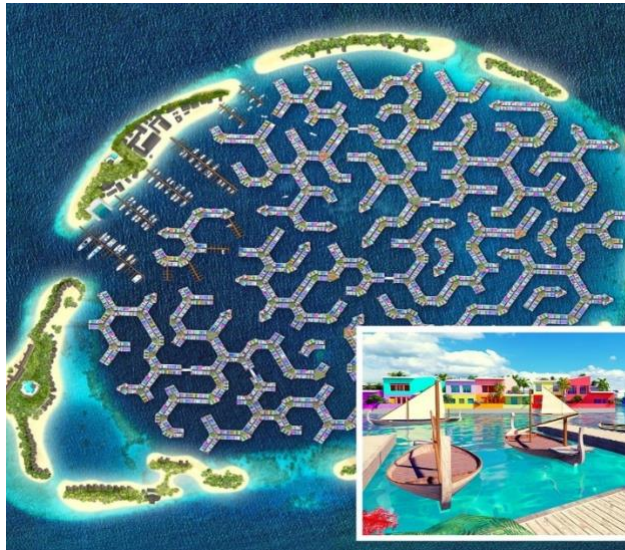
In the last 20 years, coastal and inland flooding has increased globally by 44% (UNDRR, 2020). Global mean sea level has also risen about 8 inches since 1880 and is projected to increase by 12 inches (0.3m) by 2050 even if greenhouse gas emissions follow a relatively low pathway in coming decades (Sweet et al., 2022). This projected rise will have profound shifts in coastal flooding, and storm surges threatening human lives, housing, and infrastructure necessary for local and regional industries, habitats for fish and wildlife, roads, bridges, power plants, and so on. Since sea level rise and coastal risk vary regionally and locally and funding for adaptation is limited, cities have to choose between a variety of adaptation strategies including coastal armoring, accommodation, managed retreat, managed realignment and ecological restoration, land reclamation, and the construction of utopian projects also called climatopias. In the past decade, over 40 countries including Nigeria, China, India, South Korea, Kenya, Maldives, and the Philippines have dumped billions of dollars into developing these shiny new cities in low-lying high-risk coastal areas projected to experience rising sea levels and coastal inundation (Caprotti et al, 2015; Shepard, 2017; Ajibade, 2017; 2022). These utopian cities are proliferating, in part, because architectural firms, engineers, transnational capitalists, and landed elites are promoting a narrative that frames technology-driven adaptations as “the blueprint” for combating rising sea levels, storm surges, and coastal flooding (Finney, 2022). While diverse solutions are needed to address the many risks facing coastal cities, there are concerns that climatopias are accelerating the frontiers of coastal capitalism and privatization of the ocean without enhancing coastal resilience. Indeed, speculative investments in these projects compared to funding for other adaptations raise profound questions. Who are these projects designed for? Who has been silenced in the design and development of these projects and why? Are the projects enhancing coastal adaptation or maladaptation? Who benefits and loses from these projects? Are these projects ameliorating or perpetuating legacies of structural injustices? In what ways have these projects enhanced the erasure of other forms of

coastal adaptation? And are the projects a refuge for climate refugees or will they create new climate refugees in the future?

What are climatopias and who are they designed for?

Climatopias are secluded luxury homes built on the coast for local and transnational elites. These grand architectural renderings with their amphibious design, immaculate landscaping, leisure facilities, and high-tech amenities are a stark contrast to the reality of the urban population living in abject poverty in the greater areas of these satellite cities (Ajibade, 2017; Ajibade, 2022). Ideologically, climatopias divert attention from the realities of climate change and the struggles of everyday life by seeking to create the ideal community and escape spaces from climate impacts. The projects are physically isolated from but financially dependent upon the larger, older vulnerable cities, thus forming new territorialized nodes of speculative investments but exemplifying the de-territorialized power of highly mobile corporate enterprise (Murray, 2015). The idea of “the city as a business” is entrenched through the growth logic and consumerist lifestyles underpinning these projects. By design, access to amenities and housing on these floating island cities is limited to the highest bidder. For example, residents in the proposed Maldives floating city will be priced from \$250,000 (Finey, 2022) – a prohibitive cost for the average Maldivian.

The Maldives Floating City



Source: Waterstudio.NL/Dutch Docklands

Manila City of Pearl



Source: Gohan Concepts

The billions of dollars pumped into climatopias are generated through a public-private partnership involving quasi-governmental agreements between local, national, and international investors. For example, the almost completed Eko Atlantic City (EAC) in Lagos cost about \$6 billion. It is currently being planned and developed by South Energyx Nigeria Limited with the support of the Lagos State Government, the Federal Government of Nigeria, and the International Finance Corporation, a member of the World Bank Group. Consultants include the Dutch Royal Haskoning, China Communications Consulting Group, Dal Al-Handasah, Ar+H Architects, and DHI Institute in Copenhagen (Ajibade, 2017). Similarly, the Maldives Floating City is a private-

public partnership between Dutch Docklands and the island government. Dutch Docklands' founders are architect Koen Olthuis and developer Paul van de Camp and the project relies on floating technology from the Netherlands (Finney, 2022). Manila City of Pearl is also a product of a public-private partnership between the Philippines government and Chinese investors and transnational architects and engineers. To date, the legal status of these satellite cities in relation to the greater areas remains nebulous. Also, most climatopias suffer a legitimacy crisis stemming from the lack of meaningful stakeholders or public engagement in the planning of the project. Despite these challenges, climatopias continue to have a great allure among local politicians who see them as nationalist projects aimed at building a global city inspired by climate change but protected from its impacts.

Who has been silenced in the development of climatopia and why?

In many ways climatopias exemplify power – the power of a few to shape the coast in ways that exacerbate the everyday vulnerabilities of low-income groups while simultaneously increasing the resilience, wealth, and comfort of the rich. These projects do not only metabolize land, ocean resources, and labor but they disrupt coastal communities' rootedness, resourcefulness, and existing resilience. In cities such as Lagos, Tianjin, and Manila the development of utopian projects in fragile locations has gone hand-in-hand with the forcible eviction of fishermen and low-income coastal communities. Other impacts documented include the violent displacement of traditional ways of life, gentrification, and the destruction of wetlands that act as natural carbon sinks (Caprotti et al., 2015; Ajibade, 2017; 2022). This dispossession of low-income residents from the beach areas and the appropriation of the common-pool resource for elite estate development have served to deepen social inequality and livelihood vulnerabilities, thereby redistributing rather than ameliorating risk. In addition to entrenching social inequality, these utopian projects support an unsustainable capitalist political economy while foreclosing a re-imagination of other less extractive co-existence and less disruptive relationships with the ocean.

Are climatopias enhancing coastal adaptation or maladaptation?

Architects, engineering firms, and planners of climatopias often cite scientific assessments of projected coastal risks as justifications for the projects (Finney, 2022). They claim the projects can withstand natural disasters, including ocean surges, tsunamis, and flooding. It can also help in stopping coastline erosion. There are other added benefits such as reducing housing deficits and propelling economic growth. The EAC project in Lagos, for example, is expected to accommodate 250,000 residents and a daily flow of 150,000 commuters as well as expand tourism opportunities, and create new businesses and jobs. The economic benefits from the project are expected to trickle down to everyday people, although evidence of this is yet to be seen. There is also limited evidence that proves these projects are indeed a haven from rising sea levels. Aside from these issues, there are major concerns that climatopias may be contributing to maladaptation. This is because these projects are likely to increase urbanization, ecological degradation, and biodiversity loss due to rising pollution associated with the large influx of people on the coast. The impact of the energy grid on marine life could also deplete aquatic species.

In the case of the EAC, it was tested for one-in-a-100-year and one-in-150-year flooding and storms, since its commencement communities in the region have experienced repetitive flooding and increased storm surges along the Bar Beach Victoria Island area (Ajibade, 2017). Local communities have also documented increased erosion and loss of fisheries resources. Over time,

reclamation-based climatopias may experience sinking problems due to compacted soil from heavy buildings (Tay et al, 2022). The path dependency and lock-in effects resulting from the massive capital sunk into these projects means it would be difficult to dismantle or abandon the project in the future even when found to be extremely risky. In contrast to the trickle-down logic, the significant investments in this project mean less funding is being directed to social housing in non-vulnerable areas. Frankly, as sea level rise becomes more severe, more adaptation funds will be needed to maintain an acceptable level of risk to humans, housing, and infrastructure in these iconic climatopias. From a climate justice perspective, the role and culpability of the Dutch, Chinese, and American corporations in perpetuating urbanization in vulnerable coastal regions of the world and in the displacement of the urban poor from these areas require further interrogation.

Future directions: remedy injustices and center equity

Climatopias are not just a case of adaptation gone wrong, they are about social, economic, ecological, and climate justice. The lack of attention to procedural, distributive, and recognition justice in the decision-making, planning, development, and implementation of climatopias means historically embedded inequalities and the contemporary injustices associated with these projects will be exacerbated, producing new tensions over time. The status of climatopias, as techno-fixes developed within an ‘entrepreneurial and state-supported neoliberal’ paradigm, means they may become the primary drivers of urban development and economic growth, thus contributing to climate gentrification and displacement of marginalized populations in coastal regions. By attempting to work within rather than challenge climatopias as the dominant approaches to coastal adaptation, states may find themselves compromising on having a diversity of socio-economic classes on the coast, protection of the natural integrity of coastal habitat, and on the long term safety of all coastal populations. Justice in coastal adaptation requires both local and transnational actors to act in good faith by making concerted efforts to remedy current harms and avoid future disasters. Climatopia-related harms to marginalized groups may be remedied by taxing the planners and residents of these projects and using the funds generated to support marginalized communities and safely relocate them to less hazardous areas.

Beyond harm reduction, just and resilient coastal futures calls for a holistic consideration of environmental, cultural, and social transformations of the coast and a critical examination of how different opportunities and risks will play out across space and time. The notion that market-based techno-fixes are the solutions must be set aside because they stifle the visioning and re-imagination necessary to create truly equitable, safe, and just coastal adaptations. Collective mobilization and everyday resistance against such techno-fixes may be needed to put a break on accelerating privatization and state-supported elite capture of the coast. I recognize that no single solution will work for all communities or groups, and perhaps floating cities may be exactly what some communities want. To accommodate the needs of different groups, it is important to create a social contract with communities and diverse stakeholders stipulating when, why, and under what conditions climatopias may be built or disallowed. For some other communities, developing policy guidelines to facilitate just forms of relocations and the development of receiving cities may be their preference. No matter what communities choose, one thing for sure is that it is not going to be an easy ride to a resilient and just coastal future.

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