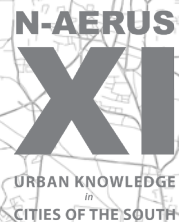


Between Development and Experiment: The Volta River Project's (Un)settling Communities



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Experimenting with Development, Developing Experiments

“Africa - by which is meant for the present purpose the regions of tropical Africa inhabited by Africans, and more particularly those which form part of the British Commonwealth – is a great experiment, or series of experiments, not so much in human government as in human co-operation.”

Charles Jeffries, 1943¹

“It is unlikely that anything approaching the ambitious nature of this mass evacuation scheme has ever been essayed before. In effect the whole (Volta River Project) exercise took the form of an unprecedented experiment in the disposition of human beings.”

James Moxon, 1969²

The words of Charles Jeffries and James Moxon, written a quarter-century apart, serve as a valuable indication of a persisting 'experimental' approach to the management and transformation of Sub-Saharan Africa's environment, with particular reference to former British colonies. This time interval confirms Christophe Bonneuil's periodization of science-based state-construction³, which is rooted in the move from early colonial explorations to developmentalist experimentations, with the latter covering both late colonial and post-independence years. By examining the continuous role that science – and the large-scale social engineering that accompanied it - has played in the establishment of a colonial and post-colonial “development regime” in Africa, Bonneuil has explored some key development schemes, showing how such 'experiments' constituted a particular mode of crafting knowledge on African societies and managing their environment. Most importantly, his analysis dwells on the ways in which such approaches played an important part in state-building, how they oriented the evolution of medicine, agriculture and development studies, and also in what way they created preconditions for growing interest in the values of indigenous knowledge. Far from describing developmentalist action as a mere transfer of technology from the North to the South, the French scholar acknowledges the extent to which practices were shaped by the colonial and post-colonial contexts in order to transform them into 'objects of development'⁴.

1 Charles JEFFRIES, “Recent Social Welfare Developments in British Tropical Africa,” *Africa: Journal of the International African Institute*, 14, no. 1 (Jan., 1943), 4-11. Charles Jeffries (1896–1972) was closely connected with administering the British colonial service from 1930 onwards, and as Joint Deputy Under-Secretary of State from 1947 until his retirement in 1956 he was intimately concerned with the problem of managing the service in the changed post-war world. He published several works dealing with the colonial civil service in the pre-war and immediate post-war period.

2 James MOXON, *Volta: Man's Largest Lake* (London: André Deutsch, 1969). James Moxon (1920-1999) was a British colonial administrator in Ghana. As colonial officer, he served in Kpandu, Dodowa, Aburi and the capital, Accra. He was subsequently styled Nana Kofi Obonyaa and on the eve of independence, took seat as the only white traditional ruler and member of the House of Chiefs. He played a major role in setting up the Ghana Information Service and especially its film unit, and his ever-widening circle of friends came to include both Kwame Nkrumah, the first president of Ghana, and the American entrepreneur Edgar F. Kaiser, who would play a key role in the implementation of the VRP. His book *Volta, Man's Greatest Lake*, published in 1969 reflects how genuinely he believed the rhetoric about Ghana's Volta River Project as it approached realization in the late 1950's and early 1960's.

3 Christophe BONNEUIL, “Development as Experiment: Science and State Building in Late Colonial and Postcolonial Africa, 1930-1970”, *Osiris, Nature and Empire: Science and the Colonial Enterprise*, 15 (2000) 258-281.

4 For more on the notion of developmentalism, see Arturo ESCOBAR, *Encountering Development: The Making and Unmaking of the Third World* (Princeton: Princeton University Press, 1995). See also James FERGUSON, *The Anti-Politics Machine: 'Development', Depoliticization and Beurocratic Power in Lesotho* (Minneapolis: University of Minnesota Press, 1990).

On a complementary note, in her reflections on science about the 'South' Raewyn Connell denounces the mechanisms metropolitan scholars have enacted for studying the non-metropolitan world, and the consequent constitution of several disciplines and sub-disciplines for the purpose, amongst which she lists anthropology, development economics and political economy⁵. With particular reference to sociology, the author aptly demonstrates the intimate relationship such disciplinary field has had with colonialism – “the greatest social change of the time” - denouncing the discipline's evolutionary concern and implication with issues of empire. Most importantly Connell outlines how in spite of the alteration of the discipline's conditions of existence entailed by the world wars and decolonization, scholars have pursued their exclusive reliance on the metropole for intellectual tools and assumptions, treating the majority world as object with profound repercussions for the production and application of knowledge.

For the design disciplines similar critiques have been set forth by scholars such as Arif Dirlik - who has posited architecture as a colonial activity *par excellence*⁶ [Dirlik, 2007:37] - in addition to comparable disciplinary [de]constructions and [re] constructions rooted in the epistemological break introduced by post-colonial studies and critical theory and advanced by researchers specifically dwelling on urbanism and (urban) planning enterprises. Paul Rabinow, Gwendolyn Wright and Mark Crinson amongst others have unfolded the proximity between disciplinary shifts and the changing culture of imperialism as it gradually incorporated the intellectual responses to its more tangible manifestations⁷. The fruit of such demonstrations can be found in the recent work of researchers such as Libby Porter, who has advocated for “unlearning the colonial cultures of planning” still seen as persistently present to date. In her opinion, theorizing power relations and understanding local histories and cultural nuances is still insufficient to discharge urban planning from the politics of difference it consistently pursues, since the genealogy of the discipline itself is drenched in colonial historiographies, a fact that makes relations of domination and oppression ever present⁸. Indeed, such position situates planning practices as part of one continuous gesture from the heart of empire to our present days, oriented mainly towards the significant dispossession of indigenous peoples in terms of land rights⁹.

The notion of 'experiment' in the name of 'development', emerges with force from Bonneuil's account and is inherent in Connell's critique of the way in which knowledge dynamics have occurred, especially in the crucial post-independence years, as former colonial methods would be re-signified and weaved back into the complex machinery of state- and nation-building processes. Such an approach, taken with the whole set of practices it carries, makes more than tangible the unbalanced perceptions driving territorial transformations in the so-called Third World, as expertise shifted in its profile from 'exploration' to 'experiment'¹⁰. Developmentalist testing would be central to late colonial activity, and would also be extended to and institutionalized with technical assistance projects proposed in the wake of decolonization and post-colonial enterprise. Indeed, time and time again, colonial officers first and technical assistance experts later, would advocate for increased 'experimentation' in development projects which included research in key environment-shaping aspects ranging from building research to neighbourhood layout¹¹.

5 Raewyn CONNELL, *Southern Theory* (Cambridge: Polity Press, 2007), 65.

6 Arif DIRLIK, “Architecture of Global Modernity, Colonialism and Places” in *The Foreign and the Domestic in Architecture*, ed. Sang LEE and Ruth BAUMEISTER (Rotterdam: 010, 2007), 37. See also Nezar ALSAYYAD, “Culture, Identity and Urbanism: A Historical Perspective from Colonialism and Globalization,” in *Colonial Modern: Aesthetics of the Past, Rebellions for the Future*, ed. Tom AVERMAETE et al. (London: Black Dog, 2010).

7 Paul RABINOW, *French Modern: Norms and Forms of the Social Environment* (Cambridge: MIT Press, 1989); Gwendolyn Wright, *The Politics of Design in French Colonial Urbanism* (Chicago: Chicago University Press, 1991); Mark CRINSON, *Modern Architecture and the End of Empire*, (Aldershot: Ashgate, 2003).

8 Libby PORTER, *Unlearning the Colonial Cultures of Planning* (Aldershot: Ashgate, 2010), 15.

9 Libby PORTER, 75

10 Christophe BONNEUIL, 280.

11 To name a few relevant cases of period publications laden with 'experimentalism': A.M. FOYLE, ed., *Conference on Tropical Architecture* (London: George Allen and Unwin, 1953); ECOSOC, *Housing*

Though the 'experimental' premises of several interventions made more than evident the unrelenting consideration of the (former) colonies as a laboratory, such outlook in the post-war period also offered designers and their affiliated actors the chance, as Sanjeev Vidyarthi has shown, to improve - if not re-signify completely - the initial formulations of a particular planning approach or urbanistic device as these were introduced and re-examined in the light of renewed contextual conditions and partially co-productive negotiations with at least some sectors of the indigenous society¹². In Vidyarthi's examples, the introduction of the neighbourhood unit by Albert Mayer and Otto Koenigsberger in post-Partition India is described as a skillfully re-interpreted tool with egalitarian rather than discriminatory features. Such episode shows the crucial importance of studying each colonial and post-colonial condition in itself, since this contextualization can be highly informative not only of how inequity was perpetrated, but also provides crucial clues on the presence of local agency and how eventual co-production fed back into the larger dynamics of knowledge circulation and diffusion¹³.

The Dam[ned] Urbanism of the Volta River

According to Bonneuil, large-scale planned settlement schemes were the cornerstones of the experimental culture of development. In his view, these pre-packaged development projects offer a particularly promising field - but one largely unexplored by historians of science and technology (and urbanism, one may add) - for research into the relations among science, the state, and society from the colonial to the postcolonial periods¹⁴. The urbanism of river basin development and dams flourished during the Development Decades, modeled on the seminal TVA experience, labeled by James Scott as a "high-modernist experiment and the granddaddy of all regional development projects"¹⁵. By combining regional planning, industrialization and agricultural restructuring, these large-scale highly capitalized projects offered a convenient framework for overall modernization in relation (at least in theory) to context-specific features and locally-based wealth such as large water bodies, minerals and crops. At the same time, interventions were large enough to federate resources at a scale matching the newly-emerging nation state; the latter's formation entailed a similar re-enactment of the environment and of the social structure which could be fittingly incorporated within the far-reaching 'developmentalist' scope of river basin development that appealed to nationalist leaders, development economists and funding groups. The over-arching framework for territorial transformation offered by river basin development offers therefore fertile terrain to inquire into the ways in which urbanism complacently accompanied the development of late colonial science as it re-adjusted its terms of reference when newly-independent nation-states emerged from the totalizing forces of imperial geography with claims for liberation, empowerment and identity. As one of such large-scale territorial transformations the Volta River Project and the 'dam[ned] urbanism' it generated is worth examining in this light.

The 'Volta River Project' (VRP) earned its full appellation as it escalated in scale and objectives, reaching the full status of a "multi-purpose development plan based on the needs of the region as a whole" in 1951, the year the Gold Coast entered its 'transitional period' towards self-government¹⁶. Triggered by an all too frequent colonialist search for raw materials in the first years of the twentieth century, the project

and Town and Country Planning Bulletin (New York: United Nations, 1948-1953). On the extension of 'experimentalism' in post-colonial decades see Ryan BISHOP et al., "(Post)Colonial Experimentation" in Postcolonial Urbanism: Southeast Asian Cities and Global Processes, ed. Ryan BISHOP et al., (New York/ London: Routledge, 2003), 23-25.

12 Sanjeev VIDYARTHI, "Reimagining the American neighbourhood unit for India" in Crossing Borders: International Exchange and Planning Practices, ed. Patsy HEALEY and Robert UPTON (London/ New York: Routledge, 2010), 73-94.

13 Brenda S. YEOH, *Contesting Space in Colonial Singapore: Power Relations and the Urban Built Environment* (Oxford: Oxford University Press, 2003).

14 Christophe BONNEUIL, 261.

15 James C. SCOTT, *Seeing like a State. How Certain Schemes to Improve the Human Condition Have Failed* (New Haven/ London: Yale University Press, 1998), 6.

16 James MOXON, 66.

was picked up in turn by the late colonial administration, the 'transitional' Government of the Gold Coast, and the freshly-elected Convention People's Party (CPP) following Ghana's independence. Last but not least, the Bui Dam and New Town is one of the VRP components upon which Ghana is forging new partnerships with the donors, entrepreneurs and citizens of today. The succession of proposals and the related alliances between the state, the market and civil society is thus revelatory of the ways in which the interventions gravitating around the large-scale transformation of the river basin – with its plethora of re-settlement schemes, new town foundation and irrigation proposals – were re-signified as the conditions for development swerved, allegiances shifted and the knowledge base of the professionals involved changed through time. With such a record, the 'model' river basin development therefore, aptly serves the purpose of examining such shifts and the epistemological implications these have had for the design disciplines.

[fig. 1] **Akosombo Dam, Ghana**
The main symbol of the Volta River Project finds its place today on the one Cedi banknotes, underscoring the intertwining of the hydro-electric project with issues of Ghanaian identity and the self-representation of the nation-state.

[Source: Bank of Ghana, 2009]

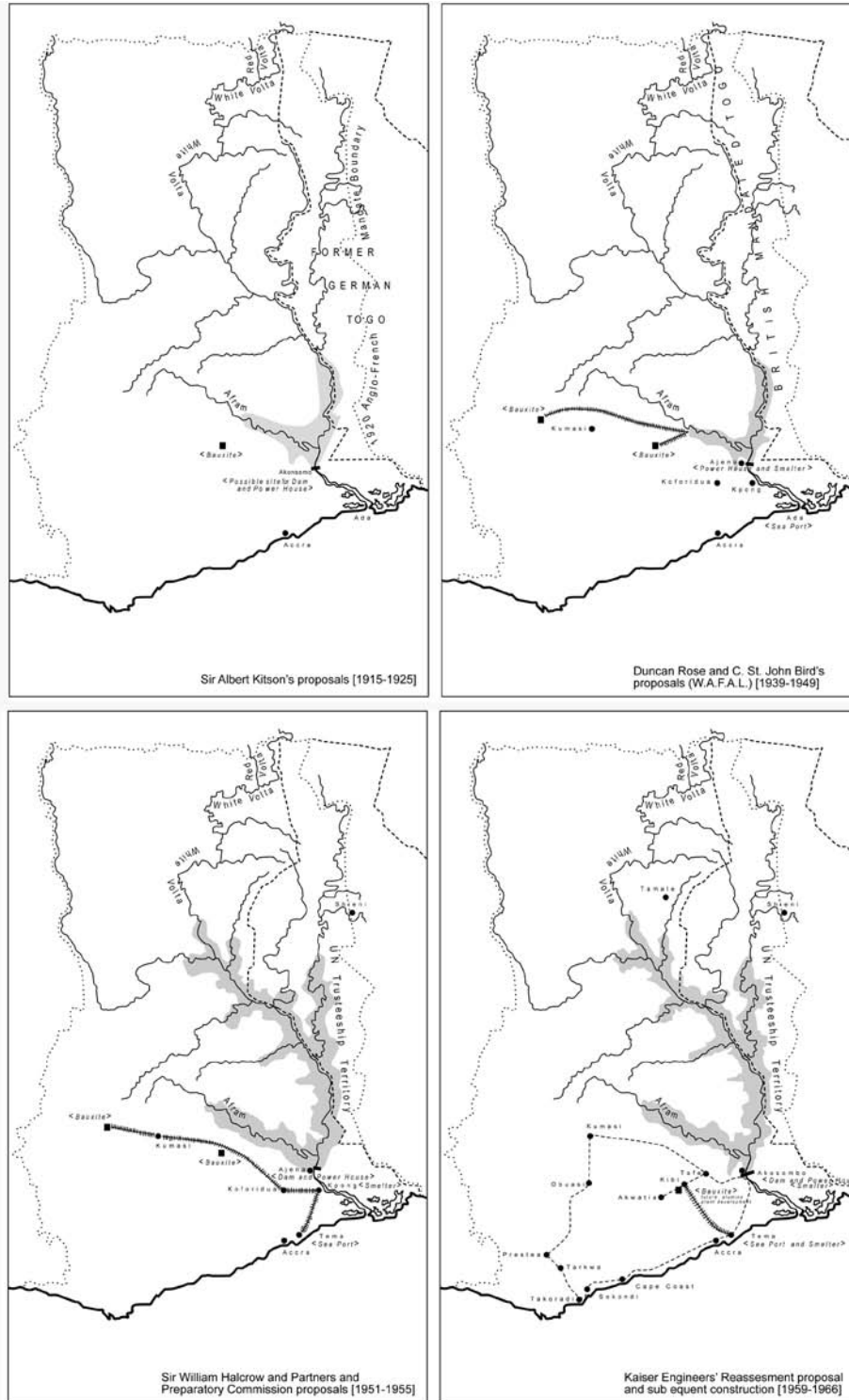


In line with major experiments in river basin development, the VRP entailed the reconfiguration of the rural and urban environment, as resettled villages were recast as part and parcel of an agricultural and water management machinery and the larger cities were framed as the showcases of the project's – and the nation's - success in high-speed industrialization and modernization. The language of physical planning - neighbourhood units, dwelling typologies, planned public space, legislative measures - formed the subject for 'experimentation' and social engineering, serving as both a driver for development but also potentially acting as a shield from the rapid structural change entailed by the implementation of the Volta River Project¹⁷. In this perspective, the research assumes that, by means of a genealogical reconstruction of the VRP, significant insight can be gained into how the epistemic communities involved at each stage of the territorial project crafted knowledge on the local environment and interceded in many of its endogenous development opportunities¹⁸. By looking at each juncture in turn, this interception - and the responses it generated - is made obvious through the recurrent reference to 'experimentation' and its eventual abandonment as awareness towards the value-laden nature of 'technical expertise' rose. The discourses and representational practices of the epistemic communities

¹⁷ On the ambiguous partnerships forged between modern colonial urbanism and the anthropological idea of 'tradition', see, for example: Serhat KARAKAYALI, "Colonialism and the Critique of Modernity" in *Colonial Modern: Aesthetics of the Past, Rebellions for the Future*, ed. Tom AVERMAETE et al., (London: Black Dog, 2010), 38-49. On the ambition to achieve both changelessness and progress by designing 'transitional' dwellings and giving prominence to life 'outdoors', see Viviana D'AURIA and Bruno DE MEULDER, "Unsettling Landscapes: new settlements for the Volta River Project between tradition and transition (1951-1970)" in *OASE*, no. 82, Issue: L'Afrique c'est chic. *Architectuur en planning in Afrika / Architecture and Planning in Africa 1950-1970* (Rotterdam: NAi, 2010).

¹⁸ David HART, *The Volta River Project: A Case Study in Politics and Technology* (Edinburgh: Edinburgh University Press, 1980). Hart's main argument is centred on the considerable underestimation of the expenditure estimates required for the project, and the consequent burden on Ghana's actual development that the VRP finally represented, quantified to coincide with a 30-year delay in the country's actual development possibilities. More specifically the author claims that the estimates of the necessary expenditure on land acquisition, road works, resettlement and health problems were systematically pruned to ensure that the unit price of electricity would be attractive to smelter operators.

involved in the VRP underscore how the terms of reference for their participation were paradoxically caught between environmental determinism, the dichotomization of the built environment, and the ambition to allocate agency to a growing number of citizens during the crucial shift from colonial to post-colonial conditions. When these issues are confronted with contemporary planning practices for the on-going hydro-electric venture in Ghana, they further underline how open the challenge for accommodating 'other' conceptions of planning rather than technical-instrumental ones still is today¹⁹.



[fig. 2] Volta River Project: Proposals and Project Evolution [1915-1966]

The gradual encompassing of the aluminum scheme as part of a broader regional project is made evident by both the increase in the resulting lake's size and by the extension of the infrastructural backbone premised, in its latest version, on the Accra-Tema-Akosombo industrial triangle.

[Source: re-drawn by author based on James MOXON, 1969, front and back covers.]

19 On the invitation to cater for multiple rationalities within planning and design practices see Philip HARRISON, "On the Edge of Reason: Planning and Urban Futures in Africa", *Urban Studies* 43, no. 2 (February 2006), 319-335.

Expanding Knowledge: from Resourceful Map-Making to 'Subservient' Social Surveying

The expeditions of "pioneer empire builders" Sir Albert Kitson (1868-1937) and Duncan Rose (1901-1966) in imperial years had exposed the areas around the mighty Volta River and its Black and White branches as rich in bauxite²⁰. In their surveys, the territory to be examined and utilized expanded from a 'Golden Coast' to an 'Aluminum Inland', upon which the infrastructural apparatus for mineral extraction could be grafted upon. The emphasis placed on resource-bound exploitative logics would considerably tone down as self-government began to influence the scope and timing of the hydro-electric project, envisioning its liberating power for the country that could interrupt cash crop dependency and aim for economic diversification. At the same time, the institutional framework endorsed by the emerging Ghanaian state-builders referred back to British planning models and statutory back-up, creating ambiguities and disruptions whose effects would become clear only further on in time²¹. Indeed, after the need for a nationwide version of the VRP was expressed, several reports formulated in the following decade would reveal the difficulties in striking a balance between the entrepreneurial interests of aluminum producers, the newly-formed local administration and the lingering influence of British expertise²². Within this framework, proposals for the Tema Manhean resettlement (Fry, Drew, Knight and Creamer, 1951-1954), the Tema New Town (Tema Development Corporation/Doxiadis Associates, 1951-1969), the temporary township of Ajena (Architects' Co-Partnership, 1957), the smelter town at Kpong (Mayer and Whittlesey, 1956-57) and the VRP resettlement villages (Volta River Authority, 1962-66), all illustrate the competing projections of late colonial power and emerging nation statehood, a struggle that would be consumed under the growing weight of international agencies in the definition of space-making tactics for the transformation of the (built) environment.

In his discussion on planning practice in the Gold Coast E.A.S. Alcock, Town Planning Adviser to the colony's Ministry of Housing in the early 1950s, expressed clearly the stakes for planning at that crucial moment in time: "*Planning in the Gold Coast has advanced from its early beginnings to a stage where its foundations are resting on deeper knowledge and wider experience and where it is becoming recognized by authorities and the public as one of the means of improving the social and economic life of the people*"²³. In an earlier description of Tema New Town - the first tangible outcome of the Volta River Project - he had in fact stated that the Gold Coast should avoid the pitfall of what Lewis Mumford had termed the 'Non-Plan' for the 'Non-City' and that surveying should therefore be made subservient to social needs²⁴. These statements on the compliance of planning surveys to the consideration of social aspects underline a generalized sentiment amongst professionals in the late 1940s and early 1950s for the need to broaden housing policy and planning knowledge²⁵. In practical

20 In their view, the meanders which had given the river its name, also hosted more than one opportunity for building a hydro-electric dam which would allow to produce aluminum out of bauxite. In a moment when gold was not enough, the appetites of geologists, mining experts and the imperial apparatus that supported their explorations, were summoned by the opportunities that the mineral wealth of the little known interior of British West Africa could unfold. See E.A. KITSON, "Outline of the Mineral Resources of the Gold Coast", *Geological Survey Bulletin*, 1925; Christopher St. JOHN BIRD et al., *Volta River Scheme*, WAFAL, 1949. For more on the economic relevance of bauxite and aluminum see Espen STORLI, *The Global Race for Bauxite, 1900-1940*, paper presented at the XVth World Economic History Congress, Utrecht, 2009.

21 On the institutionalization of British planning in the colonies, see Robert HOME, *Of Planting and Planning: the Making of British Colonial Cities* (London: E & FN Spon, 1997). On the consequences of such institutionalization for the Sub-Saharan African context see also Ambe J. NJOH, *Urban Planning, Housing and Spatial Structures in Sub-Saharan Africa: Nature, impact and development implications of exogenous forces* (Aldershot: Ashgate, 1999); *Planning in Contemporary Africa: The State, Town Planning and Society in Cameroon* (Aldershot: Ashgate, 2003); *Planning Power: Town Planning and social control in colonial Africa* (London/ New York: UCL Press, 2007).

22 In 1948, the clash between local land tenure and the concessions of mining companies generated extensive opposition within Government as well as the specific request by the Krobo Paramount Chief to make the aluminium scheme a national project (MOXON, 1969: 57).

23 A.E.S. ALCOCK, "Planning in the Gold Coast," *Town and Country Planning*, May (1954): 236-240.

24 A.E.S. ALCOCK, "A New Town in the Gold Coast," *Town and Country Planning*, no. 23 (1955): 51-55.

25 Anthony Atkinson for example would state that the "change in emphasis from the purely medical

terms, this enlarged scope would often entail the employment of neighbourhood units designed with a certain thought for what were generally referred to as 'African customs' or 'African ways of life', fallen under the scrutiny of increasing numbers of British architects and planners working in colonial territories where pressure for self-government was rising, often explosively²⁶.

Indeed, as the Gold Coast entered 'transition', architectural standards and planning measures would change accordingly. Statutory bodies for the management and implementation of the VRP's components paralleled the indigenization of the colonial administration, but were modeled on the British experience of new towns and embodied the transfer of particular environmental categories, such as the dichotomy between 'town' and 'country'²⁷. The new port city of Tema would present a significant example in this respect, spearheading the intention of pushing forward regional planning and consequently coordinating (in the auspicious wishes of its advocates) town and village planning under one framework only. Besides the special legislations enacted for its realization, the 'urban experiment' was expressed by the phasing and testing of methods employed, since Tema was imagined as a sequence neighbourhood units to be built one at a time, as to enable the incorporation of lessons learnt in the improved planning of the next community awaiting construction. These principles were intended as tenets 'on trial' and if successful, would be adopted in the other new towns envisaged as part of the VRP²⁸.



[fig. 3] Evolution of the Master Plans for Tema New Town, 1951-1959

Prior to the decision to move the aluminum smelter from Kpong to Tema, the Tema Development Corporation was charged with the responsibility of planning the new harbour town. The proposals evidently echo the British New Town experience in terms of both the institutional framework and the conception of the urban layout.

[Source: Overseas Building Notes (May 1963), 4]

The new urban environment: Tropical Transitions and Ekistic Experimentations

The design of "self-contained communities" in Tema reflected a particular view on urbanization, denoting the preoccupation of creating a 'sense of familiarity' within the hostile urban environment and the correlated objective of integrating features of local

to a broader, social concept is one of the most important developments which is taking place in housing design." See Anthony ATKINSON, "Aided Self-Help -- its application to the housing of tropical peoples," *Housing and Town and Country Planning Bulletin* 6, Issue: Housing in the Tropics, (New York: United Nations, 1952), 47. See also J.D.N. VERSLUYS, "Some Social Aspects of Housing Programmes", in IFTP, Proceedings of the South East Asia Regional Conference, New Delhi (February 1954), 78-82.

26 By 1947, shortly under fifty British architects and planners were working in colonial administrations. For a more elaborate description see Anthony D. KING, "Exporting planning: the colonial and neo-colonial experience" in *Shaping an Urban World*, ed. Gordon CHERRY (London: Mansell, 1980), 203-226. For relevant accounts of the shift in housing policy in late colonial years with particular reference to the Sub-Saharan African context see Richard HARRIS and Alison HAY, "New Plans for Housing in Urban Kenya, 1939-1963," *Planning Perspectives*, no. 22 (2007), 195-223; Richard HARRIS and Garth MYERS, "Hybrid Housing. Improvement and Control in Colonial Zanzibar," *Journal of the Society of Architectural Historians*, 66, no. 4 (2007): 476-493.

27 Anthony D. KING, 1980, 209-214.

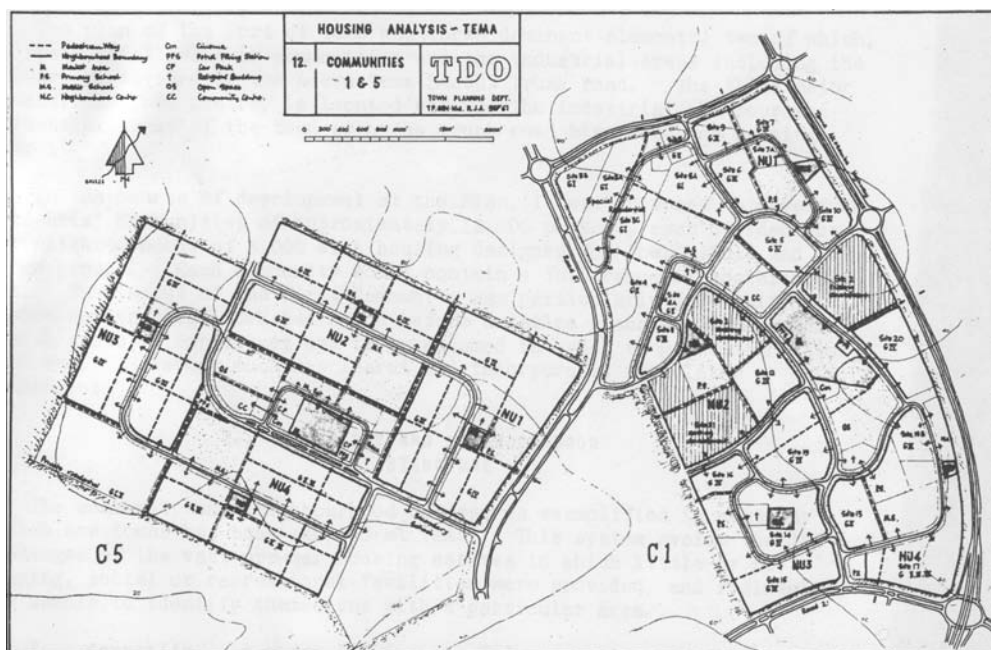
28 A.E.S. ALCOCK, 1955, 54.

lifestyle, both based on a particular interpretation of 'traditional customs', as Alcock's depiction eminently demonstrates: "One of the reasons why units of this size (3000 people) may be successful in recreating feelings of belonging is the West African custom, when people seek each other's company in the evening, of walking up and down the principal streets near their homes meeting, greeting and gossiping.[...] The footpath and street system is therefore planned to focus on the few shops, the small trading area and the open air meeting place, so that this natural social activity will be concentrated and will bring people into contact with each other and thereby, it is hoped, will recreate the social atmosphere of the village evenings"²⁹. Town planners and designers therefore, held the crucial role of interpreting, occasionally supported by the anthropologist engaged in fieldwork, the social features which could be translated from rural to urban conditions, albeit through a form of essentialization moving beyond 'health'-based considerations and rooted in the anthropological idea of local "community" and the so-termed traditional customs.

[fig. 4] Tema New Town's first communities

Experimentalism in the planning of Tema was premised on the use of lessons learnt from the realization of one 'community' for the design of the following one. The differences between Community 1 (right) and Community 2 (left) show the gradual rationalization of the layout and the progressive abandonment of winding streets and 'irregular' neighbourhood subdivisions.

[Source: Overseas Building Notes (May 1963), 1]



The first two communities conceived by the Tema Development Corporation (TDC) between 1951 and 1959, namely before the aluminum smelter would be shifted from Kpong to Tema, reflected the idea that, as urbanization proceeded in Ghana, tribal ties and "discipline" should be superseded by other priorities if a "law-abiding society" was expected. Consequently, the overall course of action was to discourage racial, tribal, religious or class segregation as to trigger the citizen's allegiance to the neighbourhood, community and town³⁰. "Non-traditional" housing accommodation was considered as the natural translation of such policy into building standards and typological definition, and several consultants would be called upon by the TDC to design the multitude of dwelling types that were to guarantee both social cohesion and diversity – were it not for income. Amongst the advisers were Maxwell Fry and Jane Drew, who had been active in the Gold Coast since 1943³¹.

29 A.E.S. ALCOCK, 1955, 53.

30 Late colonial discourses on African citizenship, self-government and development reflect such priorities clearly. For a relevant example see the writings of community developer Thomas Reginald BATTEN: *Thoughts on African Citizenship* (London: Oxford University Press, 1944); *Problems of African Development. Part I: Land and Labour* (London: Oxford University Press, 1947); *Problems of African Development. Part II: Government and People* (London: Oxford University Press, 1948); *Communities and their Development: An Introductory Study with Special Reference to the Tropics* (London: Oxford University Press, 1957). For their reflection in the planning of Tema see: D.C. ROBINSON and R.J. ANDERSON, *Report on the Development of the Town of Tema from 1951 to 1961* (1961); D.C. ROBINSON, "Planning in the Commonwealth: Tema, the New Port of Ghana," *Journal of the Town Planning Institute*, no. 4 (XLV) (March 1959), 90-93; "Community Development at Tema," *Overseas Building Notes*, (May 1963), 1 -12.

31 Maxwell Fry was co-founder of the MARS group with Morton Shand, Wells Coates and F.R.S. Yorke and an active member of CIAM. Fry had spent his army years based in Accra, as a Town Planning Adviser to Colonial Governments in West Africa. This role he would pursue together with his partner and

The designs the British couple of architects elaborated for detached houses, flats and maisonnettes referred to the framework of 'tropicalism' as it had been extrapolated from colonial practices and renewed with modernist tenets³². This entailed the use of building standards and recommendations employed in territories as varied as Burma, Malaya and Kenya some years before the 1953 'founding' event of the discipline, and successively re-elaborated through the implementation of 'colonial welfare' projects under the guidance of modern designers endorsing CIAM ideals³³. This effort, directed particularly towards the planning and construction of housing, reflected - at least in part - the humanitarian concern for the unsatisfactory conditions of indigenous rural migrants, but also the conscious incorporation of labour into the colonial economy, often perceived as an unavoidable and irreversible process³⁴.



[fig. 5] **Housing in Tema**
More than thirty housing typologies were used in Tema New Town in line with the planners' intentions to maximise diversity and avoid segregation.

[Source: Keith JOPP, Ghana's new town and harbour Tema, Accra: Ministry of Information, 1961, 25; 29]

More significantly however, and seemingly as a result of their CIAM background, Fry and Drew advocated for the necessity of designing 'intermediate types', claiming that neither the architecture built in the name of empire nor the local vernacular could be of significance³⁵. Fry's assertions are telling in this respect: "...we have tried to produce types that are healthier to live in and yet more suited to the conditions of a

wife Jane Drew as colonial welfare projects were intensified after the Colonial Welfare and Development Act. Returning to his war-time bungalow to live, and working with a staff of four expatriates, a secretary and the "only West African trained architect" (T.S. Clerk) the British couple of architects would be responsible for the design of a number of educational buildings. Their business partners Knight and Creamer would be charged with following-up on West African projects when Fry and Drew would be summoned by Le Corbusier to work on low-income housing in Chandigarh in 1951. For a more detailed discussion of the roles played by Maxwell Fry and Jane Drew in the complex relation between late British imperial practice and modernist architecture see Rhodri WINDSOR LISCOMBE, "Modernism in Late Imperial British West Africa: The Work of Maxwell Fry and Jane Drew, 1946-56", *Journal of the Society of Architectural Historians*, no. 2 (65) (June 2006), 188-215 and Mark CRINSON, "Dialects of Internationalism: Architecture in Ghana" in Mark CRINSON, op. cit., 137-156.

32 The reference to tropical architecture requires qualification vis-à-vis recent discussions on its actual definition. Here a distinction is made between general 'tropicalism' as a colonial and neo-colonial practice and 'Tropical Architecture' (capitalized) as a particular phase within the former, explicitly related to its combination with CIAM tenets. For more specific accounts with reference to West Africa see: Hannah LE ROUX, "The Networks of Tropical Architecture," *The Journal of Architecture* 8, no. 3 (Sept. 2003), 337-354; "Building on the Boundary: Modern Architecture in the Tropics," *Social Identities*, 10, no. 4 (2004), 439-453; "The post-colonial architecture of Ghana and Nigeria", *Architectural History* 47 (2004), 361-392; Ola UDUKU, "Modernist Architecture and 'the tropical' in West Africa: The tropical architecture movement in West Africa", *Habitat International* 30 (2006), 396-411. See also Jiat-Hwee CHANG, "Building a (Post) Colonial Technoscientific Network: Tropical Architecture, Building Science and the Politics of Decolonization" in *Third World Modernism: Architecture, Development and Identity*, ed. Duanfang LU (London/ New York: Routledge, forthcoming).

33 Fry would state the challenge of building in West Africa in relation to CIAM quite directly: "The main interest for architects lies elsewhere and concerns the application of CIAM principles and method to comprehensive problems of tropical architecture and planning. It is on that score that the achievement in West Africa will be measured." RIBA Archives, Fry & Drew Papers, Box 13, Folder 13/4

34 Anthony D. KING, 1980.

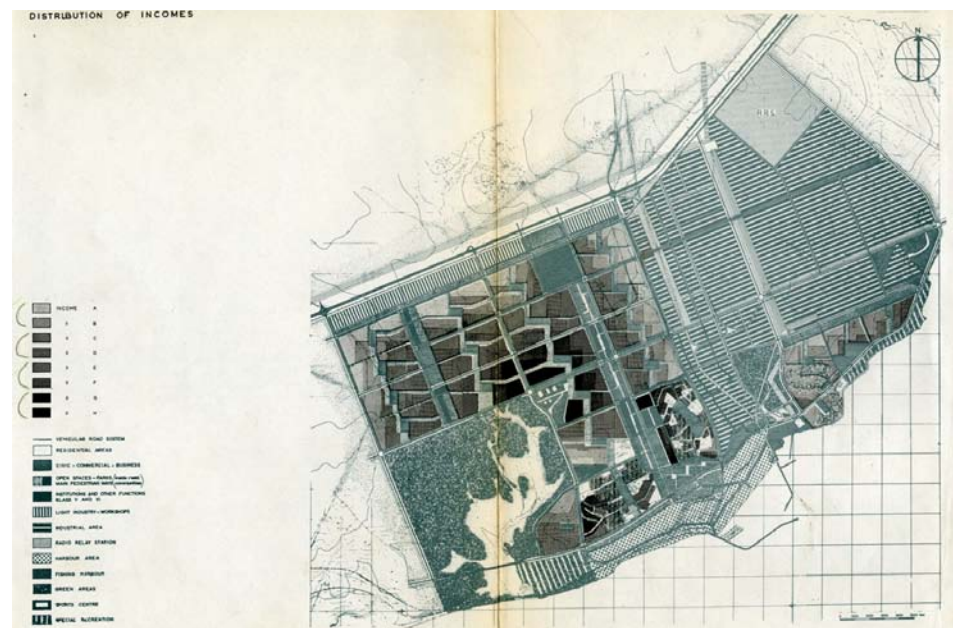
35 As Fry would write in his memoirs: "We looked around to architectural precedent but there was none. Not in our own colonial building which was without character or the sort of response to natural conditions we were seeking; nor in African building which taught us the value of shade but was of a passing order the beauty of which we could admire as it fell and decayed before the onslaught of the west. We were fated to make a new architecture out of our own love of the place and our obedience to nature, and to make it with cement and steel; asbestos sheets, wood above the termite line, glass, paint, some stone later, and not much else." RIBA Archives, Fry & Drew Papers, Box 22 Folder 2 (MF Memoirs), 186/ 15.

town, yet sympathetic to a family life that is lived as much in the open as indoors. [...] It is a matter of finding intermediate types that will fit the broader requirements of the differently organized life of the future, and of experimenting to the full where there is a clear demand³⁶. However experimental, the conception of new dwelling typologies took into account some of the existing features which, in the designers' view was significantly representative of local lifestyle. Fry's wife and partner Jane Drew, for example, would claim with assuredness that "the verandah is a very important part of the African house. There is one at the front for social needs and one at the back for housework, because every African likes to be in the open as much as possible, owing to the climate"³⁷.

The production of reports by consultancy firms and international agencies peaked considerably during the 1950s in line with the parties summoned by the increasingly affirmed Kwame Nkrumah as to find a feasible solution for turning the other VRP components into tangible interventions. The leader's quest was finally sealed off by the agreements signed by the Ghanaian Government at the end of the decade with Kaiser Engineers and the World Bank³⁸. The resulting VRP re-assessment documents would concentrate a number of additional activities in Tema, which entailed the revision of the city's role within the Accra-Tema-Akosombo industrial triangle. On the 1st May 1961 therefore, Doxiadis Associates (DA) was solicited by the Ghanaian Ministry of Works and Housing to advise on the development of the Accra-Tema Metropolitan Region, the first of many tasks the Greek firm would perform throughout the 1960s through the joint action of an Athens-based head office and a field office in Accra³⁹.

[fig. 5] **Tema Final Master Plan**
Based on Ekistics' hierarchical and interlocking system of 'Community Class Sectors', DA's revised Master Plan for Tema reflected the primary role of income and class subdivision within the new town. Low-income, low-rise housing was located in the close proximity of harbour and industrial area, and middle- and high-income multi-typologies near the central civic spine and the Sakumo lagoon.

[Source: DOX-GHA 22, 1961. Athens, Doxiadis Archives]



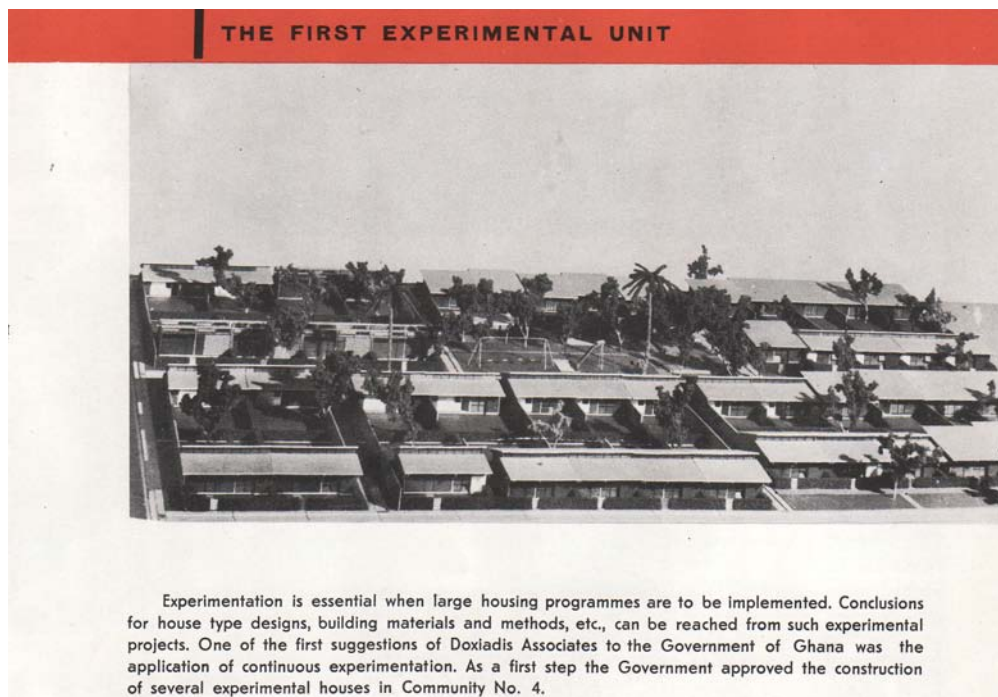
36 Maxwell FRY, "Town Planning in West Africa", Architects' Year Book, ed. Jane B. DREW, no. 2, (London: Paul Elek, 1947), 64-73.

37 Maxwell FRY, "Colonial Planning and Housing", *AA Journal*, (November 1946), 53-60.

38 Sir William HALCROW and Partners, Report on the development of the Volta River Basin, 1950; COLONIAL OFFICE, Volta River Aluminium Scheme - White Paper, (London: HMSO, 1952); PREPARATORY COMMISSION, The Volta River Project, Vol. 1-3 (London: HMSO, 1956); KAISER ENGINEERS INC., Reassessment Report on the Volta River Project for the Government of Ghana (Oakland, CA: Kaiser, 1959). See also: IBRD, Report on the Gold Coast (Washington D.C.: IBRD, 1953); IBRD, Economic Report on Ghana (Washington D.C.: IBRD, 1957); Charles ABRAMS, Vladimir BODIANSKY, Otto H. KOENIGSBERGER, Report on Housing in the Gold Coast, (New York: UN TAA, 1955); Otto H. KOENIGSBERGER, Housing in Ghana (New York: UN TAA, 1957).

39 The DA team was composed of architect town-planner N. Deliyannakis, architect G. Kleogenis, Civil Engineers S. Antoniadis and C. Ioakimidis, and economists P. Cavadias and T. Marinos, who carried *in loco* surveys, consulted local authorities and collected information under the guidance of the DA Representative in Accra. The Athens team, consisting of project manager A. Jadjopoulos and deputy M. Doris, proceeded on the other hand with the tabulation of the data collected. Traffic Engineer O. Papadakis and architects C. Katsoufis and Dimou designed were in charge of initial proposals before all forces were joined to proceed with overall design work under the personal direction of C.A. Doxiadis. Doxiadis Archives, Athens - Ghana Reports DOX-GHA (1), Dec. 1959- Dec. 1960.

Though the scale of their proposals had radically shifted to regional development and was backed by national economic planning, in line with both Nkrumah's ambitions and Doxiadis' 'planetary' approach, the reports and projects produced by the Greek team echoed late colonial planning efforts in many ways, and more particularly so in their unremitting reference to an 'experimental approach'. If this was part and parcel of the 'scientific' and 'neutral' discipline Doxiadis had coined under the name of Ekistics, the 'Science of Human Settlements', his interpretative framework was nonetheless deeply connected with modernist ideals. As in the case of Fry and Frew, DA considered housing design as the most indicated test-bed: *"The experimental character (of the 1961-62 Development Programme) emerges automatically when it is considered that the projects to be executed during these years, and the solutions to be provided, will be the first in a planned series of similar projects which will be studied systematically on the methods of Ekistics. [...] This experimentation assumes an even greater importance if it is considered that Tema, the largest housing and town planning project in Ghana today, is in fact a pilot and demonstration project for the country as a whole. [...] What is said above is of even more importance in constructions such as those of houses, for instance, the success of which depends on social, cultural, financial, technical and other factors, some of which cannot be easily assessed. It is only by experimentation in the construction and operation of a certain type of house that reliable conclusions can be drawn"*⁴⁰.



[fig. 7] **Experimental housing in Communities Nos. 4 and 5, Tema**

Premised on the Ekistician's mission of 'giving shape to a house which then shapes us', DA's dwelling proposals pursued the elaboration of typologies which would promote variety and cater for all income categories. The experimental low-income row-housing in Communities 4 and 5 combined urban agriculture and intensive industrial labour, incremental growth and standardization, extended family structures and tribal coexistence.

[Source: Source: DA Monthly Bulletin no.40, November 1961]

And indeed DA would 'experiment' by setting up 'experimental' low-income housing units in the Communities built as part of the new Master Plan for Tema. In the Greek architect-planner's view, the success of the "modern Ekistician" would be gauged by dwelling design and, more specifically, his/her ability to capture the social transition the Ghanaian environment and society were undergoing and manifest it spatially. The elements identified for doing so were the socio-spatial components permanently and "deeply felt as needs by the people", out of which the verandah – once again – was considered as the most essential element and would in fact be featured both in low-rise row houses and multi-storey apartment blocks. Though embodying in full the professional shift from late colonial adviser to 'global' consultant, C.A. Doxiadis' concern for the African's 'outdoor living' indicated ample familiarity with the assumptions

40 Doxiadis Associates, Ghana Reports DOX-GHA (8), Jul.-Dec. 1961, Doxiadis Archives, Athens. For a more detailed account of the continuities and discontinuities in dwelling design between 'Tropical Architecture' and the work of DA, see Viviana D'AURIA, "From Tropical Transitions to Ekistic Experimentation: Doxiadis Associates in Tema, Ghana," *Positions on Modern Architecture and Urbanism* (Issue 1: Grand Plans) eds. Sarah WILLIAMS-GOLDHAGEN, Eric MUMFORD and Cor WAGENAAR, (Rotterdam/ Minneapolis: NAI/ University of Minnesota Press, 2010), 40-63.

of tropical designers such as Maxwell Fry. His writings are lined with the same faith in the transformative power of modern architecture and planning, capable of hosting specificity by forging partnerships with traditions worth preserving, of easing transition by the use of intransient dwelling components, but also allowing progress to shine through with vibrancy.

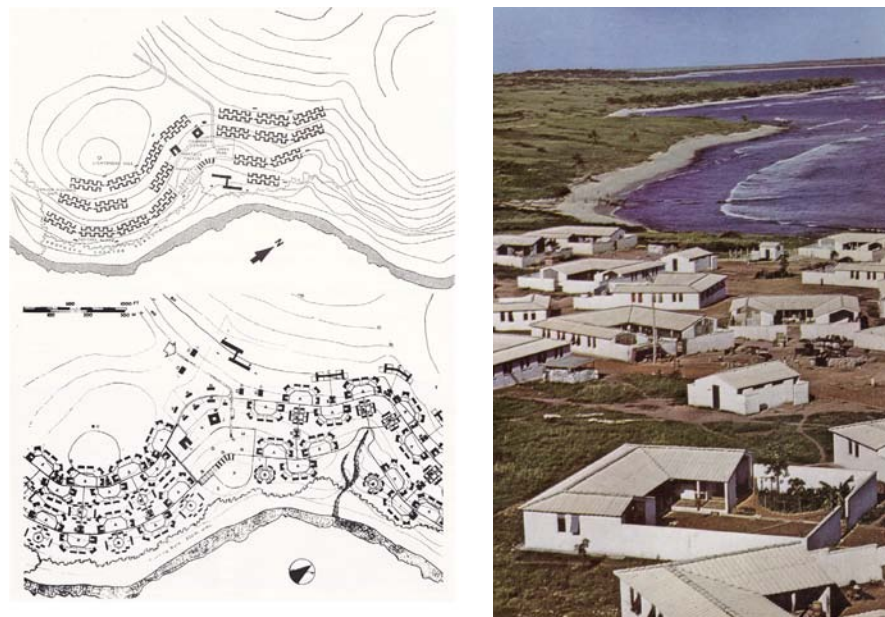
Rural improvements between grid-iron urbanism and core-housing

In Tema's rural counterpart, the dominating approach to the transformation of the built environment reflected once again the transfer of particular environmental categories from the metropolitan to the colonial society, including the distinction between 'town' and 'village'. The 'social atmosphere of village evenings' nostalgically viewed upon by A.E.S. Alcock and his colleagues as a key feature to reproduce in cities to avoid social disaggregation would fall into the background. Rather, the main register for describing village life would be oriented particularly towards sanitary and environmental considerations. Fry, Drew, Knight and Creamer, the professional office charged with the design of the new village ('Tema Manhean') hosting Old Tema's relocated population, described the original settlement in the typically denigrating fashion of 'health'-obsessed colonial advisors: "*The present conditions in the village are unhealthy, without proper sanitation; the air is polluted, fly nuisance is excessive, and the local lagoons, connected with religious sites and local fetishes, are sources of mosquito breeding. The houses are built of rough plaster walls, which are allowed to crumble away before any repairs are undertaken*"⁴¹. The socio-spatial language called upon to perform the necessary gestures of relocating the 9000 fishermen inhabiting the coastal village of Tema from the site of the new harbour would therefore place emphasis on hygienic considerations and on the differentiation of its environment from the cosmopolitan urbanism of Tema New Town, only a few kilometers away.

[fig. 8] **Tema Manhean: setting the standard for resettlement**

The difference between the planned and realized village resulted from the move away from collective housing units to individual, gender-based compounds.

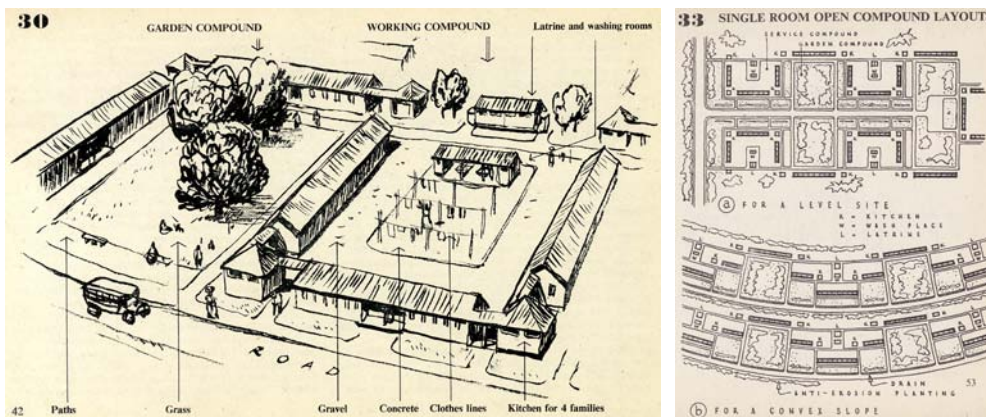
[Source: Godfrey W. AMARTEIFIO et al., 1966, 51; 57/ Keith JOPP, 1961, 27]



Tema Manhean would result from the Ghanaian government's decision to proceed with the construction of the new port city regardless of whether the other components of the river basin development would be granted funding or not. In social welfare officer Godfrey W. Amarteifio's words, the basic resettlement policy "*would enable the people to continue to live as farmers, fishermen and fishmongers, retaining their traditional organization by quarters, traditional tribal organization and ancient*

41 Norman CREAMER, "Work in the Tropics", *Architectural Design* (February 1958), 70-72. This account was considered a reflection of "an understanding of the social and family life of the villagers and of the organisation of Old Tema" by David Whitham, the British architect and Research Fellow at the Kumasi-based Faculty of Architecture who would follow the resettlement of Old Tema's fishermen closely and comment on the plan's implementation. See David WHITHAM, "The New Village as Planned and Built" in Godfrey W. AMARTEIFIO, D.A.P. BUTCHER and David WHITHAM, *Tema Manhean: A Study of Resettlement* (Accra: Ghana Universities Press, 1966), 55-66.

techniques of agriculture, fishing and processing of fish"⁴². The architect-planners in charge would be none other than Maxwell Fry and Jane Drew, who found in the new village design a fitting opportunity to apply the recommendations of their co-authored handbook, summarizing the experience of their many expeditions 'into bush'.⁴³ The manuals elaborated by Town Planning Advisers such as Fry and Drew (1947; 1956) inaugurated an era of handbooks that would reinforce the 'knowledge sharing' instances colonial powers had pursued through conferences and other events, and that would be perpetrated within the networks of the freshly-established international agencies of the United Nations, as the writings in the UN Town & Country Planning Bulletin by housing experts Adrian Atkinson and Jacob Leslie Crane eloquently demonstrate⁴⁴. Reference to general planning principles resulted in clear-cut suggestions didactically accompanied by abundant iconographic material (diagrams, photographs, perspectives and sections) aimed at the conversion of existing villages, considered the "concomitant of agriculture", to "new and better forms"⁴⁵. Survey, the planner's "essential preliminary" was declined in its main tasks and results, which in West Africa amounted to settlement location, orientation and form, all based on soil erosion, water management and existing infrastructure.



[fig. 9] 'Intermediate types' for Tema Manhean

At the crossroads of health-based recommendations and modernist tenets, Fry and Drew's 'open' and 'garden' compounds were amongst the main recommendations for village improvement.

[Source: Maxwell FRY and Jane DREW, 1947, 42; 53]

As a mechanism of knowledge diffusion, handbook-based recommendations can be considered as a revealing outcome of late colonial planning practices. E.A.S. Alcock, in picking up this *genre* immediately after his precursors Fry and Drew, would fittingly represent the way in which the benevolence of 'technical expertise' was interpreted by its protagonists and the way their position was considered vis-à-vis their public, even during the radical changes the Gold Coast was experiencing on its road towards liberation. Alcock's language reiterates several terms used by Drew and her partner in terms of the 'demand' for 'assistance' and the impossibility of advising on all fronts: "As much help as possible is always given but demands exceed capacity and many local authorities engage inexperienced people to lay out their villages and design their public buildings. To ameliorate this situation as far as possible, designs for council offices, for markets and for other public buildings have been issued, while a book entitled 'How to Plan Your Village' was written by Alcock and Richards in very simple language with as much pictorial matter as possible to educate the local authority councilors and officials and their untrained 'consultants' in the elements of planning of rural areas in the tropics. To help dwellers to improve village building, research has been carried out in the field and laboratory"⁴⁶.

42 Godfrey W. AMARTEIFIO, D.A.P. BUTCHER and David WHITHAM, 27.

43 Maxwell FRY and Jane DREW (in collaboration with Harry L.FORD), *Village Housing in the Tropics with Special Reference to West Africa* (London: Lund Humphries, 1947).

44 See, for example: Anthony ATKINSON, "African Housing", *African Affairs*, 49 (196), 1950: 228-237. The number of colonial officers that would subsequently be employed in the UN is substantial. E.A.S Alcock, for instance, worked as UN expert in the Caribbean after several years of employment as planning adviser to the British colonial administration. On this point see also Ijlal MUZAFFAR, "The Periphery Within: Modern Architecture and the Making of the Third World" (PhD diss., MIT, 2007).

45 Maxwell FRY and Jane DREW, 1947.

46 A.E. S. ALCOCK, "Development and Planning in West Africa, with reference to new towns on the Gold Coast: Paper presented at the Town and Country Planning School", *Builder*, no. 26 (August 1955), 356.

Alcock's description of his handbook speaks for itself, as does the legitimization of its contents by reference to research-related activities. Equally telling is Maxwell Fry's account of the mismatch between the planner's survey and the social scientist's analysis, a divergence which would weigh considerably upon the resettlement of Old Tema and continue to haunt overall VRP relocation: "*Mr. Fry said that a team of sociologists and anthropologists had been working in Ashanti when he and his colleagues were at work there, but although the two teams had been very friendly, they had not been able to work very closely together, owing to the different speeds at which they had to produce their results. He and his colleagues [...] had to find out quickly the thoughts and opinions of the Africans on various subjects and use the answers at once, because they affected town planning. [...] Much the best sociologists, from their point of view, were the more human of the District Commissioners, because they were the fathers and mothers of their people; they had come out to Africa as young men and found themselves with districts of 200 square miles, for whose people they had to act as king, magistrate, customs officer, and so forth. That very often had an extraordinarily good effect upon their characters, and many of them were marvelous repositories of local knowledge*"⁴⁷.

Despite the "marvels" of "local knowledge", the 'open compound' structure proposed by Fry and Drew and further re-interpreted by them as to form a novel collective housing unit, was abandoned in the name of 'traditional' compounds, whose assemblage reflected the gender-based grouping of houses. Rather than the "ingenious arrangement of living rooms and covered areas" in the ninety-five rooms contained in each of the twenty standard housing units, the requests of the resettled to maintain the expansion-capacity of their original dwellings in the new layout culminated in the design of compounds embedding traditional Ga customs in their layout and safeguarding the expansion-capacity considered crucial for extended family structures⁴⁸. In Tema Manhean therefore, the development of intermediate types could not adequately counter the violence of relocating livelihoods and households in the name of progress on one hand, and changelessness on the other.

The "wish of the people of Old Tema to preserve their former way of life", resulting mainly from the fact that other alternatives were not realistically feasible, finally transformed the proposal by Fry and Drew in a caricature of traditional spaces, with gender-based compound dwellings that separated the relocated fishermen from the 'cosmopolitans' of Tema even further, albeit to be swiftly swallowed by the larger economic dynamics that would overrule their livelihoods for good. To name them as 'casualties of development', as Otto Koenigsberger would do shortly after, was but a euphemism⁴⁹. Caught between the politics of decolonization and lingering imperial ambitions, the Tema resettlement would be a 'test case' not only for late colonial expertise to reconfigure itself during colonial devolution, but also for native professionals to prove their value in dealing with fierce opposition from the resettled in the name of a new nation. It is on this occasion therefore, that 'intermediate' architecture and urban design would meet with the local welfare officer who had proved vital for tackling tribal issues and religious practices. In such encounter, the ingredients required for a fully-fledged resettlement machinery tailored to Ghana's specific conditions would be elaborated and reserved for future use⁵⁰.

When the creation of the "greatest man-made lake in the world" became an imminent intervention following the erection of the dam at Akosombo, the Volta River Authority (VRA) was confronted with the strenuous task of managing the resettlement of over 70,000 villagers from more than 600 hamlets to 52 'towns'. Various experts had come and gone within the framework of the Preparatory Commission's investigations,

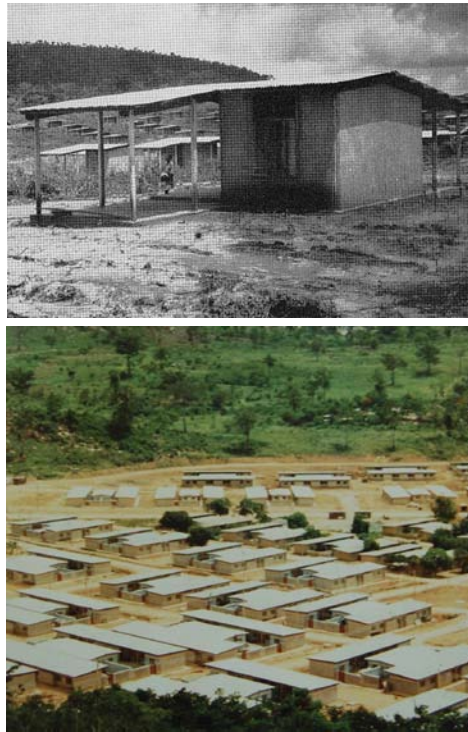
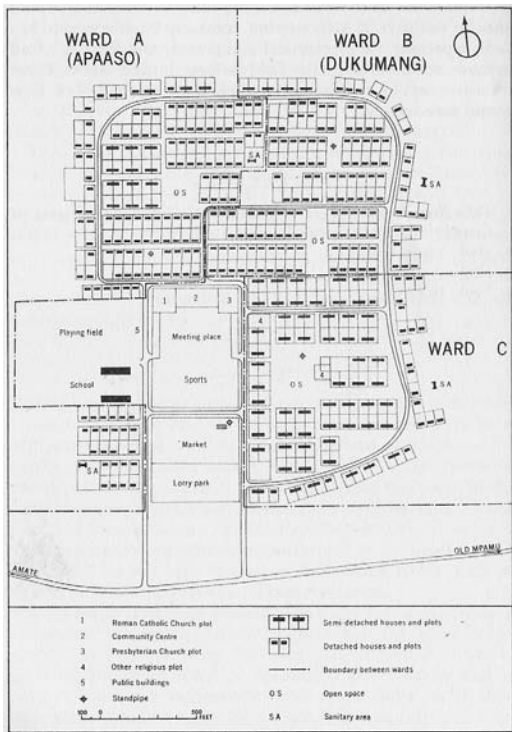
47 Maxwell FRY, 1946, 61.

48 This section is largely based on David Whitham's description of the planned village. See David WHITHAM, 1966. See also Norman CREAMER, 1958.

49 Otto H. KOENIGSBERGER, "Foreword" in Tema Manhean: A Study of Resettlement, Godfrey W. AMARTEIFIO et al., 1966, v.

50 Godfrey W. AMARTEIFIO, "Social Welfare" in The Volta Resettlement Experience, ed. Robert CHAMBERS (New York/ London: Praeger, 1970), 105.

recommending self-help with incentives as the most appropriate strategy for the peoples' relocation, a strategy considered inappropriate for independent Ghana by the combined professional and patriotic fervor of town planners and architects⁵¹. Wedded with pan-Ghanaian energies and developmentalism, the assumption that resettlement was a fitting opportunity to introduce social and economic changes created fertile terrain for far-fetched 'experimentation' in housing design, township conception and agricultural planning. The approximation to village life through the design of regionalist housing forms however, would be ironically obscured by the standards set during the Tema Manhean resettlement. Though the latter's conception had been rooted in an anti-urban idea, the quality of its communal services would be the premise for all resettlement towns resulting from the merging of small hamlets into larger model settlements.



[fig. 10] **Core housing and model towns**

The 'core' or 'nuclear' house was composed of one-roomed landcrete structures to be successively extended by self-help. It formed the basis for the radical restructuring of the Ghanaian territory, bearing the promises of grafting an 'urban style' upon a prominently agricultural landscape and with scarce consideration for cultural specificities.

[Source: Robert CHAMBERS, 1970, 174; 192]

A standardized core housing design declined along three typological lines was identified as the key to the operation's success: by dislocating self-help to the back end of the relocation process planners legitimized prefabrication and placed agency within clear-cut and retroactive boundaries. Performing experiments along regionalist lines became, in the words of Laszlo Huszar, "futile" because "a planner can give physical expression to the social and economic environment, but cannot create it. Since all the settlers in the many new townships live in similar houses, and all of them engage in the same kind of agriculture without regard to their particular tradition or experience, an attempt on the planner's part to recreate traditional patterns becomes meaningless formalism"⁵². The nature of experimentation with respect to the professional's role therefore, appeared to have swerved. Some environmental preconceptions persisted nonetheless, in many ways related to the prominence given to 'outdoor living', which made shelter less essential, and verandahs fundamental⁵³.

51 For the promotion of self-help as both a strategy for resettlement and overall housing policy for the newly-independent country, see PREPARATORY COMMISSION, Vol. II, 65-135; Charles ABRAMS et al., 62-63; Otto H. KOENIGSBERGER, 1957, 181.; Robert CHAMBERS, "Introduction" in *The Volta Resettlement Experience*, ed. Robert CHAMBERS (New York/ London: Praeger, 1970), 10-33.

52 Laszlo HUSZAR, "Resettlement Planning", in *The Volta Resettlement Experience*, ed. Robert CHAMBERS, op. cit., 148-163.

53 Echoing several similar statements expressed in handbooks and reports by colonial officers and technical assistance experts, Laszlo HUSZAR would claim that "housing is not as high a priority in the tropics as it is in temperate climate" [Laszlo HUSZAR, op. cit., 162].

Coda: Grounding knowledge in Bui City

The planning of resettlement towns by the VRA, the Ministry of Housing and the Town Planning Department of the Ghanaian government was consistently supported by personnel from the University of Science and Technology (later KNUST) in Kumasi⁵⁴. The planners involved combined teaching activities with resettlement planning, often relying on students to perform evaluation surveys and present improvement hypotheses. Such responsibilities became crucial for the re-configuration of the School of Architecture's curriculum, when the regard for cultural identity and tradition came to follow a less utilitarian approach, following rather a more essential cultural one. This was reflected in the organization of the first postgraduate urban planning course in West Africa, within which the territory's indigenous settlement structures were extensively surveyed and documented. Several 'Occasional Reports' produced in-house were to form the backbone of a vigorous mapping process which would reflect the variety and range of dwelling cultures and settlement typologies found throughout the country, precisely those differences that the VRP resettlement had neglected because of repeated delays, lack of resources and confidence in self-help⁵⁵.

The re-discovery of the Ghanaian territory in its pluralism and diversity however, did not leave its mark on the local university's curriculum only, but fed back into the work of researchers from the metropole such as Paul Oliver and Labelle Prussin who shortly after their African experience would advocate for a more culturally-sensitive reading of the built environment as a driver of development⁵⁶. To which extent this concern still weighs on their work is provided by a recent contribution by Oliver himself, where his work within the VRP resettlements is taken as a starting point for an increasing consciousness vis-à-vis the problems of the ethics of intervention, especially in cases involving 'emergency' methods⁵⁷. A measure of how much this awareness has remained rooted in Ghana itself could potentially be provided by examining the interventions which continue to feed on the promises of dam[ned] urbanism, such as the case of Bui City⁵⁸, re-launched at the turn of this century after initiatives had been silenced by Nkrumah's demise and the growing consciousness of the disturbing results deriving from the massive VRP relocation. In 2007, under the responsibility of Chinese company SinoHydro, the almost century-old proposal has left the drawing boards and a 114 meter RCC dam should be realized by 2012 about

54 Staffed mainly by non-Ghanaians in its first decades of existence, hosting workshops by Buckminster Fuller, lectures by Otto H. Koenigsberger and guidance by Paul Oliver, the higher education institution advised on both what was known as 'Area Planning' and dwelling conception. In the 1960s, research fellows from Germany and Hungary such as Hannah Shreckenbach and Karoly Polanyi would begin to decrease the prominence of British staff. For an account of the AA Tropical Architecture School's involvement in the KNUST's curriculum building see Patrick WAKELY "The Development of a School: An Account of the Department of Development and Tropical Studies of the Architectural Association, 1953-72" in *Habitat International*, 7 no. 5/6, (1983).

55 For an account of this experience see Charles K. POLONYI, *An Architect-Planner on the Peripheries: Case Studies from the Less Developed World*. The retrospective diary of Charles K. Polonyi (Budapest: Lázsló Horváth, 1992), 51-75. For the reports produced see, for example: Kumasi Study. Report on the Postgraduate Urban Planning Course given by B.T. Fewings and C.K. Polonyi – Occasional Report No. 7, (Kumasi: Faculty of Architecture, University of Science and Technology, 1966) ; Tamale/Kumbungu Survey – Occasional Report No.12, (Kumasi: Faculty of Architecture, University of Science and Technology, 1969); Anyako: Studies of an Ewe Village – Occasional Report No.14, (Kumasi: Department of Architecture, University of Science and Technology, 1971).

56 Paul OLIVER, ed. *Shelter in Africa* (London: Barrie and Jenkins, 1971); Labelle PRUSSIN, *Architecture in Northern Ghana: a study of forms and functions* (Berkeley: University of California Press, 1969).

57 Paul OLIVER, *Built to Meet Needs: Cultural Issues in Vernacular Architecture*, (Oxford: Architectural Press, 2006) 401-403. By the same author see also "Perfecting for Needs: Vernacular Architecture in Education", *Habitat International*, no. 5/6 (7) (1983), 377-383.

58 The Australian geologist E.A. Kitson did not limit his 1915 proposal to the dam in Akosombo, but had in fact imagined a second hydro-electric project along the Black Volta further north. Its realization depended largely upon the financial support of development agencies and foreign enterprise, and Ghana's declared non-alignment was kept alive by referring to Eastern as well as Western promises of support. Proposals for Bui were thus set forth by both experts from the AA/ KNUST, as well as by foreign engineering firms as the feasibility studies by J.S. Zhuk Hydroproject from the USSR (1966), Snowy Mountains Eng. Corp. from Australia (1976) and Coyne et Bellier of France (1955) demonstrate. See also David BUTCHER and Laszlo HUSZAR, *Bui Resettlement Study: a Report for the Ministry of Fuel and Power* (Kumasi: University of Science and Technology, 1966).

300 miles upstream of Akosombo⁵⁹. The sensational announcement that a world-class city ‘the likes of Dubai’ would complement the infrastructural intervention has engendered curiosity and expectations on many levels, momentarily obscuring the dubious objectives behind the dam’s construction⁶⁰. Though claims of relying on an ‘experimental’ approach are absent from the official planning documents produced to date, Bui Dam and City set an equally significant challenge to the administrators and designers of contemporary Ghana, where the dangers of relying on the ‘mono-culture’ of hydro-electric power and foreign expertise have already been proven. The consistent involvement of professionals from the KNUST, as had been originally anticipated, carried the significant promise of local ownership over the project and the consequent challenge of conceiving more context-specific solutions bearing the cumbersome weight of previous resettlement experiences. Nonetheless, initial plans for the novel settlement to be realized at the site of the new dam exude exogenous developmentalism, while the opportunity of relying on local practitioners has been recently placed under threat⁶¹.



[fig. 11] *Bui Dam and New Town* Cultural and lake recreation, tourist facilities and theme parks are suggested as main development drivers for a new city expected to host between 500,000 and 1 million inhabitants.

[Source: SinoHydro & Chinese Academy of Urban Design and Planning, Preliminary Consulting Service for Bui City, 2008]

In 1971 Thomas Blair asked: “Africa can become a crucial laboratory of a new science/art policy of urban and rural planning. The question is what will it be? How can it be less than a philosophy and method allied to the desires of emerging populations for social reconstruction [...] and whose inter-disciplinary practitioners feel impelled not only to understand, plan or replan industrialising urban socio-economic systems but to radically change them where necessary?”⁶² In stating that the KNUST could “use Bui City as a laboratory for students and faculty members”⁶³ it is hoped that the eventual research performed will be grounded in the innumerable signs of the VRP’s socio-spatial re-appropriation and Blair’s question can begin to be answered.

59 The Bui Hydropower Project in the Brong Ahafo region is financed by loans from the Import-Export Bank of China, with a total investment amounting to USD \$600 million. SinoHydro, the Chinese contractor involved in the project’s implementation, was also one of the main contractors on the Three Gorges Dam in China. With a designed generation capacity of 400 MW, the Bui Hydropower Station is the second largest in the country, built under the slogan of turning Ghana from a power importer to a power exporter. With a record of 80 large-scale water management projects in Africa alone, SinoHydro is responsible for interventions such as the Sasumu Dam Rehabilitation Project in Kenya and the Djiploho Hydropower Project in Equatorial Guinea, ranking high in the list of international contractors..

60 The emergence of massive dam projects around the globe is giving rise to fears of irreversible damage to the pristine natural resources and the cultural heritage of river peoples. In Bui the environmental, social and economical stakes are considerably high, since as a result of the new dam a fourth of the national park upon which it currently sits will be flooded and more than 1000 people will be displaced. Moreover, doubts exist about the impact a third dam will have on the efficiency of the main hydro-electric power station in Akosombo. Overall, the Bui project involves the resettlement of eight communities in three parts (A,B and C), to “new resettlement townships with communal facilities” supported by a Livelihood Enhancement Program that will “restore lost economic activities and improve living standards in project affected areas” [Bui Power Authority, 2010].

61 Vice Chancellor’s State of the University Address (Kumasi: KNUST, 24th March 2010) 40.

62 Thomas BLAIR, “Shelter in Urbanising and Industrialising Africa” in Shelter in Africa, op. cit., 238.

63 Vice Chancellor’s State of the University Address (Kumasi: KNUST, 24th March 2010) 40.

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