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Smith, Harry; Jenkins, Paul

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Harry Smith (corresponding author)
Reader
Centre for Environment & Human Settlements,
Centre of Excellence in Sustainable Building Design,
School of the Built Environment,
Heriot-Watt University
Edinburgh EH14 4AS, United Kingdom
h.c.smith@hw.ac.uk
Tel: +44 (0)131 451 4616

Paul Jenkins
Professor / Head of School
School of Architecture & Planning,
University of the Witwatersrand, Private bag 3, Wits 2050
Johannesburg, South Africa
paul.jenkins@wits.ac.za

Highlights

- The paper reports on collaborative trans-disciplinary development of urban strategies

- Traditional land use planning is limited in weak institutional contexts in Sub-Saharan Africa

- Trans-disciplinarity can achieve more impact than traditional masterplanning in such contexts

- Trans-disciplinarity can link research and practice in appropriate forms of knowledge exchange

Trans-disciplinary research and strategic urban expansion planning in a context of weak institutional capacity: case study of Huambo, Angola[1]

Abstract

Increasingly online public access to satellite imagery and the development of qualitative GIS have, in principle, the potential to provide action- and strategic planning approaches with more economical spatial information to monitor and plan physical urban transformation. This is of particular use in rapidly urbanising contexts in the global South, where lack of resources prompted the development of rapid and participatory urban appraisal techniques since the 1990s. However, in such contexts weak institutional capacity, unclear responsibilities and poor integration among key actors may still be major barriers to effective decision-making and implementation of strategic land use plans. In addition, as most urban expansion is driven by popular demand, understanding the nature of this demand has to be the basis for effective supply of urban land etc. This means exploring change in important core social and cultural values, as well as participatory engagement with key stakeholders on immediate and mid-term strategic objectives.

This paper reflects on the experience of an Urban Development Priority Action Strategy being developed for the city of Huambo, Angola, by the city administration in partnership with local NGO DW (Development Workshop), with support from a European academic institution, the Centre for Environment & Human Settlements (CEHS). This initiative seeks to embed trans-disciplinarity in a meaningful manner at the local level to permit the identification and implementation of a realistic set of priority actions. This paper reports on the type of information and understanding that is generated through this approach, as well as on the *de facto* constraints and boundaries that are created by the relationships between the key stakeholders, their capacities and interests. It also illustrates the more immediate and short-term results that can be achieved through this approach in comparison with traditional masterplanning approaches – including key stakeholder engagement with identified actions and proposal of new organizational and financial models for urban land development and management – as well as highlighting the advantages of mutual knowledge exchange between praxis and research.

Keywords

Key word; Trans-disciplinarity; Urban strategies; Knowledge exchange; Institutional capacity; Angola

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[1] Abbreviations used: Centre for Environment & Human Settlements (CEHS); DW (Development Workshop); DEPTUA (Provincial Government's Planning Department); INOTU (Instituto Nacional de Ordenamento do Território e Urbanismo – National Institute for Territorial Planning); ROTUA (Repartição do Ordenamento do Território, Urbanismo e Ambiente – Municipal Department of Planning and Environment).

Introduction

In 2013 the Centre for Environment & Human Settlements (CEHS) at Heriot-Watt University, UK, was invited CEHS to assist Angolan-based NGO Development Workshop (DW) in identifying key physical areas and sectoral issues in the current rapid urban development of the city of Huambo, Angola, thus permitting the NGO to develop an emerging partnership with the City Administration, focused on selection and design of priority urban interventions based on partnership working, as well as to engage other interested and relevant stakeholder organisations. This collaboration was developed in the context of a long-standing relationship between CEHS and DW, whereby for over a decade the former has provided strategic analysis and planning of urban activities undertaken by DW; urban land and planning research and advocacy vis-à-vis legislation and government policy, strategy and practice; advice and training on informal and social housing activities; and partnership arrangements for scaling up impact. In this particular collaboration full engagement with the City Administration of Huambo was considered essential in order to elicit information on urban development trends and governance, identify the potential for meaningful strategic action and establish mechanisms within the City Administration to implement the identified strategies. This approach thus is embedded within a long-term approach to knowledge exchange between researchers and practitioners on strategic urban development in Angola.

Huambo is a second-tier city in central Angola, in size far behind the primacy of the capital city Luanda, but growing fast nevertheless, reflecting the rapid urban growth that is taking place across the country.[2] Despite some moves towards decentralisation since the end of civil war in 2002, local government in Angola remains very limited in its powers and weak in terms of capacity. Huambo was particularly badly affected by over 25 years of civil war, during which the city was taken and retaken by the two warring factions – the People's Movement for the Liberation of Angola (MPLA) and the National Union for the Total Independence of Angola (UNITA). The city was subjected to several periods of intense siege and bombardment, and witnessed both depopulation and inflow of internally displaced people due to the fighting. By the end of the war, the city was not only extremely damaged physically but also bereft of institutional capacity, and politically on the 'wrong' side, as it was at that point still perceived as a UNITA stronghold.

Ten years after the end of the war, external consultants were commissioned to prepare a Municipal Master Plan to guide future development of the city. By 2013 this master plan was on deposit with central government, but lack of opportunity for involvement of the City Administration in the process of the master plan preparation and approval, and uncertainty over when (and if) such a plan may be approved, contributed to a situation in which it was necessary for the local administration to identify actions it could take to manage ongoing urban growth.

A 'traditional' planning approach would require the collection of extensive data and its interpretation by the relevant professional experts (planners, economists, housing experts, etc.) with inputs from identified stakeholders – something specifically ignored by the masterplanners. In a context of weak institutional capacity, and of very limited sets of conventional 'data' and resources to conduct primary data collection, what innovative approaches to local planning and design could improve the quality of urban life? What are the 'state of the art' tools for collaborative spatial planning that would be relevant to such a context? How can uncertainty be accommodated in local design processes and

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[2] In the absence of any national census for some four decades, estimates put Luanda population at perhaps 6 million, and Huambo at around 1 million.

practices? It was obvious to the partners in this project that an alternative approach was not only more appropriate but also necessary. This drew on practices developed through participatory and rapid urban appraisal as well as action-planning, but also on a proactive trans-disciplinary approach to the generation, interpretation and exchange of knowledge.

This paper first describes the characteristics of a trans-disciplinary approach. It sets out key arguments supporting the relevance of such approach in urban management in the contexts of rapid urbanisation and weak institutional capacity that are so prevalent in Sub-Saharan Africa, drawing on the growing literature on trans-disciplinarity. It then describes the process that was followed in Huambo, and presents the key findings and strategic actions that were identified through such process. The paper concludes with a reflection on the potential results of this trans-disciplinary approach in comparison with a traditional masterplanning approach, and on the scope for such trans-disciplinary approaches elsewhere. The paper thus aims both to contribute to the academic debate on trans-disciplinarity, and to explore the practical issues involved in its implementation and its potential impact in urban development practice. Its conclusions on transdisciplinary research should be of interest to researchers more generally, and its implications for urban planning and management are relevant to urban development practitioners, particularly those working in contexts of weak institutional capacity.

The relevance of trans-disciplinarity to urban studies and action in contexts of rapid urbanisation and weak institutional capacity

Trans-disciplinarity as a concept has been around since the 1970s, but there is no consensus on its meaning (Balsiger, 2004; Lawrence & Després, 2004). However, Lawrence & Després (2004) identify several characteristics as forms of definition: (1) it tackles complexity in science and knowledge fragmentation, addressing complex domains; (2) it accepts local context and uncertainty, thus becoming a context-specific negotiation of knowledge; (3) it implies intercommunicative action, thus requiring continuous collaboration between trans-disciplinary research and practice; and (4) it is action-oriented, so requires linkages not only across disciplines but also between theory and professional practice including between researchers and practitioners. Much of this is encapsulated in Thompson Klein's description of trans-disciplinarity as "a generative form of communicative action that is context-specific" (cited in Lawerence & Després, 2004, p. 403). In the field of urban planning this resonates with interpretations of Habermas's concept of 'communicative action' in Healey's promotion of 'intercommunicative planning' (Healey, 1997) and Forester's exploration of deliberative practices and collaborative planning to overcome conflict (Forester, 2009).

Ramadier (2004) argues that trans-disciplinarity therefore goes beyond multi-disciplinarity and inter-disciplinarity. According to Ramadier (2004, p. 433), 'multi-disciplinarity and inter-disciplinarity do not break with disciplinary thinking', the latter being based on approaching the complexity of reality through simplification and focus on a specific aspect. In Ramadier's view, multi-disciplinary approaches juxtapose theoretical models from different disciplines, taking parts from each model – this highlights the different dimensions of the object of study, with different disciplines been considered as complementary in its understanding. Inter-disciplinarity, on the other hand, aims to construct a common model often adapting concepts from one (or more) disciplines to others. A key limitation of both approaches according to Ramadier (2004) is that they both avoid paradoxes and therefore remain fragmented (i.e. still anchored in disciplines). Trans-diciplinarity, however, recognises the superposition of realities and tries to confront them, i.e. it specifically focuses on complexity with the paradoxes this brings, and aims to reach an articulation of the understandings of

such complexity rather than seek consensus, which in the case of inter-disciplinarity often leads to seeking the lowest common denominator among disciplines. This understanding of trans-disciplinarity is shown in diagrammatic form in Figure 1
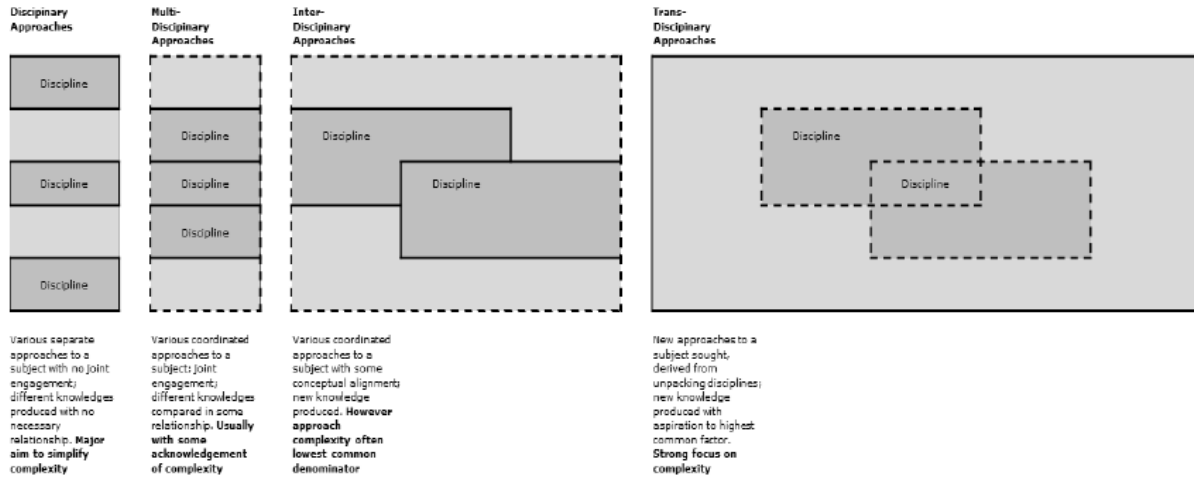
Figure 1. Diagrammatic explanation of trans-disciplinarity

Trans-disciplinarity has emerged as part of the drive to understand complexity. According to Pinson (2004), with its focus on the complexity of the city, urban planning emerged as an inter-disciplinary endeavour in the late 19th century, and the increasing focus on the city within other disciplines (geography, sociology, etc) in the latter part of the 20th century has provided concepts and tools that have contributed to urban planning becoming a 'multi-disciplinary discipline'. This suggests the need for multi-disciplinary teams in urban planning, but Pinson proposes that adoption of a trans-disciplinary approach by individual urban planners is required, although this does not exclude specialization at the same time.

This paper argues that such trans-disciplinary approach is, if anything, even more necessary when it comes to understanding and addressing the issues in cities in the rapidly urbanising world, such as in Sub-Saharan Africa, where the social, cultural, economic, environmental and physical contexts are very different from those in the post-industrial urbanised 'North' where the 'multi-disciplinary discipline' of urban planning developed (Jenkins, 2013). This to an extent has already been advocated – though not specifically using the term 'trans-disciplinarity' – in approaches such as action-planning and action-research.

Action-planning takes an approach that is problem-driven, participatory, fast, adaptive and incremental (Hamdi & Goethert, 1997). It enables relevant forms of planning – and importantly also implementation – to take place despite the limitations of weak institutional capacity. Addressing such limitations in development capacity more fundamentally would normally require longer term institutional reform and investment, which is often hindered by structural and political factors, and which can hold back responding to the immediate challenges of rapid urban growth and development (see e.g. Jenkins & Smith, 2001; Grindle, 1996). Action-planning allows the circumvention of such institutional constraints by working with existing resources and valuing various forms of knowledge. It thus displays the key features of trans-disciplinarity summarised by Lawrence & Després (2004) seen above. From a practitioner perspective, Hamdi (2004, p. xxii) calls for 'a kind of knowing [that]

is less normative, less easy to standardize in its routines and procedures, less tolerant of data-hungry study, and less reliant on statistics or systems analysis. … in favour of informed improvisations, practical wisdom, integrated thinking and good judgement based on a shared sense of justice and equity, and on common sense'.

Action-research has a long pedigree now, with even a dedicated peer reviewed journal. Its relevance to transdisciplinary research is evident in Lawrence & Després (2004) fourth characteristic set out earlier: being action-oriented. Action-research has been used in the field of urban development 'to engage with the key actors from the beginning and use the research process itself as a tool to this end, with a view to affecting policy as it is formed' (Jenkins & Smith, 2004, p. 32). This again involves both valuing different forms of knowledge and involving the holders of such knowledge in the research process. While this paper reports on activity that can be seen as action-research, it focuses on the need to cross disciplinary boundaries in the approach.

The rest of this paper presents and discusses the experience of the identification of urban trends and strategies to deal with these in the city of Huambo in 2013, drawing on the approaches of trans-diciplinarity and action-planning.

The process of research and formulation of strategies in Huambo

The main objective of the project was to identify key physical areas and sectoral issues in the current rapid urban development of the city, permitting DW, in conjunction with the City Administration, to select and design priority urban interventions based on partnership working. This involved addressing a wide range of issues, to gain an understanding of the complex context of urban growth in Huambo. The range of issues identified as requiring attention at the outset included the following: (1) trends in physical expansion of the city, and the different rationales behind these trends (demographic change/projection, land occupation trends and nature of housing development); (2) formal plans which exist and are planned for the city (at different scales), and the implementing/financing and monitoring mechanisms for these (including analysis of institutional responsibilities and capacities); (3) key planned investments within the peri-urban area and city region (infrastructure, residential, industrial, commercial etc); (4) legal and regulatory framework for peri-urban land development (land rights, institutional responsibilities, implementation difficulties, options/alternatives for improvements); (5) actual peri-urban development supports (i.e. access mechanisms to land, infrastructure, finance, materials etc); (6) *de facto* socio-cultural drivers of peri-urban development; and (7) attitudes across 'formal' and 'informal' sectors to current trends and aspirations for future development.

The data collection approach that was proposed to gather information on these issues included a range of methods which are well established in urban planning and urban studies research, including document review, satellite image analysis, physical surveys (at macro and micro scales, i.e. from urban region down to neighbourhood level), questionnaires, semi-structured interviews, and ethnographic techniques. Initial primary data was collected during the first half of 2013, with an intensive period of fieldwork led by YYY in June. This data collection was approached as a scoping study, with more extensive surveys and some aspects such as ethnography being proposed as a subsequent more detailed study. This range of methods and techniques (from different disciplines) could have provided the basis for a multi-disciplinary approach that simply set the results from each

disciplinary method side by side. However, a trans-disciplinary approach was taken in contrasting the different realities that emerged from the data that was collected, sometimes resulting in specific issues not being resolved, but providing a rich understanding of the forces at work in the growth of the city of Huambo, as well as a practical basis for the proposal of strategies.

A case in point was identification of the size of the city. Roof counts undertaken using satellite imagery and household size profiling by DW suggested a total population in the order of 300,000, while detailed population counts submitted annually by traditional neighbourhood leaders (*sobas*) indicated a total of around 1.5 million in the urban commune of Huambo (excluding the two rural communes that also form part of the Municipality of Huambo). Questioning of these two sources of data identified the use of an outdated typical household size in roof count exercises (requiring new household profiling based on fieldwork) as well as the probability that population returns from neighbourhood leaders may be skewed by the expectation of resources allocated according to population size of each neighbourhood. Resolution of the identification of size was postponed until the results of the first census to be carried out in independent Angola become available in 2014, but this did not hinder gaining an understanding of the order of magnitude of the city's population, or proposing strategies to manage urban growth. Furthermore, contrasting these different 'measures' of reality allowed the team to identify the need for updating of assumptions used in data analysis within DW's research unit, as well as to gain further understanding of the role of *sobas* and the influences on their practices.

Context-specific negotiation of knowledge and intercommunicative action, as identified by Lawrence & Després (2004) – see previous section – were a strong component in the process of data collection and analysis, as well as in the formulation of strategies. This was put into practice through continuous discussions with NGO and City Administration staff of the emerging data from the different methods cited above, as well as using such discussions to make explicit the knowledge of trends and administrative/governance structures that the partners had not only as professionals but also as inhabitants of the city and members of society, drawing on experiential and tacit knowledge. Discussions in the joint team office that was set up for the project were complemented by recognisance/transect trips to a wide range of peri-urban areas of the city and city-region by the CEHS team together with DW staff, as well as by 'shadowing' of staff from the Municipal Department of Planning and Environment (Repartição do Ordenamento do Território, Urbanismo e Ambiente – ROTUA) on their field visits (mainly to deal with requests for planning permission).

The 'action-orientation' of the approach underpinned the successful attempt to gain strong stakeholder engagement from those with capacity to implement the strategies that would emerge from the exercise. Though it was envisaged initially that a wide range of stakeholders would be involved, limitations in budget and time dictated a targeted approach during the time the CEHS team was involved in the fieldwork during June 2013, to be followed up by wider stakeholder engagement through an Urban Forum, which was one of the strategic proposals that resulted from the project – see below. This targeted approach succeeded in gaining full involvement from the Municipality of Huambo, with direct engagement and support from the City Administrator as well as from the Director and staff at ROTUA, and support and advice from the Vice-Governor of the Province. This was in sharp contrast to the process and resulting situation with the Master Plan for the City of Huambo, developed through a more traditional and much less participatory process to which we return in the next section.

Key findings

Urban trends

At the city-region level, a circular rural/urban migration exists, linked to daily and seasonal movements connected to work and use of services, with population in the rural areas surrounding Huambo on the whole remaining relatively stable. Though there is some rural-urban migration from the region and beyond, the bulk of population growth, which is quite rapid, is based on natural growth. Overall city size is probably in the region of 1 million, though estimates vary greatly as discussed earlier. In terms of physical growth there is an axis of emerging development between Huambo and the town of Kaala, 20 kilometres to the West. Most of the area officially designated as 'urban' ('foral', as classified during the Portuguese colonial period), is occupied by unplanned peri-urban areas, though there are also around 15 planned layouts for urban expansion which are not yet fully occupied. In addition the national government has promoted the construction of 'new centralities', as part of a national housing programme – mostly turn-key housing projects which are distant from the city and not yet inhabited (Figure 2).

Figure 2. 'New centrality' under construction in 2013 near Huambo

At the city and neighbourhood level, 20% of the urban area is taken up by the formal colonial city, with the remaining 80% being peri-urban areas. These are undergoing two processes: urban expansion, partly planned; and densification, generally unplanned and uncontrolled. Most of the peri-urban areas are taken up by 'informal' housing, with some (also 'informal') commercial activity and schools, and little in the way of amenities such as parks, sports, etc. (Figure 3). Though density of peri-urban areas is still generally relatively low[3] (with some exceptions), two densification processes

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[3] I.e. up to or around 100 inhabitants/hectare.

are occurring at a relatively fast pace: increasing building on open spaces within plots; and occupation of open space within less consolidated areas (Figure 4). Physical expansion is taking place mainly along transport corridors where there are good connections and/or access to infrastructure, as well as around certain nodes such as markets and educational facilities. Infrastructure (especially water and sanitation) is very weak, with piped water supply existing mostly in the 'formal' city, while the rest is supplied by boreholes and wells, and sanitation in peri-urban areas being dealt with through latrines and some on-plot septic tanks, with the concomitant risk of water supply contamination. Formal electrical supply through pre-paid meters is spreading, though many illegal connections to the power supply still exist. Consolidated access roads are scarce, and storm water drainage is practically inexistent in peri-urban areas. There is increasing environmental risk of erosion, though not of flooding given that city development has followed ridges rather than valleys. However, 'informal' areas are spreading into the bottom of valleys and gullies, occupying hazardous areas (Figure 5).

Figure 3. Typical older consolidated informal peri-urban area in Huambo

At the level of individual plots and households, there is an observable evolution from rural-type construction and plot occupation, based on separate buildings spread out within large fenced plots with little functional specialisation, to more urban versions of this typology continuing the tradition of separate buildings but within tighter plots occupied by several households. The final step in this evolution (so far) is rectangular plots with a main 'modern' house and additional annexes that may be occupied by relatives or rented out (Figure 6). This physical evolution accompanies tendencies towards decreasing household size, plot subdivision, increasing provision of rental accommodation, and increasing density of land occupation by buildings. There were some indications also of incipient vertical densification in some areas.

Figure 4. Scope for densification in informal peri-urban area, Huambo

Figure 5. Informal settlement in vulnerable valley location, Huambo

Figure 6. 'Modern' house typology under construction in Huambo

Administrative structure

The Municipality of Huambo is geographically divided into three communes, the central one of these being the actual city of Huambo. This in turn is subdivided into neighbourhoods, which are clustered into several 'Neighbourhood Administrations' for governance purposes. Neighbourhood residents are represented by traditional leaders (*sobas*), who are supported by secretaries and '*seculos*'. The sobas provide a link between neighbourhood residents and the city administration through participating in fortnightly meetings with the relevant Neighbourhoods Administrator. Currently elected, as opposed to the traditionally inherited role, the power of sobas is diminishing, but they are still the key figure that people go to when needing some form of state bureaucracy – such as land allocations to be witnessed, which is an important step also in getting land tenure formally recognised by the Municipality.

In terms of land management, several state organisations have a role: the Municipal Administration is legally responsible for authorising occupation of, and building on, plots of up to 1000 m2, with this responsibility being charged to ROTUA. In peri-urban areas the *soba* liaises with the Neighbourhood Administration, which in turn communicates with the Municipality. ROTUA's capacity, however, is very limited, with only 11 members of staff of which less than half are trained in areas relevant to urban management and planning and only two have higher level education (architects – but with no urban management training). Though ROTUA gets involved in preparing some plot layout plans (with external help due to its limited capacity), there are other state organisations that also get involved in land management including: the provincial delegation of the National Institute for Territorial Planning (Instituto Nacional de Ordenamento do Território e Urbanismo – INOTU), which prepares layout plans on request; and the Provincial Government's Planning Department (DEPTUA), which is legally in charge of approving plots between 1000 and 5000 m2, as well as all land reserved under the

national plan for housing and other uses of national importance (*reservas fundiarias*). There is therefore some overlap and confusion over land management roles of these different organisations, as well as a lack of overview.

This situation has parallels in land use planning. The current planning law specifies a cascade of plans from national to local level, but the preparation and implementation of these in practice is unclear. Municipalities are expected to have a master plan (Plano Director), which in the case of Huambo has been prepared by external consultants commissioned by the Provincial Government. At the time of the research the Plano Director was deposited with central government in Luanda awaiting approval, but the Municipality did not have any copy of it, and had been only minimally consulted during its preparation (Governo Provincial do Huambo, 2011b) – though the research team was able to gain access to copies of the plan and analyse it (which it passed on to the municipality). Responsibility for planning of expansion areas within the municipality has been a grey area, as there was uncertainty within ROTUA as to where this responsibility lies. There was an understanding that if INOTU prepared a plan for an area, this would have to be then approved by the Municipality, but in practice this usually did not happen, generating subsequent confusion over land management – in particular the allocation (and often hidden sale) of the land.[4] In addition, certain institutions (e.g. higher education and defence entities) controlled large areas of land which were previously outside, but now within the urban area with urban expansion – a situation that did not help towards integrated land management within the city. The need for better coordination among the actors involved in land use planning and management became obvious during the research.

Strategies

The uncertainty over the status of the Plano Director for Huambo, the extremely limited input from the Municipality to it and lack of 'ownership' – and the highly conventional 'top-down' content of this master plan, which focused on large infrastructure (such as transport, including proposed ring roads) and the formal city, practically ignoring the issues affecting the peri-urban areas (Governo Provincial do Huambo, 2011a, 2011c) – all reinforced the need for the formulation of urban strategies that the Municipality could take forward, mainly through ROTUA, in order to improve management of the rapid growth Huambo is experiencing. These strategies were drafted as part of the ongoing analysis of data during the fieldwork period in June 2013, being an integral part of the discussions between the partners. During the process, leadership on the project was intentionally and gradually transferred from the research team to the partner that would be responsible for implementation of the strategies, ROTUA, which presented the proposed strategies to the Provincial Government. The latter responded with support, positive feedback and recommendations as to how to seek funding for the proposals.

Drawing on the action-oriented aspects of the trans-disciplinary approach taken, and using the knowledge generated by this approach, the strategies focused on practical ways forward to address the administrative and organisational issues identified, as well as specific physical urban planning and land management proposals.

In organisational terms, key strategies proposed included the following:

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[4] Land is Angola was nationalised soon after Independence and most land is considered to belong to the state – for the benefit of the people. However an active land market exists with all participating – including state entities, as in other post-Socialist Sub-Saharan Africa countries (see Jenkins 2013).

- Creation of technical support units at the neighbourhood level in order to facilitate urban management (land occupation and use, buildings and densification) at the local level. This is envisaged to take pressure off current higher level ROTUA staff so as to enable them to focus on strategic issues – i.e. be proactive instead of the current reactive stance which swamps the limited higher level technical capacity. Potential human resources for these units were identified within the existing administration of the neighbourhoods, which would be in turn supported and overseen by the intake of new mid-level technical staff at ROTUA. Training would need to be provided for both the administrative and technical staff within these new units – something that DW is well placed to provide.
- Creation of a Forum on Urban Development for the City of Huambo, chaired and hosted by the Provincial Government with technical support from DW, which would provide opportunities for knowledge exchange and eventually, it is hoped, better coordination among the key actors involved in the development of the city.
- Creation of a land bank as a partnership between the Municipality of Huambo and other interested actors, which would use proceeds from land development as a revolving fund to support managed expansion of the city. This would capture at least part of the increase in land value for wider social use (provision of infrastructures, etc), as well as avoid the drain of locally-generated revenues to the central government's treasury (which would still collect taxes – at a substantially higher rate).
- Creation of a cadastre to register urban land (at the moment the land registration system is very weak) with technical support from DW, continuing work that was already underway on this issue. This would strengthen the municipality's capacity to manage urban land. It was proposed that following completion of training, the cadastre would be built up incrementally, using the physical development opportunities described below as part of that process, with the final aim of achieving a complete cadastre of the city on a neighbourhood basis.

Another set of key strategies focused on physical aspects, including:
- Identification of areas at risk from the point of view of urban management. A methodology was developed and agreed to identify such areas considered to be at risk – whether related to unplanned development or through densification. Mapping these areas would help identify areas for upgrading and for land development (see below).
- Identification of areas for short-term urban expansion led by the Municipality. The research identified the fact that there are areas of land still within a short distance from the city centre and with good conditions for development in terms of accessibility, topography, etc. It was proposed that the Municipality should take a lead in developing these in order to avoid unplanned land invasion and to 'capture' the increase in land value to provide basic infrastructures and services as well as to finance subsequent land development projects on a rolling basis, using the land bank mechanism proposed above. The proposals included two specific areas of land which had been identified as suitable for this purpose during the research, belonging to higher education entities linked to forestry and agriculture, with which the Provincial Government agreed to negotiate.[5]
- Neighbourhood upgrading projects (with minimum intervention). It was proposed that low- and medium-density informal peri-urban areas be identified for the implementation of such projects,

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[5] In the colonial period, as the central government envisaged moving the country's capital to Huambo (for a period named 'New Lisbon' – *Nova Lisboa*), a number of faculties of the national university were located in the city – with large areas of land allocated in the periphery. This trend continues with the university once again being allocated an enormous area of land to the southwest of current expansion in the Plano Director – without clear indication of potential use – i.e. rather speculatively.

starting with two pilot projects and also making use of the land bank as a funding mechanism. A draft set of 'values' guiding development principles in such projects (as well as in the day-to-day dealing with land management issues by the neighbourhood technical units described above), was prepared in collaboration with ROTUA, going beyond established norms and rethinking the underlying reasons for technical requirements such as set-backs, etc.

- Planning from valley and gulley bottoms upwards. As a result of the city having been planned along ridges, although valley bottoms are officially designated as 'non-developable' land, these are being invaded by constructions in hazardous conditions. The proposed strategy to address this was to plan from the valley upwards in new layouts, dealing appropriately with drainage and erosion control, so as to reduce and manage risk in the occupation of valley bottoms. Two pilot projects for such strategy were also proposed.

- Preparation of a plan for the protection of built and natural heritage in the city. The formal city of Huambo contains a wealth of built heritage from the first half of the 20th century, from the initial colonial constructions to Modernist architecture from the 1950s and 60s.[6] This, combined with the government's current intention for Huambo to become the 'ecological capital' of Angola, provides a basis for the development of a tourist industry that would help boost the economy. A plan for protection of both built and natural heritage was thus seen as providing support for this aspect of the city's economic development.

The urban strategies set out above were agreed by the key partners involved, and the Municipality of Huambo took ownership of these. Linked to the strategies was an agreed list of actions and specific responsibilities for each of these in order to ensure such strategies are put into practice – again a different approach from that taken in the Plano Director with its abstract intentions and large budget projections.

Conclusion: Benefits of the trans-disciplinary approach

So how does this experience compare with Lawrence & Després's (2004) definitions of trans-disciplinarity? The approach taken had by necessity to firstly tackle the complexity of the object of study (and action), and do so in a way that crossed over between disciplinary approaches and forms of understanding. If comparison is made with the approach taken in the Plano Director, the latter was multi-disciplinary in the sense that it collated types of data relevant to different disciplines (demography, economics, etc.); but treated these separately, without analysing the mutual influences.

Secondly, the approach in this strategic exercise also accepted the local context and relatively high degree of uncertainty (e.g. population size, grey areas of administrative responsibility, unclear funding etc.), and made context-specific on-going negotiation of knowledge a key part of its methodological approach by making continuous discussion among the partners a linchpin of the project and its continuation (e.g. the Urban Forum). Again, comparing with the Plano Director, this eschewed complex situations that were not immediately 'analysable' using the established methods from these disciplines (e.g. ignoring any quantification of population and economic activity in the peri-urban areas), which led the master plan to in effect 'negate' the need for proposals addressing the real and dominant presence of peri-urban Huambo. On the contrary, the project reported here specifically focused on the prevalent context (peri-urban areas, which constitute 80% of the land area of the city) and on understanding the dynamic processes taking place in these.

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[6] Heavily influenced by Brazilian modernism.

Thirdly, the project also embraced intercommunicative action, through the constant dialogue between researchers and practitioners leading to joint production of new knowledge (a far cry from the bottom-down approach taken in preparing the Plano Director), and in doing so also ensured that it was action-oriented, with key partners in the process being policymakers and practitioners, which could therefore provide guidance on the feasibility of proposals that were formulated.

This approach in itself has already yielded practical benefits in the form of strengthened ties between some of the key actors (specifically DW, the Municipality and the Provincial Government), who share the newly generated knowledge and have 'ownership' of the resulting strategies, with the potential for improved coordination among and with other actors yet to be realised. It has also opened up prospects for ROTUA which had not previously been contemplated, in terms of organisational arrangements (especially partnerships and widening middle-level technical capacities), funding (with closer proposed planning with Provincial government), and scope for intervention in the development of the city (becoming more proactive rather than reactive). In this sense, the classic divide between research and practice was averted.

In the six months following the fieldwork and collaborative formulation of urban strategies, discussions around the creation of the Urban Forum progressed among the local partners, with great interest from the Provincial Government in chairing this, and the land register was steadily built up through collaboration between DW and the City Administration. Strategies requiring sourcing of finance and changing organisational structures (e.g. pilot projects and creation of technical support units at the neighbourhood level) had not yet started to be implemented due to the time these processes take and other pressures on Municipality staff time. Nevertheless, these developments are already in themselves more than what has been achieved in Huambo by the multidisciplinary masterplan prepared in 2011, which is still awaiting approval at the time of writing in early 2014.

The degree to which the proposed strategies will be successfully implemented in the longer term is as yet an unknown, and follow-up monitoring will be needed to ascertain what impact the approach may have had, but the trans-disciplinary and action-planning approach taken from the beginning of this experience has established a new basis for collaboration, which will facilitate such monitoring. As such, the experience so far suggests that trans-disciplinary approaches are indeed extremely relevant, and possibly essential, to our practical understanding of urban development in Sub-Saharan Africa and to providing a basis for action. In this, CEHS follows a long tradition of 'hands-on' agency in urban development by professionals (sometimes termed 'insurgency planning' or 'spatial agency'), but has deliberately couched the intervention as a form of trans-disciplinary activity within the academic frame, in itself a form of both 'reflection in practice' and practice-based research. In this, as noted in the introduction, this form of activity reflects a long-term commitment to exchanging knowledge between actors (e.g. government institutions and non-governmental organisations – as well as residents), reflecting the belief no one form of knowledge should be seen as having precedence *per se*.

As argued in Jenkins (2013), where the 'formal' institutional context is weak (as is widespread in Sub-Saharan African urban areas), the so-called 'informal' institutional context needs to be factored in – and indeed be recognised as the most important factor in urban development. The authors argue here that engaging with these complex forms of knowledge exchange requires more nuanced engagements in land use planning which can be best generated through trans-disciplinary approaches, and not only in situations of institutional weakness such as Angola.

References

Balsiger, P.W. (2004). Supradisciplinary research practices: history, objectives and rationale. *Futures, 36*, 407-421.

Governo Provincial do Huambo. (2011a). *Plano Director Municipal do Huambo, Comunas de Chipipa e Calima: Vol. 1 Caracterização e diagnóstico, Tomo 1.1 Recolha, análise de dados e diagnóstico preliminar*. Governo Provincial do Huambo: Huambo.

Governo Provincial do Huambo. (2011b). *Plano Director Municipal do Huambo, Comunas de Chipipa e Calima: Vol. 1 Caracterização e diagnóstico, Tomo 1.2 Diagnóstico participativo e técnico*. Governo Provincial do Huambo: Huambo.

Governo Provincial do Huambo. (2011c). *Plano Director Municipal do Huambo, Comunas de Chipipa e Calima: Vol. 1 Caracterização e diagnóstico, Tomo 1.3 Estratégia do Plano*. Governo Provincial do Huambo: Huambo.

Grindle, M.S. (1996). *Challenging the State. Crisis and Innovation in Latin America and Africa*. Cambridge: Cambridge University Press.

Forester, J. (1999). *The Deliberative Practitioner: Encouraging Participatory Planning Processes*. Cambridge MA & London: The MIT Press.

Forester, J. (2009). *Dealing with Differences: Dramas of Mediating Public Disputes*. Oxford & New York: Oxford University Press.

Hamdi, N. (2004). *Small Change: About the art of practice and the limits of planning in cities*. London: Earthscan.

Hamdi, N. & Goethert, R. (1997). *Action Planning for Cities: A Guide to Community Practice*. Chichester: John Wiley & Sons.

Healey, P. (1996). The communicative turn in spatial planning theory and its implications for spatial strategy formulation. *Environment and Planning B: Planning and Design*, 23, 217-34.

Healey, P. (1997). *Collaborative Planning: Shaping Places in Fragmented Societies*. London: Macmillan.

Healey, P. (1999). Institutionalist analysis, communicative planning and shaping places. *Journal of Planning Education and Research*, 19, 111-22.

Jenkins, P. (2013). *Urbanization, urbanism and urbanity in an African city : home spaces and house cultures*. New York : Palgrave MacMillan

Jenkins, P. & Smith, H. (2001). An Institutional Approach to Analysis of State Capacity in Housing Systems in the Developing World: Case Studies in South Africa and Costa Rica. *Habitat International*, 16, 485-507.

Jenkins, P. & Smith, H. (2004). Collaborative approaches to knowledge development : Action research in urban land issues in Mozambique and Angola. *International Development Planning Review*, 26, 25-45.

Lawrence, R.J. & Després, C. (2004). Introduction: Futures of Transdisciplinarity. *Futures*, *36*, 297-405.

Pinson, D. (2004). Urban planning: a 'undisciplined' discipline? *Futures*, *36*, 503-513.

Thompson Klein, J. (2004). Prospects for transdisciplinarity, *Futures*, 36, 515-526.

Ramadier, T. (2004). Transdisciplinarity and its challenges: the case of urban studies. *Futures*, *36*, 423-439.