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IHS THESIS SERIES

Disseminating information to a wider audience is important to IHS. For a long time the execution of research activities and publications by IHS staff and their partners has been a key point on the IHS agenda: research is one of the three main services provided by the institution. Research is used to develop knowledge in thematic areas, and to spread knowledge and to profile IHS in markets abroad.

The IHS Research Committee (formerly known as the IHS Editorial Board) has, over the years, taken a role in promoting internal publications by staff and partners and in disseminating information, in the form of occasional papers, project papers, working papers, articles and reprint series to our clients.

The environment in which IHS currently finds itself offers an expanded number of opportunities to publish. A new Master's course in Urban Management was set up by the Institute for Housing and Urban Development Studies (IHS) in cooperation with Erasmus University Rotterdam (EUR) in 2003, to meet the challenges of a changing market. Being embedded in the research activities within EUR and with the redesign and accreditation of IHS's new Master's programme, the amount of research and publications within the institute is increasing.

To promote, disseminate and strengthen the publication of the theses developed within our Master's programme and to provide an internal and external forum for the discussion of issues in the fields of urban and regional management and development, the IHS Research Committee publishes the publication series called the IHS Thesis Series.

One of the aims of this series is to help the participants of the Master in Urban Management and Development (UMD) programme make their research and final work accessible to a wider audience. It also contributes to the development of IHS's academic knowledge base by providing theoretically and empirically informed analyses of the changes affecting the urban and regional conditions in developing countries, as well as in developed nations.

In this fifth issue, we present a selection of the theses of the UMD Master's programme: 2009-2011 (UMD 6 and UMD 7). We also include a number of unpublished theses from previous years.

In the back of this publication a CD-ROM is enclosed which contains the full, unedited versions of the selected theses.

UMD 6
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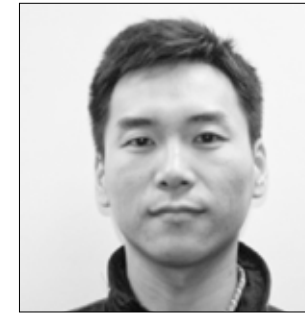
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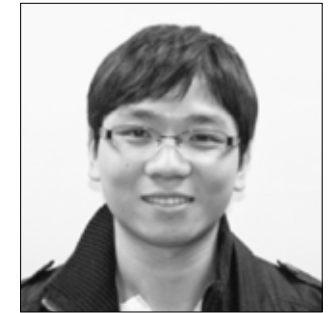
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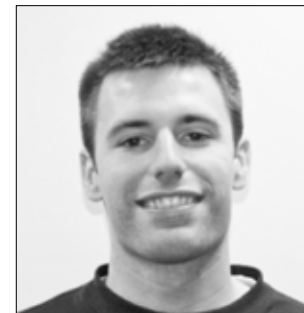
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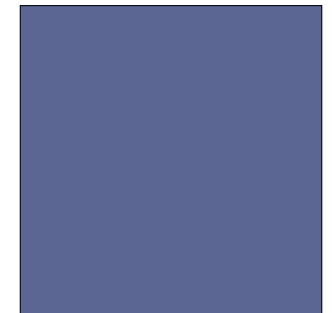
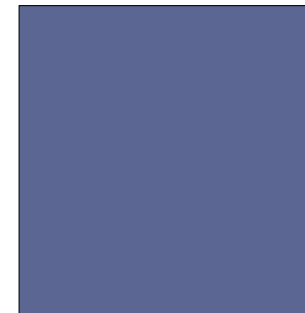
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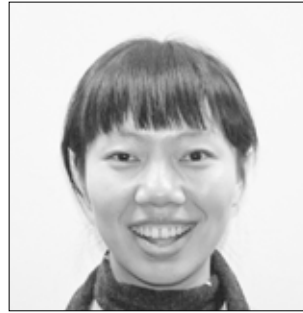
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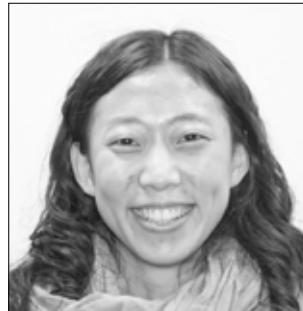
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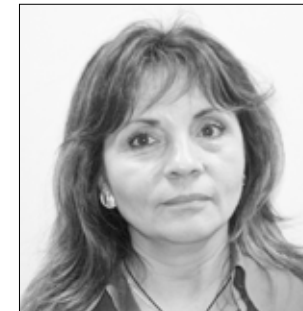
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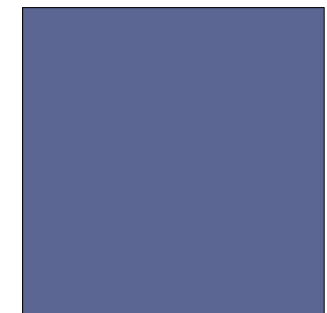
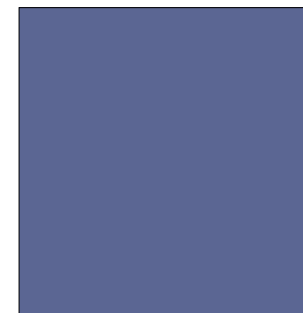


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SUMMARY 1

The Development of Social Cohesion in Public Housing

A Study of a Flat Housing Project in Sukaramai, Medan, Indonesia

Author Ferri Ichsan

Country Indonesia

Supervisors Wim Blauw, PhD (EUR) Ir. Suryanto (MSP)

The thesis examines factors that influence social cohesion in a project that provides low-to middle-income families with housing. The programme is sponsored by the Government of Indonesia in cooperation with PERUMNAS (Indonesian National Housing Corporation). Unfortunately, this housing has been losing quality. The project is a response to a general decline in the quality of the environment of the housing of the area and in nearby RUSUN Sukaramai Medan. Social problems in the neighbourhood further contribute to the declining condition of the housing. In particular, a general lack of private space and the intensive use of common facilities seem to constantly cause conflicts among the tenants. Furthermore the situation seems to be more volatile because of the different ethnic backgrounds of the tenants. These differences are often the spark for such problems, which escalate, thereby disrupting the community and hence reducing community solidarity.

Social cohesion as a concept addresses the rapid and radical changes that have been having a negative impact on the mechanisms that cement a community. Social cohesion in this respect helps to create a sense of belonging, trust and security and encourages a situation that supports a willingness to enhance the living conditions necessary to promote a stable, co-operative and sustainable community.

Identifying the various factors that influence social cohesion in these social housing flats is necessary to enhance the concept itself, as well as to help formulate a better public housing policy. Taking social cohesion into consideration means one develops a more comprehensive understanding of how investment in neighbourhoods and communities creates integration and cohesion, especially where resources are limited.

It is evident from the study that the level of social cohesion within each neighbourhood of the housing flat estate in RUSUN Sukaramai varies significantly. However, the study offers an initial indication of the various social and physical factors in each neighbourhood that tend to have an influence on social cohesion. Place attachment, functional social support at

that location and civic activities are the aspects of social cohesion that vary most between the different neighbourhoods in the estate, while tolerance of diversity is likely to be negligible among neighbourhoods.

The most dominant factor in terms of the physical environment of the estate that affects social cohesion is place attachment. Several aspects such as dwelling type, the general housing conditions, the infrastructure of the neighbourhood, home components, room size and quality of rooms show a strong correlation to the attachment to place. Equally important in this context is the condition of the neighbourhood in terms of how quiet and safe it is. A high degree of these two aspects correlates to a high level of place attachment. Social deprivation is linked to the level of job satisfaction and financial problems, both of which also have a bearing on social cohesion in relation to place attachment. Those who are more satisfied with their jobs and who are not undergoing financial difficulties tend to have a high degree of attachment to place. In terms of social support, the dwelling type and job satisfaction are significant. The way in which the flats are configured, either as vertical row housing with 28 dwelling units on each floor or as flats with a mushroom shape that have only four dwelling units on each floor, seems to influence the level of social support, with the former tending to receive more support.

Involving tenants in housing management increases social cohesion in relation to civic activities and tolerating diversity. An improvement in the extent to which tenants tolerate diversity occurs when the degree of victimization in the neighbourhoods can be minimized and also by improving tenants' occupation by encouraging them to become more involved in the formal sector. There are other factors, apart from aspects of physical environment in the housing estate and the conditions of the neighbourhood, which also have a bearing on social cohesion. One of these factors, which is quite significant, is the social conditions of the residents themselves. The study suggests that the level of education also plays a role in how place attachment interacts with the various aspects of the housing conditions. Household types have a clear effect on the correlations between tolerating diversity and being involved in housing management.

SUMMARY 2

The Role of Public Art in the Urban Environment

A Case Study of Mural Art in Yogyakarta City, Indonesia

Author Teguh Setiawan

Country Indonesia

Supervisor Ir. Bakti Setiawan, MA, PhD (MPKDUGM, Gadjah Mada University)

Mansee Bal, MSc (IHS)

The mural art project in Yogyakarta City offers a unique example of the role that public art can play in an urban setting. This artist-initiated project involves a variety of community groups. However, no policy on public art in urban environment yet exists in Indonesia. Nevertheless, the literature remains inconclusive about how public art can benefit both the urban environment and citizens at the same time. In-depth information does not exist on how public art can improve the quality of the urban environment, especially in the local context of Yogyakarta City, since little research on this subject has been conducted in the field of urban management.

This research aims to explore the impact of public art on the urban environment within the context of Yogyakarta City. The main research question is: How does public art affect the urban environment in Yogyakarta City? To answer this question, firstly 'What is public art?' needs to be defined; and following on from that 'How do citizens perceive the public art and its impact on the urban environment?' Citizen participation in public art and the prospect of public art in the urban context are then discussed. The conceptual model developed from the literature covers public art, urban environment, perception, participation and the prospect of public art in an urban context.

The research shows that the impacts of public art in the urban environment are multidimensional. The perceived benefits of public art, whether in physical, social or cultural contexts, suggest that public art is very prominent in creating liveability and sustainability within the city. However, further critical studies on public art are still needed to really understand the functional and artistic aspects of public art in the context of the urban environment.

SUMMARY 3

The Impact of Organizational Culture and Balance of Power on a Public-Third Sector Partnership (PTSP)

Author Veronica Olivotto
Country Italy
Supervisor Alberto Gianoli, PhD (IHS)

Partnerships, a form of contractual collaboration for service delivery, have existed for many years, and many scholars have looked into their virtues and drawbacks. On paper, partnerships seem to be the best option for service delivery in today's cities. The main reason for this being to maximize efficiencies by identifying stakeholders' comparative advantages and harnessing key resources needed to achieve objectives that may be lacking or inadequately developed in one actor's individual competencies.

The rhetoric around partnerships, however, may exceed expectations. Experience shows that severe problems can occur at any stage of a project but that the most crucial stage is the initial phase in which demands and objectives are agreed upon. The cultural baggage and (vested) interests (the human aspect) is vital at the negotiation stage of partnerships and they represent a major threat to the success.

Another very important aspect that influences the workings of a partnership is the organizational culture of the stakeholders involved. Although every partnership entails a certain degree of adaptation between different cultures, the risk of cultural incompatibility is still very high and often degenerates in organizational barriers that are not easy to resolve. Existing power relations are bound to define organizations and how they work, because important decisions involve an allocation of scarce resources, and scarcity in organizations encourages political behaviour. Politics involves the exercise of power to get something done, as well as to enhance and protect the vested interests of individual stakeholders.

This thesis investigates the impact of both organizational culture and power on the workings of a Public-Third Sector Partnership (PTSPs) operating in a suburban town of Milan (Italy). The partnership aims to improve the social cohesion between local and migrant families and ameliorate the quality of health and housing services in the area. The thesis limits itself to an analysis of the feasibility study. PTSPs are increasing thanks to the growing significance of Third Sector Organizations as key agents for social delivery within

'the mixed economy of welfare', hence resulting in more competition among Third Sector Organizations to tap into local governments funds.

The study develops multiple analysis frameworks to investigate the impact of culture and power on the outcomes of the feasibility study. One framework consists of two survey tools: Cameron and Quinn's (1984) Competing Values Framework to understand the dominant organizational culture traits of each partner, and the Degree of Knowledge Sharing, although more experimental, looks at the balance of power as an expression of stakeholders' divergent interests. Hilslop (2005) suggests various degrees of knowledge sharing determines whether an organization positively or negatively contributes to organizational performance. A reluctance to share knowledge may be due to the willingness to use power to pursue interests that are in conflict with those of the organization. Therefore, high knowledge sharing in one organization indicates that the balance of power is appropriate to promote organizational performance. In other words, the probability of a conflict of interests is in a linear relationship with the knowledge-sharing index that this study utilizes.

The second framework mapped the findings of the first on to a Relationship Matrix, which expresses the roles and responsibilities of each stakeholder in relation to the partnership's operational model. This model emphasizes the critical decision-making points of the partnership (or Critical Value Point). The cvps are matched with the areas where the previous framework detects a potential cultural conflict or a low Degree of Knowledge Sharing (these areas are called Critical Divergence Points). By using knowledge sharing as a complementary variable and by adding control statements to check for conflicting interests, the study reveals that a stakeholder – a voluntary organization – becomes marginalized and virtually exorcized from cooperating with the other partners. It is accused of wanting to use the partnership's budget to finance collateral projects.

When compared with the pre-feasibility study, which set as a goal of partnership governance the cooperation of stakeholders on multiple initiatives, such incidents compromise the outcome of the final feasibility study. The voluntary organization has the lowest knowledge-sharing index of all partners, confirming the linear relationship between the potential for a conflict of interest and the level of informal processes inherent in the organization. That organization's predominant 'Clan culture' seems to be at the root of the problem.

A collectivist culture, contrary to an individualistic one (for example a Market-oriented one) does not encourage people to be inquisitive about when and why knowledge sharing situations may turn out to be advantageous. A Clan culture, in fact, is a closed culture where, for instance, employees prefer face-to-face meetings and are less likely to use an impersonal medium such as the Internet, leading to constraints in acquiring knowledge from outside the group. This finding also validates why this research explores culture within a partnership. On one hand, because they look inwards, Clan cultures often do not realize the effectiveness of knowledge sharing in partnerships, though paradoxically among their peers knowledge sharing is 'the normal way', as long as it serves their own organizational goals. On the other hand, because cohesion and allegiance are so prominent, if the market turns somewhere else a Clan culture (that according to Cameron and Quinn's dimensions is

high on flexibility and internal unity) would follow it without question. Empirical evidence suggests that very collaborative cultures often do not see the problem in diverging from the partnership's mission because in their organization they are used to diverge and adapt to the changing market at all times. That is why the conflict of interest becomes so clear with the voluntary organization and why cooperation with other stakeholders is undermined.

This study suggests that there is a link between the symptoms, expressed as the degree of knowledge-sharing, and the root cause, or the organizational culture. It indicates that the most effective way to address organizational barriers in a PTSP is to devise and prioritize interventions according to the root-causes and not the symptoms, because the latter depend on the former. It suggests that the partnership's managers should strive for transparency, hence minimizing the informal space of Clan cultures. Finally, at the partnership's inception a 'common culture' programme needs to be set up to limit the opportunities for conflicts between stakeholders and to reduce the probability of a partnership's collapse as a result of cultural clashes. All members of a partnership must be willing to accept change with executives from each organization leading cultural alignment.

SUMMARY 4

Land Sharing Experience in Kathmandu

The Case of Sankhamul Squatter Settlement, Nepal

Author Yatra Sharma

Country Nepal

supervisor Paul Ewoud Rabé, PhD

This study looks into a squatter upgrading programme financed by the government of Nepal, which focuses on land sharing in Sankhamul, a squatter settlement located on public land along the banks of the Bagmati River in Kathmandu. This land sharing project stems from an initiative of a local NGO working with squatters called Lumanti. It is in favour of a 'land sharing' project in Sankhamul to provide secure housing tenure to the squatter inhabitants. The idea being to share the land among owners and occupants, using part of it for formal housing for squatters and the rest for development by the government. It is seen as a win-win strategy whereby both stakeholders retain the use of the land. Unfortunately, both the government and the squatters have rejected the scheme, despite the considerable planning and long negotiations that went into it.

This study considers the abandonment of the proposed land sharing project as a major problem and examines the reasons behind the failure. In doing so, the research aims to assess whether land sharing is an appropriate tool in the context and consequently recommends measures for the future of land sharing as a policy tool for squatter upgrading in the country.

The study identifies six prerequisites necessary for successful implementation of a land sharing project. It then goes on to evaluate if these preconditions represent opportunities or constraints in the case of Sankhamul. The findings show that three of the preconditions are actually constraints: the proposal was technically not feasible; the role of the intermediary was not effective; and due to the lack of fear of eviction, community consensus did not favour the implementation of land sharing. The study also explores whether the stakeholders consider any other upgrading tools to be more relevant than land sharing in their context and it indeed reveals that on-site upgrading is believed to be more appropriate than land sharing in Sankhamul by the stakeholders. The results point out that the reasons behind the abandonment of the project may be due to the absence of the three essential preconditions and the inappropriateness of the land sharing tool in this context.

Therefore, land sharing appears to be a wrong approach in this particular case.

The research also indicates some of the unique preconditions for land sharing in this case. This is clarified in this paper and contributes to the literature for future reference on land sharing. The thesis also discusses the possible scenarios for upgrading the Sankhamul squatter settlement, and also makes recommendations for the future of land sharing as a squatter upgrading tool in Nepal.

SUMMARY 5

He Kâinga Hou ki te Hau Kâinga

A Housing Development on Multiple-Owned Ancestral Land in a High-Growth Area of New Zealand

Author Brigid Te Ao McCallum Livesey

Country New Zealand

Supervisors Carlos Morales-Schechinger, MPhil (IHS)

Many owners of multiple-owned ancestral Māori land want to build housing on their land, but difficulties in the allocation process mean that relatively few developments are realized. Some difficulties result from the nature of Māori land tenure under the Māori Land Act of 1993, which aims to balance the protection and development of Māori land. Others relate to government policies and the demands of the market environment. The desire to build housing on Māori land reflects a social and cultural connection to the land, as well as problems with increasingly unaffordable housing for the indigenous Māori and general population in the growing cities of Aotearoa/New Zealand.

This thesis explores how owners of Māori land develop housing on their land, how property development concepts apply to these developments, and the effect of government policies on the viability of housing development on Māori land. The research documents two case studies in the western Bay of Plenty, New Zealand, where owners of Māori land have taken up the challenge to develop housing on their land for their people. These developments are compared with two housing developments held in general (non-Māori) title. The research finds that the interpretation of concepts such as return, risk and timing are very different in developments on Māori land than in developments on general land. Stated social and cultural objectives for development combined with a goal to provide affordable housing suggest that the two housing developments on Māori land could be considered 'not-for-profit'. This suggestion is supported by the developments' reliance on government funding and similarities with other not-for-profit housing models on collectively-owned land.

Government policies aim to encourage housing development on Māori land through various policies including funding, targeted land-use planning and capability support. These policies differ in their effect on supporting owners of Māori land to meet the costs of development and to develop their land as papakāinga. Central government provides funding for development, but there is uncertainty about whether local government will

act to reduce the costs of development that are within their control, such as Development Impact Fees.

This research suggests that developing housing on multiple-owned ancestral land is possible in a market environment, but that developments will operate differently for housing developments on general land. Currently government policies attempt to address these differences with varying levels of success. It is apparent that in high-growth areas, housing development of a not-for-profit nature on Māori land contributes to local government objectives of accommodating population growth and central government objectives of improving access to affordable housing. However, provisions in the Māori Land Act that protect land by restricting alienation and requiring extensive consultation with multiple owners complicate housing development on Māori land. Owners of Māori land must also resolve the tension between 'development for today' and 'protection for tomorrow'. These two case studies of housing development on Māori land illustrate that the protection and development of Māori land are not exclusive. The thesis concludes that in order to encourage more housing on Māori land, there is a critical need to balance the protective mechanisms of the Māori Land Act with targeted government policies that increase the viability of housing development on Māori land, where this fits with owners' aspirations.

SUMMARY 6

The Influence of Land Value on the Profitability of Low-Income Housing Projects on the Periphery of Lima

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Supervisor Carlos Morales-Schechinger, MPhil (IHS)

The real estate sector in Peru, especially for housing projects in Lima over the past decade, shows significant growth. The Peruvian government is a key stakeholder in this effort, being responsible for the implementation of two important housing programmes: *Mivivienda* which targets the middle class and *Techo Propio* which is for low-income groups. *Mivivienda* is one of the most successful programmes of the government not only because the demand has increased greatly but also the supply of new dwellings. However, for *Techo Propio* there is still a significant imbalance: although housing demand continues to rise, there are nevertheless fewer housing projects catering for poor people, despite the availability of large subsidies to finance and stimulate construction. Developers seem to prefer to develop *Mivivienda* projects. The effective demand for low-income housing of more than a quarter of million dwellings in Lima alone is in stark contrast to the supply which is about a hundredth of that. The first step towards understanding this conundrum is that the problem does not concern subsidies. Some empirical evidence suggests that the scarcity of serviced land in Lima and other economic and social factors may be important issues.

This research uses financial analysis from the point of view of the supply side. It investigates the influence of land on the total profit obtained by developers from social housing projects that are subsidized by government. As quantitative and exploratory research, the study includes case studies (eight projects) of the *Techo Propio* Peruvian social housing programme. The focus of this thesis is the peripheral area of Lima covering the period 2001 to 2010. The main research question explores whether a land strategy (to buy a plot and bide one's time until the price increases without any further investment) leads to a greater profit than working on a housing project, which involves cash flow (and risk) arising from the effort to build and sell houses.

A discounted cash flow analysis as a financial tool to explore the profitability of each project represents the main methodology of this research. Raw data mainly comes from

interviews with developers and an examination of the files of the public institution that promotes the programme. Key performance indicators for the comparison between the case studies include unitary net present value (NPV per square meter of plot invested) and the return on investment (ROI: NPV per dollar invested). The methodology is complemented with some qualitative and sensitivity analysis.

Using the selected indicators, the findings show that only three projects out of eight have greater unitary net present value because of land than because of the project itself. Three projects show a loss, and in two of them land was the reason. Return on investment shows five of the eight projects having greater profitability because of land than because of the projects themselves. In general, the return on investment better defines the benefits generated from the land strategy than net present value per square meter.

Following the comparison between the projects using the key performance indicators, simple descriptive statistics and the sensitivity analysis for a typical *Techo Propio* project, there are conflicting results between projects. This finding makes it impossible to come to a definitive conclusion regarding the main research question. Nevertheless, this research has proved in some way, based mainly on the results of indicators and on some qualitative information, that *Techo Propio* faces many constraints in making it a profitable proposition for private developers, and it is much less successful than *Mivivienda*. A land strategy based only on buying a plot of land and biding one's time for the price of land to increase is no longer applicable to Lima. A land strategy needs a number of partners, private developers, banks, landowners and central and local government to employ some of the modalities of plot acquisition, such as a real estate investment trust. For developers a land strategy may also include an optimum floor area ratio and mixed uses, and for the government the design of some instruments for land value capture.

Finally, this research contributes to a better understanding of the *Techo Propio* as a social housing programme especially from the perspective of private developers. Issues such as to why there are so few projects and dwellings of this type built in Lima, why the profitability is marginal or even negative, and why in some cases the land contributes significantly to the total profit. Although the results of the quantitative analysis are rather inconclusive it is evident that *Techo Propio* is not profitable enough for developers.

SUMMARY 7

Factors Contributing to the Failure of Development-Induced Resettlement Projects

A Case Study of the Sahaspura Slum Relocation Project, Colombo, Sri Lanka

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Rapid urbanization, lack of adequate affordable housing and lack of a pro-active approach to development contribute to the proliferation of slums in most cities in the world. In Sri Lanka Colombo, the commercial capital of the country, has the highest demand for land and housing. The Sustainable Township Programme (STP) aims to address the housing issue of the urban poor through voluntary relocation and resettlement into compact townships. The STP utilizes six compact townships within Colombo. The Sahaspura Slum Relocation project represents the first phase of Sahaspura Compact Township under this programme. The objectives of this project are to resettle slum dwellers occupying several slum gardens in Colombo in apartment complexes and utilize the liberated land for urban redevelopment.

Initially 651 families relocated to Sahaspura with 161 families refusing to do so. Following resettlement around 100-150 families decided to sell their project houses to generate funds to purchase a house in the suburbs or to return to their original settlements. This resulted in no land becoming free for commercial development and ultimately undermining the entire resettlement development objectives of the project.

The main research objective aims to identify the factors leading to the rejection of the Sahaspura slum relocation project by the target group. Furthermore it aims to point to factors necessary for the improvement of slum dwellers lives so that resettlement indeed results in beneficial development. In particular the research focuses on those factors that draw to and keep slum dwellers in their original settlements. It also examines the way in which the planning and implementation of the project occurs and identifies how the perceived changes of living in high-rise housing may affect the lives of the target group. The subject of this study, the Sahaspura resettlement project is presented and a holistic case study and research instruments include a target group survey, focus group discussions and interviews.

The research findings indicate that the livelihood assets of the target group forms the basis for any decisions they make. The main reason to refuse resettlement or to sell out remains the perceived and experienced effects of the resettlement. These are influenced by the inability to obtain basic services, tenure issues, the social disruption caused in every aspect of their lives, the loss of income opportunities and dissatisfaction with the level of compensation on offer. The study also shows that there are certain aspects of a project's implementation that have to change to make the target population more receptive to such projects. Therefore, the Sahaspura slum relocation project's failure to achieve its objectives is because the resettlement process did not address the effects of the relocation on the social fabric of the affected community and other associated socioeconomic issues relating to livelihood opportunities.

Ensuring that social disruption does not occur together with incorporating the restoration of livelihood activities are the key factors to guarantee the success of development-induced slum relocation projects. A participatory approach throughout the process reflecting the aspirations of the target group will contribute towards ensuring the project and its compensation packages are presented in a more acceptable fashion to the target group. An appropriate institutional framework, including adequate legislation, is of utmost importance for the successful implementation of slum relocation projects that protect the rights of the target group while at the same time achieving national development objectives.

SUMMARY 8

The Nature of Resistance and Conflicts in the Compulsory Land Acquisition Process in Tanzania

The Case of the Expansion of the Julius Nyerere International Airport Project at Kipawa Area in Dar es Salaam

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Compulsory land acquisition is one of the most challenging questions in land management. Landowners are against it as they usually lose their land against their will. The issue of the compensation payable in respect to the acquisition is also a contentious issue. Although several measures exist for authorities to improve the compensation package, the affected land owners usually remain dissatisfied. In fact, land acquisition raises a number of criticisms and leads to conflict between the land owners or occupiers and the acquiring authority.

The objective of this research is to identify appropriate compulsory land acquisition solutions in resolving conflict between the acquiring authorities and land owners/occupiers. This study explores the land acquisition practice in Tanzania, with special reference to the Julius Nyerere International Airport expansion project in the Kipawa area. The researcher's interest in this case stems from a wish to gain an insight and understanding into what factors cause such conflicts, in this case one going back more than ten years.

The research examines the stages of the compulsory land acquisition process. This process adheres to a theoretical model following FAO guidelines (2008) that describe the acquisition process as having seven steps. The model also outlines seven implementation steps for successful compulsory land acquisitions. The seven steps are: planning; publicity and notification; valuation and submission of claims; payment of compensation; possession; appeals; and restitution

The research assesses the applicability of the theoretical model together with the perceptions of affected land owners and the public authorities acquiring the land. However, these guidelines are rather general and have a rural and peri-urban focus and have adjustments to cater for the urban focus of this research.

The research explores those factors that contribute to conflict in the seven steps of the compulsory land acquisition process. Data collection includes semi-structured and

structured questionnaires by means of focus group discussions, and interviews with affected landowners, government officials, experts, NGOs and local leaders.

The results show that the major factor that influences the conflict is the poor planning of the project, which leads to delays in the payment of compensation and also delays the start of the project. There are poor budget estimates lacking any clear time framework. This finding confirms that the problem stems from the initial step of the compulsory land acquisition process. However, affected land owners perceive the seven steps to be good but they argue that proper implementation requires participation to improve the process. Therefore, the research recommends that various strategies be implemented to reduce conflicts during compulsory land acquisition. These strategies include: proper planning of compulsory land acquisition projects; clear laws and regulations governing land acquisition processes; capacity building on the legal framework for the affected land owners; transparency in valuation exercises; fair compensation amounts; and effective participation of the affected land owners in all the stages of the compulsory land acquisition process.

Finally, the findings of this thesis suggest that further research on how the seven steps of the land acquisition process comply with the legal framework pertaining to compulsory land acquisition in Tanzania is necessary. In addition further research should look into how laws and regulations need to incorporate the rights of tenants and other vulnerable groups that may have a direct or indirect right to the land in question so that they receive some assistance during relocation or resettlement.

SUMMARY 9

Impacts of Development-Induced Displacement on Households' Livelihoods

Experience of People from Kurasini, Tanzania

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In many developing countries population displacement because of development projects is a prominent issue in urban settings. Population displacement due to development projects poses one of the major challenges facing governments in developing countries because displaced people are not resettled and rehabilitated. The main method many governments employ when dealing with population displacement is the payment of cash compensation. Scholars and donor organizations agree that cash compensation has limitations in terms of the capacity to improve and/or restore the livelihood of displaced households.

The Kurasini Redevelopment Plan, started by the Tanzanian government in 2006, aims to allow the provision of land to expand the port of Dar es Salaam. The project involves the displacement of people living in the informal settlements of Kurasini. Cash compensation payments to the affected displaced households are the main driving force of the project. The Land Policy provides for full, fair and prompt compensation to affected people when land is acquired for public interests, but the policy mentions nothing about resettlement and rehabilitation of displaced people.

This research is an exploratory case study that seeks to discover the experienced impacts of displacement on households' livelihoods and whether the policies that focus on cash compensation sufficiently prevent impoverishment. The research includes a comparative study between non-displaced households living in Kurasini and displaced households living in Vijibweni, Dar es Salaam.

The research methodology includes 32 in-depth interviews and two focus group discussions among women in each community. In addition interviews with government officials provide key information.

The research findings reveal that there are various socioeconomic impacts affecting the households. A significant difference in household income between the two groups exists. The non-displaced households earn between 100,000 and 400,000 Tanzania shillings

and the displaced households earn between 75,000 and 300,000 Tanzania shillings. The displaced households rely on a single-income source. Multiple-income sources exist in non-displaced households, including small businesses, wage employment and income from rent. Many households' members generate income in Kurasini and all contribute to the household's income. In Vijibweni household heads, mainly men, are the only income earners. Although all displaced households purchased land and constructed houses, only two reached completion and 15 remain semi-finished. Compensation money finds different uses, including: buying land, construction, education costs, funeral costs, accommodation, transport costs and buying food. Compensation payments do not enable displaced households to improve their livelihood. No rehabilitation measures or livelihood reestablishments are part of the government policy for displaced households.

To accomplish the goal of livelihood improvement the government needs to draw up a budget for livelihood reestablishment, amend the policy to accommodate resettlement and rehabilitation, provide entrepreneurship skills to involve key stakeholders, provide technical advice to displaced households, conduct an assessment to identify the needs of households and of various groups including women and children, and consider other forms of compensation.

SUMMARY 10

Community Participation in Neighbourhood Energy Retrofits

The Case of Güzelyalı Neighbourhood, Izmir, Turkey

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This thesis assesses the effects of a new European Directive, which the Government of Turkey adopted in December 2009 and that promotes the improvement of the energy efficiency of the building stock (for both old and new buildings). The approach is promising as it focuses on the existing built environment and it is a new and desired approach. To date, the regulations generally tend to concentrate on new construction, which is also crucial and inevitable, however, the fact remains that the majority of the existing built environment continues to function unsustainably. Therefore, regulation is an important step, although it is not sufficient to achieve sustainable development. The present structure and the methods of operation of the national and local authorities are insufficient to generate sustainable and positive outcomes for energy efficiency in the existing building stock. This is not due to a lack of technology or know-how, since these are available widely and worldwide. However, energy retrofitting is still a big challenge for Turkey as well as for many other countries.

The development of new technologies is a feature of the last few decades. Today, energy retrofitting, which refers to improving the existing buildings with energy efficiency equipment, requires new and innovative approaches and appropriate attention to social aspects. Community participation is an important component in realizing retrofits due to the fact that energy retrofits will be feasible, adequate and easy if the community is involved. Community participation increases the chances of understanding the local context, helps to address fundamentals, it overcomes resistance and smoothes the implementation of necessary measures. Technical solutions alone cannot generate solutions. Communities, by participating, can see the benefits and contribute positively to the final outcome.

This research aims to investigate how communities can participate in neighbourhood energy retrofits. Community participation is often not part of an overall programme but is sometimes included as an afterthought. The new and innovative retrofitting approach

needs to look into integrating the concept into the process, which includes an analysis of the different elements. Therefore, the first objective in this study is to explore these elements that lead to the development of a framework for community participation in neighbourhood energy retrofits. Later, the research analyses the potentials and limitations for a selected area located in the Güzelyalı neighbourhood of Izmir.

Izmir, with its unique context, is an important case for the role of the community in local environmental planning and management. The selection of Güzelyalı to conduct the fieldwork for this research arises from it being one of the better-off neighbourhoods in Izmir and from its social context and the existence of established community networks. The focus is on an in-depth study in a pilot area within the borders of the Güzelyalı neighbourhood.

The study includes a review of relevant literature by looking into different concepts for community participation in neighbourhood energy retrofits. The study then analyses the potentials and limitations from different perspectives, including those of the community, local government, non-governmental organizations and community-based organizations using in-depth interviews in the selected pilot area of Güzelyalı.

The results cover the following aspects: institutional environment, community capacity and existing networks. They show that there are both potentials and limitations in realizing community participation in neighbourhood energy retrofits. By providing relevant regulations and removing the barriers, the institutional environment in Izmir is already enabling participation in energy retrofits. However, the lack of integration of different regulations related to energy efficiency improvement and community participation is still an important limitation. The city's experience in participatory local environmental planning and management is considerable, yet, in Izmir, participation tends to be limited to participating in the action but not in the decision making, as there is no official obligation for government officials to involve communities in decision making. Decision making on how to involve the community mainly depends on personal initiatives which often results in an insufficient level of participation by the communities.

Community capacity is another important aspect to analyse and in this research the level of awareness and level of commitment are the main focus. Despite the unfamiliarity with the concepts of energy retrofitting, a high level of awareness of neighbourhood and environmental issues in the pilot area is evident together with a high level of commitment. Accordingly, the neighbourhood even has a platform where the community gathers with the aim of improving the environmental conditions of Güzelyalı. The role of such community-based organizations is essential in decision making, whereas the research shows that the interaction with the community through community platforms has yet to be properly established. Instead, local authorities use formal networks to reach the community, which is also an important limitation for the city.

The research looks into these opportunities and challenges in detail. The study aims to see whether it is possible to carry out a pilot project for community participation in neighbourhood energy retrofits in the selected area. In doing so, in order to open the way forward and provide guidelines, the research also reviews five relevant projects from Europe.

SUMMARY 11

Inhabitants' Perspectives on the Adequacy of the Compound House in Ayigya, Kumasi, Ghana

Towards a Spatial and Technical Improvement and an Enabling Policy Environment as a Low-Income Housing Option

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This study begins with the assumption that the compound house, a vernacular housing form in Ghana, may be an adequate low-income housing alternative.

Compound houses house low-income populations in Ghana, where the population growth, limited housing production, lack of basic facilities, services and infrastructure, and the deterioration of the existing housing stock place basic shelter out of the reach of most low-income households.

Compound houses are low cost, easy to build, thus affordable. They have a pure architectural form and a clear space hierarchy, thus they are adaptable. They allow multi-habitation encouraging communal life and providing security. On the other hand, they are large structures and building one is still costly for a low-income household. They are overcrowded due to densification, and their shared services and facilities are overloaded.

Current housing policy in Ghana promotes single-family houses, which, in contrast to compounds, are expensive to build and house fewer people. Ignoring compound houses exacerbates the housing shortage in the country, affecting mostly low-income households.

Compounds have potentials that make them worth reconsidering. They might be a housing alternative for people with low incomes, but promoting them as a low-income housing option raises the question of adequacy. The potential exists for reconsideration, but they have problems too. Since the Habitat Agenda (1996) states that access to a safe and healthy shelter and basic services are closely related to the general well-being of the people, it is vital to assess the adequacy of the compound houses. Besides, discussing the adequacy of the compound houses may present insights on how to improve them and describe the policy environment to enable their provision.

Regarding the contextual aspect of adequacy, it is essential to evaluate compound houses from the viewpoint of their inhabitants, since they have the most accurate vision of them. On the other hand, the adequate shelter definition of the Habitat Agenda (1996) and the

criteria of the right to adequate housing by UNHCHR (1991) provide the ideal framework to assess the adequacy of the compound house. In this framework, an objective discussion on the adequacy of compound houses is the most viable way to present them as an adequate low-income housing option.

The primary research questions are: How can the housing perceptions, aspirations and needs of the compound house inhabitants become translated into spatial and technical improvements to make the compound house an adequate low - income housing option? How can a policy environment enable the provision of the compound house as an adequate low-income housing option?

To explore these questions the study employs a case study research method within a specific neighbourhood in Ayigya Kumasi, Ghana, through looking into the current situation of 'the compound house'. The study uses two household surveys in the study area: a) a general household survey gathering basic socioeconomic data and general data on housing and household characteristics; b) a compound-specific household survey to obtain the views of the inhabitants on the criteria regarding the right to adequate housing. The study methodology also includes in-depth interviews with the key informants from academia, the local government and with tribal leaders. Other data-gathering methods include observations and a transect walk.

The research highlights that compound houses in Ayigya are generally inadequate. They are satisfactory on some criteria for the right to adequate housing, but they are very problematic on other issues. The research mostly verifies and consolidates the findings of previous studies in Kumasi. It also describes the instances contradicting them, contributing to the on-going discussion on promoting compound houses as an urban low-income housing form.

The findings of the research are probably valid beyond Ayigya, and may apply to the majority of the compound housing neighbourhoods in Ghana, although the severity of the conditions might differ. New research is required to test the validity of the findings of this research and offer insights into actual physical improvements and any policy ramifications, as this research is limited only to an assessment of the existing situation of this housing form.

It is hoped that revealing the inhabitants perspectives on compound houses will contribute to a change in the government's approach, with innovative solutions to the housing problem of the low-income groups, through paying attention to existing forms of housing provision, local architecture and community participation.

SUMMARY 12

Sustainable Private Sector Participation in Municipal Solid Waste Collection Services

The Case of Arua Municipal Council, Uganda

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Supervisor Marijk Huysman, MA (IHS)

In Uganda, the responsibility for Solid Waste Management (SWM) lies with local authorities, hence the situation in Arua Municipal Council (AMC) is not an exception. Prior to decentralization Arua Municipal Council (AMC) undertook SWM services directly to all the areas in the municipality. In 1997, however, the adoption of a decentralization policy in Uganda led to the day-to-day SWM operations being transferred from AMC to Division Councils. This resulted in the accumulation of waste in many parts of the municipality, leading to a significant public outcry. This led to the introduction of the private sector in 2001 for the provision of waste collection services on the assumption of an improvement in service delivery and sustainability.

This study focuses on the functioning of the privatized waste collection service delivery in AMC. The first part of the study provides insights into the current system of waste collection in AMC. The second part explores the concept of sustainability from the viewpoints of three stakeholder groups: the local authority as the service regulator, the private operator as the service provider and the citizens in households and commercial establishments as service users. The final part of the study highlights the recommendations of the respective stakeholders on how the current waste collection services can be made more sustainable.

Following one case study, the study covers a sample of service users and includes specific interviews with private operators and workers and with AMC staff. A literature study reviews various publications on privatization and sustainable SWM based on the Integrated Sustainable Waste Management (ISWM) Model. Assessment indicators are then developed as an analytical tool in order to measure the sustainability of the waste services. The waste system is sustainable when the technical, financial, social, environmental and institutional goals are met.

The findings show that there are two systems of waste collection, a door-to-door and a communal system, and that there is only one private waste collection operator.

The households in the medium and low-income zones do not have the collection services. The collection services are not sustainable because not all technical, financial, social, environmental and institutional goals as set out in the ISWM Model are met. However, the financial, social and environmental aspects are downplayed in comparison to the technical and institutional goals.

The study includes the following recommendations to make the collection system sustainable: a) the availability of appropriate and sufficient equipment and facilities; b) mobilization of financial resources; c) public education and awareness on sound SWM; d) waste segregation; e) a regulatory framework on SWM; f) strengthening of the monitoring system; g) community involvement in SWM; and h) encouraging competition among private waste collection operators.

SUMMARY 13

Developing Approaches towards Sustainable Sanitation in an Urbanizing Environment

Testing the Feasibility of Yard-Level and Individual Sanitation Facilities in Ayigya, Kumasi, Ghana

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Access to potable drinking water and basic sanitation facilities is a huge challenge for many urban dwellers living in the informal settlements of developing countries. The provision of basic urban services is not straightforward for many local authorities in developing countries, due to rapid urbanization caused by natural population growth, an influx of rural-urban migrants, urban-to-urban migrations and international emigration. Worldwide, one out of five people do not have access to safe, affordable drinking water and sufficient sanitation. Of the 6 billion people in the world, around 1.1 billion people globally do not have access to an improved water supply, while 2.6 billion people do not have access to any type of improved sanitation facilities. Efforts to prevent death from diarrhoea or to reduce the burden of water and sanitation-related diseases will inevitably fail unless people have access to safe drinking water and adequate sanitation.

Ghana is off track in achieving the Millennium Development Goals (MDGs). Access to basic sanitation facilities, such as toilets, are still a luxury to many, including urban dwellers, who are compelled to join long queues on a daily basis in order to attend the call of nature, leading to a situation of open defecation along the beaches and in bushes. Twenty-six percent per cent of Ghanaians today rely on pan (bucket) latrines, which have been banned by the Supreme Court. Indeed, the national average for sewerage coverage is as low as 4.5 per cent. Meaning that in Ghana, of the 22.5 million of the national population, only a minority of 1.01 million have access to a full bore water-borne sewerage system, and the majority of 21.5 million have no access to water-borne safe sanitation. Only Tema and Accra municipalities have a partial sewerage system. At the moment, only seven of the 44 sewerage treatment plants in Ghana work.

In Ghana most urban and peri-urban households use public communal toilets or latrines, while a majority of rural households defecate in open areas. Public toilets are run mostly by local governments, charging a fee of 10 Ghanaian Pesewas (Gp.) or 6 US dollar cents per visit.

This situation has led to unsanitary community practices that contribute to widespread environmental degradation and leaves a large population exposed to environmental health risks as a result of inadequate human excreta disposal and wastewater management. This research aims to explore and develop approaches towards sustainable sanitation solutions for the urban poor living in Ayigya. The possible approaches under review range from public pay and use communal toilets, shared sanitation facilities, yard-level and individual home-based sanitation facilities, with a gradual implementation. To help sanitation for the urban poor enter the era of sustainable development the study reviews five community participation models, namely: (1) strategic urban planning for sanitation; (2) community-led total sanitation; (3) sanitation marketing; (4) decentralized wastewater management; and (5) sanitation mapping. These new community-based participatory paradigms of effecting settlement upgrading with respect to sanitation improvements for slum dwellers need to encompass three urban renewal options: (a) upgrading and conservation; (b) rehabilitation and renovation; and (c) redevelopment, including the option of the number of development needs under consideration.

Fieldwork research methods and techniques include a joint sample survey of 180 households and detailed individual surveys of 40 households, 30 public toilet users and ten individual households with home toilets and shared sanitation facilities. Data collection methods vary from structured household questionnaires, semi-structured in-depth interviews, and expert interviews with resources persons, two focussed group discussions, direct participant/non-participant fieldwork observations and photography.

The joint survey reveals that more than 85 per cent of the households have no direct access to potable drinking water and 73 per cent have no adequate sanitation facilities. The individual survey revealed that 73 per cent (21,900) of the local inhabitants have no access to improved sanitation facilities and more than 90 per cent (27,000) have no access to a potable water supply. People buy water from neighbourhood sellers on a daily basis, and use 'pay and use' public communal toilets. The results reveal widespread user dissatisfaction as a result of flies and odour nuisance, long walking distances, queuing during peak rush hours, long waiting time, absence of proper anal cleaning materials, dirty surroundings, lack of hand washing facilities, lack of privacy, lack of comfort, inconvenience, reports of urinary infections in women and overuse of conveniences. The study also reveals rampant unsanitary community practices such as: open defecation, use of flying toilets (polythene bags), in-house defecation in simple buckets by children and pregnant mothers, surface discharge of untreated wastewater and an almost complete absence of hand washing facilities for use after defecating. Both the pay and public use, yard-level shared sanitation facilities and individual toilets generally perform very poorly in this urbanizing environment of Ayigya. The existing sanitation facilities have mainly inadequate human waste disposal and lack of wastewater management systems due to faulty designs, poor workmanship, and the use of substandard construction materials, worsened by the inhabitants' unsanitary behaviours towards sanitation.

SUMMARY 14

Living on Pavement

*Home in a Homeless Situation,
A Reality in Dhaka, Bangladesh*

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Pavement dwelling, among the various patterns of homelessness, is part of floating homelessness, which is a quite common occurrence in a developing country such as Bangladesh. Pavement dwelling is possibly the synthesized outcome of rural migration, urban poverty and the failing of state provision, which is borne out by the number of pavement dwellers (14,999 according to the Bangladesh Bureau of Statistics) currently living in Dhaka city. This large group of pavement dwellers is beyond any infrastructural framework and lacks basic human rights.

Pavement dwellers cannot afford to rent a shelter, even in a slum or squatter settlement. All this leads to living without a roof and resources. They are socially excluded and treated inhumanly, irrespective of age and sex. Finding gainful employment is difficult for them as they lack both skills and resources.

This research addresses this urban reality of living without a home by focusing on two areas, the 'non-existent home' and the 'survival strategies' of pavement dwelling. The main objectives of this research are to contribute to the livelihood of pavement dwellers in Dhaka City in Bangladesh, thus the purpose is to gain an accurate and realistic understanding of the lives of the pavement dwellers. This research attempts to investigate the survival strategies of pavement dwellers in their homeless situation and to explore whether pavement dwellers acquire a 'sense of home' in their livelihood process as a survival strategy. Ultimately, this research attempts to understand the role of the government and NGOs from the perspective of pavement dwellers.

As this research seeks to understand the unanticipated, it is an exploratory study on pavement dwellers' livelihood in the context of homelessness. The research focuses mainly on selected cases in Green Road, Dhaka. The primary respondents are pavement dwellers and the secondary respondents are NGO and government personnel. After a literature review for secondary data, the research uses in-depth interviews, focus group discussions and

participant observation as its primary research methods. The research uses as theoretical framework an adapted version of the DFID Sustainable Livelihood Framework.

If it is clear what their livelihood assets are; the research shows that the survival strategies of pavement dwellers relies very much on the management of these livelihood assets. This research reveals that, although pavement dwellers have limited livelihood assets, they manage to cope with any given situation and adapt their living pattern according to available resources and limitations through the optimal use of their very limited capital. They gain their basic livelihood earnings as an outcome of social interactions with surrounding people by means of employment or charity.

They create a sense of community by exercising intimate mutual relationships among themselves. Their survival on the pavement is possible because of their livelihood assets, their adaptation, their social relations, their communal living and above all their shelter. Even though their shelter is makeshift, they perceive and use it along with their open pavement as their own home. Their sense of home is not limited to the basic physical entity, it is extended to the surrounding built environment of their livelihood activities and social relations. Thus the physical asset (shelter) and the social asset (mutual relationship) are the aspects of a livelihood framework that constitutes their sense of home. In their livelihood process, they receive some direct livelihood assistance from NGOs and indirectly from the government too, which all helps to alleviate their level of poverty and reduce their vulnerability.

SUMMARY 15

Climate Change Adaptation Assessment*A Case of the Eastern Fringe of Dhaka, Bangladesh***Author Anika Nasra Haque****Country Bangladesh****Supervisor Stelios Grafakos, MSc (IHS)**

Today climate change is the major threat leading to severe stress on human beings and also on the environment. The effects are global and unprecedented. It is projected to continue into the next century in spite of the many efforts to reduce Green House Gas (GHG) emissions. The least developed countries are at the highest risk, lacking in capacity to protect their cities.

Bangladesh is one of the 12 countries most at risk to climate change. Even though Bangladesh's contribution to GHG emissions is one of the lowest in the world, it is still at high risk because of its disadvantageous geographical location, high population density and low topography.

Dhaka, the capital of Bangladesh, is one of the largest mega-cities of the world, with a very rapid rate of urbanization. Climate change risk to Dhaka comes mainly through flooding. Despite the long history of flooding in the country, climate-driven variability exacerbates the situation of the city.

The study area, the Eastern Fringe Area (EFA), is a low-lying area of the city, making up two thirds of Dhaka's drainage basin. According to the structure plan it is a flood flow zone. In the process of urbanization, wetlands are being encroached upon which causes major water clogging leading to flooding. Moreover, improvements in the drainage system are unable to match the high pace of urbanization.

In the last few decades the study area has had to cope with severe damage as the result of several catastrophic floods leading to almost the whole EFA being inundated. Dhaka West is protected, but Dhaka East, which is most at risk, is still unprotected from flooding. Despite plans on the drawing board no measures are yet in place to reduce the vulnerability of Dhaka EFA to flooding. Therefore, the research aims to investigate the vulnerability of the Eastern fringe of Dhaka to flooding and to assess and prioritize the most effective adaptation measures for the area to the risk of flooding. In this study, climate change is perceived not only as an environmental problem, but also as a development issue.

A literature review provides a theoretical analysis of the main concepts relating to the topic. Part of this includes a review of different adaptation planning approaches, adaptation strategies and prioritization methodologies in order to find out the appropriate one for the research. The research uses both primary and secondary data. It is a case study of the EFA, with primary data coming from questionnaires, expert interviews, focus group discussions and direct observations. The data analysis methodology applied in this research is 'Multi criteria analysis' following the UNFCCC adaptation framework for LDCs.

To investigate the vulnerability of the study area the researcher used a vulnerability assessment. Vulnerability is an accumulated outcome of three aspects, exposure, sensitivity and adaptive capacity. Therefore, to investigate the vulnerability, an exposure index of the study area to different types of flooding hazards are identified based on the secondary data on the frequency, duration and spatial extent of different types of floods. It shows flooding by river water mostly affects the EFA. Based on the impacts of floods in the study area during the last three decades the researcher developed a sensitivity index. This shows that the water quality is the most sensitive issue relating to flooding for the EFA. The researcher also explored through a survey the adaptive capacity of the inhabitants by collecting data on: demographic characteristics, occupation, education level, income level and the existing infrastructure services of the study area. Taking into account the dominant criteria of each of the factors considered for adaptive capacity and equal access to existing infrastructure services, the assumption is that the whole study population has the same adaptive capacity. A vulnerability index shows that water quality is the most vulnerable capital asset in the study area. Infrastructure and trade are also severely under threat due to flooding.

All the existing proposed adaptation measures (flood embankment, construction and upgrading of the storm sewer/drainage system, flood wall, raised road, protection of water retention areas and canal improvement) are all taken into consideration in the assessment. Also based on the vulnerability assessment, two additional measures (enhancing emergency response mechanisms and early warning systems) are two issues arising from other cases that are similar to the EFA. Focus Group Discussions (FGD) ensure that the criteria to assess adaptation options arise in a participatory fashion in a dialogue with selected stakeholders from the study area. The main issues decided upon by the stakeholders concerning the assessment of adaptation options include: vulnerability, financial, environmental, sociopolitical, macroeconomic, socioeconomic, institutional and technological aspects. The following criteria arise from the discussion: vulnerability reduction, cost, enhancement of ecological conditions, public and political acceptance, opportunities for generating employment, achieving the Millennium Development Goals (MDGs), institutional and technical capacities.

The selected experts scored each adaptation option against the selected criteria. To ensure stakeholders' preferences in the process, weighting of each criterion is crosschecked by the same stakeholder group. In this way, the interactive weighting method is an effective way to confirm the outcome. Then the expert score is combined with the weights of the criteria to get the final score. The prioritization of adaptation options is based on this final score. The main finding is that the 'Protection of water retention area' is the most effective option

to reduce the vulnerability of the EFA to flooding. 'Enhancing early warning systems' and 'Canal improvements' rate as very effective options and flood walls are the least effective. A sensitivity analysis tests the robustness of the results to incorporate the uncertainty and range of stakeholders' preferences. It shows that the results are quite robust with regard to the criteria weights. The research concludes by putting forward suggestions for further research.

SUMMARY 16

Assessing the Sustainable Building Policy in Shanghai, China

Author Xiangjie Di

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Supervisor Liliane Geerling, MSc (BVR) Adviseurs ruimtelijke Ontwikkeling

The building sector plays a key role in global economic, social and environmental development and the issue of sustainable building has wide acceptance as a concept by which to judge sustainable development. The building industry is a major user of energy, water, materials and land, all of which have an effect on the environment. China is experiencing a period of very rapid economic growth and urbanization and it is facing the most serious environmental and social issues ever. Large numbers of migrants swarm into the urban areas from rural areas, which require many houses to be realized. Energy efficiency is very low in China and the building sector associated together with the related sectors is responsible for 46.7 per cent of the total amount of the national energy consumption. What makes matters worse is that although the designed lifecycle of the houses is 50 years, the average lifecycle in reality is only 30 years. The trend is to demolish existing housing stock rather than renovate it before the end of its projected life cycle.

The Chinese government policies that are of relevance to sustainable building issues date from 1986. Despite the attention of both national and local government to sustainable building issues, many barriers in this area still persist. This research attempts to analyse Shanghai's current sustainable building policy and to identify the strong and weak points. Furthermore, the study examines the performance of the Tongji University campus programme in Shanghai. Finally, it tries to offer suggestions for potential approaches to sustainable building development in China.

Following an extensive literature review the researcher uses a combination of research tools: qualitative methods (in-depth interviews) and quantitative methods (surveys) to develop the study. There are ten respondents covering four groups: local authority officers, university managers, design team and private developers. The results of the qualitative methods point to sustainable building policy design and implementation issues from the perspective of different stakeholders. The respondents at the Tongji campus mostly have a

higher level of education. The research attempts to analyse public awareness of sustainable buildings among the people of the sustainable campus programme.

Several factors arise from the analysis, including: 1) no specific local policies exist based on the national core strategy, they are simply a repetition of the national policy without the local planning; 2) the awareness of the development control officer, the developer and the design team are high, although they are more focused on energy issues for the special national conditions; 3) the capacity of local industry represents a key issue affecting the high incremental costs of sustainable building; 4) the law enforcement authorities are in favour of statutory regulation; 5) there are no third-party organizations that meet in the local context to assess sustainable building; 6) the official rating systems are not explicit and authentic meaning that the market is more willing to adopt the LEED as the main rating system while the government encourages a combination of two different systems; and 7) the public is unaware of the sustainable campus programme.

Recommendations to improve the sustainable building policy in Shanghai include: 1) develop a local policy based on the national strategy; 2) promote public awareness; 3) establish a clear and efficient monitoring system; 4) strengthen the enforcement of the law; 5) establish an effective incentive mechanism; and, 6) develop a comprehensive rating system that addresses the local context.

SUMMARY 17

The Public Bicycle System in Hangzhou, China

Opinions of Providers and Users

Author Yifan Xu

Country China

Supervisor Marijk Huysman, MA (IHS)

Hangzhou, one of the most modern cities in China, suffers from severe congestion, parking problems and air pollution problems following the rise of the car industry over the last ten years. The introduction of a Public Bicycle System (PBS) in 2008 by the local authority represents an attempt to address some of these issues. Despite its popularity the drawbacks of the system – such as maintenance of the system, redistribution of the bicycles and technical problems – have been a source of heated debate among the users since its implementation.

Since the PBS is a user-oriented project, its failure or success depends largely on whether the general public makes use of the service. It is crucial to sustain and improve the current system in Hangzhou by looking at the key factors that influence the users of the PBS. Based on the analyses of interviews with government officials, the public transportation corporation manager and staff working on the scheme and questionnaires covering users and non-users, this study attempts to provide an insight into the design of the PBS, its running status, the challenges it faces and the users' satisfaction regarding the PBS in the specific context of Hangzhou.

Finally, the study offers recommendations to improve the current PBS in Hangzhou and useful pointers to other cities that might be interested in establishing similar schemes, particularly those cities with generally similar contexts and travel behaviour.

SUMMARY 18

The Aftermath of Urban Renewal

The Case of the Third Millennium Park and the San Bernardo Neighbourhood in Bogotá, Colombia

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Supervisor Alonso Ayala, PhD (IHS)

This research looks into the long-term renewal plan initiated by the local authority in Bogotá city centre in 2007. Although this strategic operation claims to work towards a competitive, preserved, renewed and inclusive city centre, the latter aspect is the subject of many controversies since several urban renewal programmes historically around the world have ended up having dire consequences from a social perspective. The two most common negative impacts that arise from the experience of other cities around the world include: 1) the eviction of the original population in order to carry out demolition that give way for new construction; and, 2) the displacement of the population in the form of gentrification.

Although the above examples are of great interest for research of this type, the perspective this study takes is that of the retrospective situation of the inhabitants that are still living in the surroundings of a renovated area. For this purpose, this study examines the construction of the Third Millennium Park, which is part of the city renewal process, and the population of the adjacent San Bernardo neighbourhood. The main objective is to identify the benefits and drawbacks that this renewal project has for the residents of the above mentioned neighbourhood. The population living there witnesses first hand the positive and negative outcomes of this urban renewal process. Therefore, eight years after the inauguration of the park, it is relevant to find out whether there is a positive outcome for households, considering that there are no significant improvements to the image of the area and no gentrification. The study examines the perceptions of two types of households (those living in an apartment complex and those living in detached houses) to gauge the different realities within the same community and to quantify the importance of addressing the problems of a population with similar characteristics but different needs.

The data collection includes structured surveys of 85 households and five expert interviews. The results show that the outcome of this experience is questionable from a socio-economic point of view. The households living in the San Bernardo neighbourhood have no

support from the local government to change their perception of abandonment and decay. The lack of a socioeconomic policy within or linked with the urban renewal one is a perception that has existed since the local government took the decision to demolish El Cartucho and to construct the Third Millennium Park. From a policy point of view, the balance is similar because the renewal policy designed only heeds the needs of the population living in the immediate vicinity of the development, ignoring the inhabitants living next to it. Therefore, it is argued that a participatory process in the design, planning and implementation of the renewal did not occur. A positive outcome of the urban renewal project is an improvement in the conditions of public space in the neighbourhood and vicinity of the park. Similarly, green areas per inhabitant rose considerably with the construction of the park.

The recommendations deal mainly with the way an urban renewal policy is designed, planned and implemented. The principal points relate to the following: a) The approach that an urban renewal policy requires to be successful; b) the importance of urban governance to ensure a participatory, transparent, accountable and successful process; c) the recognition that different groups in a population in the same community and neighbourhood have different needs; d) the significance of community organization processes that facilitate the strengthening of population in dealing with the public and private sectors; e) the integration and articulation of policies and sectors from within the public administration implementing the programme; and finally, f) the commitment of politicians to guarantee the continuity of policies over time.

SUMMARY 19

Analysing the Impact of the National Health Insurance Scheme (NHIS) on the Accessibility of Health Care in Ayigya, Kumasi, Ghana

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Supervisor Ellen van de Poel, MSc (IHS) Igna Bonfre, MSc (EUR)

The health sector of many developing countries fails to address the health care needs of poor and vulnerable groups of people. As morbidity and mortality rates increase tremendously, the plight of poor and marginal groups of people remain unheard. In light of the above challenges a number of developing countries saw national health insurance as a way forward to make health care accessible to all, because most developed countries manage to expand health services and provide affordable health care through a national health insurance system. The Ghanaian population suffers from the impact of structural adjustment policies that prescribe cutting expenditures on social services and introducing a 'cash and carry' system that requires on-the-spot payment for health care received at the point of delivery. As a result health services are accessible only to those who can afford the high cost of care, while the majority of Ghanaians resort to traditional healers or face financial catastrophe to cover the costs of health care. In 2005 the government established a National Health Insurance Scheme (NHIS) to address the health care needs of the majority of Ghanaians.

The literature review discusses concepts of national health insurance schemes. It reviews developing and developed countries' experiences in implementing a national health insurance scheme. A predominantly tax financed health care system exists in developed countries, due to the fact that a high proportion of these countries' populations have work in the formal sector. In contrast, many developing countries, because of high informality in their economies, make use of multisource financing such as the premium contributions for health insurance subscribers, taxation and donor funding. Initially the Ghanaian NHIS adopts the German model of solidarity and decentralization to set up the system. The German National Health Insurance advocates universal health coverage, portability of insurance and participation by physicians. However, in its approach towards financing the scheme, the Ghanaian NHIS is unique on the continent, because it relies principally on the internal

resources of the country, unlike many developing countries where a greater proportion of the health sector is financed through donor funding.

The research aims to analyse the impact of the National Health Insurance Scheme (NHIS) in Ayigya, a suburb of Kumasi in Ghana. To this end the study uses a survey of 180 households to gather initial socioeconomic data about the population. A total of 50 insured and uninsured individuals are randomly selected in order to analyse whether the introduction of NHIS improves the community's ability to access health care and provide financial protection against high medical costs. In addition the study uses simultaneous in-depth expert interviews with District Mutual Health Insurance Scheme officers and KNUST hospital personnel.

With the introduction of the NHIS, access to health care improved and patient attendance at health facilities rose rapidly. The health facilities were unable to cope with the sudden spike in service demand. Measures have been taken to expand services and recruit additional health workers. However, there is a significant mismatch between the demand for health care and the available supply, particularly in the outpatient departments, despite the attempts to expand health services. The insured are protected from high medical costs compared to the uninsured who struggle to get access to health care due to the high costs of inpatient and outpatient care. The majority of those insured receive inpatient and outpatient health care free of charge. In terms of out-of-pocket expenses at a lower range of expenditure, both the insured and uninsured spend an equivalent amount of money for outpatient care, but as the amount of expenditure rises, only the uninsured tend to have higher spending for the cost of drugs.

A high proportion of the Ayigian community participates in the national health insurance scheme, among those uninsured the majority is an indigent group of people who cannot afford the health insurance premiums and the elderly who cannot travel to the registration offices due to infirmity. Identification procedures and guidelines have many weaknesses that create loopholes in the system. Poor people pay too much, while the principle of cross subsidization is absent and as a result the rich are not contributing in proportion to their income, as the NHIS act envisioned. The majority of those insured believe the NHIS improves access to health care. However, physical inaccessibility of health care in terms of overcrowded health facilities and financial barriers due to high out-of-pocket expenses for outpatient care remain issues for improvement.

SUMMARY 20

The Potential of Rainwater Harvesting in Ayigya, Kumasi, Ghana

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Country India (Country of research: Ghana)

Supervisor Marc Jansen, MSc (IHS)

Although we live on a planet covered by water, more than 97 per cent of it is saltwater and nearly 2 per cent of it is in the form of ice and snow. This leaves less than 1 per cent to grow our crops and supply our drinking and bathing water for households. It is pertinent to mention that 0.3 per cent of the fresh water is in lakes, rivers and wetlands. This amount includes water in plants, animals and in the atmosphere (Kingsolver, 2010). These figures illustrate universal challenges, ranging from the availability of water resources to its distribution to the population.

Global statistics indicate that over a billion people live in a region of severe water stress and one of the targets of the Millennium Development Goals (MDGs) is to halve this number by 2015. However, this target seems daunting, considering the present water supply situation in Asia and Africa. Many communities in these continents have always lacked access to a piped water supply and sub-Saharan Africa has the world's worst levels of water provision.

Ghana lies in the sub-Saharan region of Africa and nearly 40 per cent of the population is either not served or underserved by piped water. The research area Ayigya lies in the southeast district of Kumasi, which is Ghana's second largest city and is 270 km away from the capital city Accra. In this neighbourhood, nearly 91 per cent of the households have access to water by means of buying it from water vendors and/or neighbourhood sellers. Nearly 53 per cent of households spend nearly US\$0.22 to US\$0.44 per day on water, which is nearly 15 per cent of their income (Nyarko, Odai and Fosuhene, 2006).

This issue is exactly the focus of this research and the main objective is to explore the potential of rooftop rainwater harvesting at household level in order to improve the well-being of people in Ayigya. This research focuses on the technical and financial feasibility of adopting rainwater harvesting in the most cost-effective way at household level and employs survey and archival research strategies to collect data from the field.

The research reveals that Ghana Water Company Limited (GWCL) faces new challenges in the supply of potable water in Kumasi due to the excessive demand for water. Although the rehabilitation work at Barikese Water Treatment Plant has upped the production capacity to 90,720 m³/day it still falls short of fulfilling the growing demands for water arising from population growth. The Public-Private Partnership (PPP) between GWCL and Aqua Vitens Rands Limited is ineffective in informal areas due to economic constraints.

In searching for solutions to this problem, the research looks at environmentally and economically sustainable factors with regard to the improvement of water provision in Ayigya. The research findings indicate that rooftop rainwater harvesting is a technically and financially viable option considering the perception of the various stakeholders and availability of various building components suitable for adopting the system at household level.

SUMMARY 21

Bestemming: Beurs

A Study of Spatial and Transport Mismatch in Rotterdam, the Netherlands

Author Jacob Lee Calhoun

Country USA (Country of research: the Netherlands)

Supervisor Harry Geerlings, PhD (EUR)

Spatial mismatch is a hypothesis developed by the late J.F. Kain in 1968 to describe the housing situation in many Midwestern cities in the USA. Over the years the hypothesis has transformed into theories relating to sociology and some recently relating to transport. In some circles it is believed that transport mismatch exists more in cities due to citizens lacking access to their transport infrastructure. But this infrastructure is severely limited by its modes which are narrowed down to basically just roads. So would transport mismatch exist if a multimodal network of transport options existed? This is the main question this study attempts to explore.

The city of Rotterdam, the Netherlands given its diverse transport infrastructure, its unique spatial structure compared to other Dutch cities and its large amount of job seekers is the focus of this study. This study measures the impact of public transport access and its role in preventing spatial mismatch, especially in areas of lower socioeconomic status. The study employs qualitative interviews with researchers and travellers on Rotterdam's Metro system. It also uses a quantitative study using the gravity model to provide the scores necessary to judge the accessibility of both public and private transport in various post codes within Rotterdam and its surrounding municipalities.

The study shows that areas of highest accessibility are within the city centre, yet many districts close to the inner city have poor accessibility despite their very good location. These neighbourhoods tend to be in already deprived areas of the city. The communities seem to experience the symptoms of spatial mismatch but no solution has been found to resolve the problem. Other distant and more affluent neighbourhoods with high car ownership have no problem with spatial mismatch. Facilitating car ownership to more of the residents would seem like a good idea but the income of the neighbourhoods makes it difficult for that to become a reality. Providing better access to the Metro line may also be an alternative, yet some of these communities are spatially removed from the Metro line by roads, canals or simply by distance.

The research indicates that in some troubled districts with low car ownership, low income and spatially divided from the Metro line, a housing strategy can contribute to cleaning up the neighbourhood. This strategy means building middle-class homes in deprived neighbourhoods in the locations furthest from public transport access. This modernization of the neighbourhood prevents lower-income groups from expanding further from their public transport options and provides roads for residents who are able to access them. Accessibility to public transport can have a positive effect on lower-income communities but that access is severely limited if the neighbourhood's spatial structure is built more for private transport than public transport.

SUMMARY 22

Factors Affecting Slum Resettlement Projects in Bangladesh

A Case Study of Bhasantek Rehabilitation Project, Dhaka

Author Tamanna Kabir

Country Bangladesh

Supervisor Maartje van Eerd, PhD (IHS)

Since its independence in 1971, Bangladesh has seen rapid urbanization and a huge population explosion, particularly in its capital city Dhaka. A serious housing shortage for the growing population of Dhaka arises from a scarcity of vacant land, limited resources, high land values and strict construction standards. Dhaka is experiencing a prolific growth of slums.

The 'Bhasantek Rehabilitation Project (BRP)' aims to build multi-storey housing for slum dwellers and low-income groups. It began at the behest of the Government of Bangladesh in July 1998. The Bangladesh Government and the Ministry of Land signed an agreement with the private-developers North South Property development Limited in 2003 to manage this project. Around 3,260 slum dwellers were evicted from the project site without any relocation to start the construction work in 2003. The project has two kinds of apartments, one for the evictees and scattered slum dwellers and another for low-income inhabitants. Only 20 per cent of the project work reached completion by 2010. Of the completed buildings, 288 apartments in two buildings are for the evictees and scattered slum dwellers. The study notes that no evicted slum dweller or even any slum dweller occupies these apartments. Hence the resettlement project is a failure.

The research aims to identify those factors hindering or inhibiting the displaced slum dwellers to resettle in BRP and thus be a part of the slum resettlement projects of Dhaka City. The research aims in particular to find out to what extent BRP apartments are affordable for the evicted slum dwellers, and how much physical and financial capital the evictees accumulated in their slums following their eviction. It also explores the role of the government in terms of planning and participation and finally it identifies those factors that evicted slum dwellers take into consideration in their decisions to resettle back to their original locations.

In-depth interviews with the evicted slum dwellers that were self-rehabilitated in different slums close to the project area and also with the current occupants of BRP apartments represent key research tools. The research findings reveal that various interrelated factors simultaneously prevent displaced slum dwellers from resettling to their original locations. These include the affordability of BRP apartments for the evicted slum dwellers. In addition there is evidence that private developers exploited the situation in the absence of any effective government control over the project. Another reason the study highlights is that evicted slum dwellers had accumulated capital in their slum locations during the time of eviction and project implementation so they were reluctant to move to the BRP apartments, as it meant leaving their asset base. The project also lost the trust of the people through the absence of any institutional framework concerning participation. This combination of factors explains the reluctance of slum dwellers and their decisions to stay put and decide not to participate in the resettlement project.

To succeed, such resettlement projects need to take many measures into consideration. These include extensive research of the project area and the target groups before any intervention. Financial models should be devised to ensure true affordability for the people with the lowest income based on detailed surveys. The restoration of the livelihood of the poor people in the resettlement area has to be taken into account. The involvement of NGOs can create a bridge between the implementation authority and the target groups. Spontaneous participation of the target group is essential to remove the accessibility barriers between everyone involved in the project.

SUMMARY 23

Reforming the Compensation Strategy to Enable Displacees' Livelihood, Reconstruction and Improvement

An Exploratory Research of Tianzhong Lake Resettlement Project, China

Author Lu Yang

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Supervisor Maartje van Eerd, PhD (IHS)

In China rapid development usually occurs at the expense of forced displacement and resettlement. Although huge economic growth is undeniably shown and the so-called benefits are often considerable, the cost of growth is to a large extent transferred to the displacees' through interruption of lifestyle, sudden impacts, psychological traumas and impoverishment. This triggers numerous tragedies, including violence and suicide. Consequently, the reconstruction and improvement of the displacees' livelihood has drawn increasing national and international attention and recently has become a 'hot' issue.

The Tianzhong Lake Resettlement Project in Pingxiang City is a typical case where development precipitates forced displacement and resettlement. In this urban village 198 households were displaced to make way for a reservoir, wetland park and high-quality residential district aimed at climate improvement, water storage and the development of tourism. Despite the existence of a formal compensation scheme, no agreement exists for the displacees who continue to vigorously contest the resettlement for a variety of reasons.

This research explores what reforms may be necessary in the compensation policy to enable the displacees of the Tianzhong project to reconstruct and sustainably improve their livelihoods. This will require identifying losses in the resettlers' livelihood assets, understanding the impoverishment risks they face, and the establishment of the appropriate level of assistance and amenities to bring about an improvement and reestablishment of their livelihoods. The researcher is interested in ensuring that the compensation offered not only covers the lost capital assets but also has meaningful ramifications for a longer term perspective in terms of livelihood prospects.

The findings show both the visible and invisible losses of the resettlers, categorizing five types of livelihood assets. The thesis categorizes the types of livelihood assets in danger and the various reasons why these assets may be endangered. Furthermore, the thesis describes eight categories of impoverishment risks and identifies the contributory factors

and most vulnerable groups, as well as evaluating the extent of and potential of the risks to the displacees. The findings not only identify such things as joblessness and landlessness as very strong risks, they also reveal a number of significant factors contributing to the often neglected risks, such as anxiety and potential psychological trauma. Furthermore, the study looks into how Tianzhong Project has been promoted to encourage or enhance displacees to accept the plans as presented. The scale and feasibility of the assistance and facilities on offer are reviewed.

Reforms are necessary in order to maintain or increase the displacees' livelihood. These should cover the following: the level and quality of compensation given, alternatives for recovering activities, an effective and comprehensive mechanism to prevent and mitigate risks, a rational implementation process, transparency in decision-making, increasing the involvement and capacity building of the communities, and most importantly, ensuring sustainable improvement planning and instruments.

SUMMARY 24

The Causes of Vacant Housing in China

A Case Study in Xiamen

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Supervisor Carlos Morales Schechinger, MPhil (IHS)

Vacant housing stock in China has risen in recent years following a significant rapid growth in the country's housing sector. At the same time many people are obliged to live in overcrowded or sub-standard housing because they are unable to enter the housing market. Nonetheless, developers continue to construct new housing at a rapid rate, often disregarding the actual needs of the marketplace. Given the important role that housing plays in traditional Chinese society, property ownership is a driving force in the Chinese social order. Vacant housing has become a serious concern to many Chinese Government groups, social observers and economists. The inability of so many Chinese people to participate in the housing market may lead to profound negative impacts in the future within Chinese society if these problems are not addressed.

Vacant housing has a significant social and environmental impact which needs to be understood. This study looks into the causes of the phenomenon of vacant housing in China. Nine hypotheses aim to facilitate a better understanding of the problem behind vacant housing. These nine hypotheses derive from a literature review of the causes and effects of vacant housing in various international settings and form the basis to develop an appropriate approach to the case study of Xiamen in China.

Xiamen as a real estate development pioneering city in China is presented as a case study. In-depth interviews and focus group discussions are the main methods for primary data collection. The interviewees include three kinds of developers, government officials and individual property owners. Additional secondary data is gleaned from desk research from reports, policy documents, journals and online statistic reviews.

A number of the key findings come from a careful analysis of data collected from the period between 2007 and 2011. The study suggests that in 2008 a critical phase occurred when a number of factors came together that led to vacant housing. These include but are not limited to the availability of low interest rates, easy credit, massive liquidity,

government stimulus policies and a general exuberance for the real estate market in general among the Chinese. In addition, since 2010 new government policies have fuelled the creation of even more vacant housing. These policies are often an attempt by the government to slow down housing price increases, but instead they stimulate a domino effect as an increase in new housing construction saturates the property market.

SUMMARY 25

Land Value Capture from Post-Industrial Redevelopments of Inner-City Areas

A Case of the Defunct Textile Mill Lands of Mumbai, India

Author Neha Narayan Patil
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Supervisor Carlos Morales Schechinger, MPhil (IHS)

This study describes the nature of rapid development in Greater Mumbai in post-economic liberalization India, and its manifestation in real estate development and the physical maturation of the inner-city areas. The financial gains concerning who pockets, who pays and who benefits represents the crux of this research.

This thesis deals with the issue of value capture from large inner-city redevelopment, from a cost and benefit perspective. The motivation to carry out this research arose from an interest and need that the author felt to look into redevelopment projects from a financial point of view instead of from the usual social and environmental perspectives. In a fast growing economy such as that of India, local governments are constantly looking for ways to increase their financial independence. For this reason the study examines the monetary benefits and losses that policy changes engender. The decline of the cotton textile industry and the closure of the mills opened up large areas of land for redevelopment in the heart of the city.

The study looks at four project case studies on land that house defunct textile mills. The main objective of this research is to explore the potential of the existing, legally binding value capture mechanisms, and to further assess if they are designed in a manner that mitigates the impacts of the redevelopment process.

This thesis is divided into three different analytical parts. The first part looks at theories of land rent that explain how value is created, the land value practices described introduce the nature of mechanisms adopted to capture this value, hence justifying their potential benefits to public authorities. The second section analyses the cases selected by further examining the potential value creation thereof, its realization and the value captured. This financial assessment then undergoes a comparative analysis in the third section using the findings and with the help of defined indicators helping to prove the changes in land value trends and hence the need for redevelopment. This section also demonstrates the

potential value that has been created, the role and share of primary actors, namely the private developers and landowners and the Municipal Corporation of Greater Mumbai.

One of the primary findings suggests that the potential value created on account of public sector intervention far exceeds the captured value. However, the study also suggests that the mechanisms adopted have resulted in irregular outcomes, each specific to each case in terms of the success in mitigating the physical impacts of the redevelopment process.

The final chapter of the study compares the findings to argue that the mitigation of impacts from value capture practices in Mumbai is inconsistent because of the lack of common denominators among the tools for different land uses and different stakeholders, depending on the degree of benefits created. This section finally summarizes the primary concern of who pockets, who pays and ultimately who benefits from the redevelopment process.

SUMMARY 26

An Effectiveness Comparison between Two Different Affordable Housing Provision Approaches, Inclusionary Housing and Community Land Trust in England. Which Should Be Given Priority of Public Support?

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Country Korea (Country of research: England)

Supervisor Carlos Morales Schechinger, MPhil (IHS)

This research compares the inclusionary housing approach and community land trust approach to determine their productivity in delivering affordable housing units, the durability and affordability of the produced affordable homes and the initial locational advantages of the two approaches. Both approaches have enjoyed academic attention over the last 40 years for being alternative instruments for affordable housing provision after their initial emergence in the USA in the 1970s. The pros and cons of each approach are of interest to justify the allocation of limited public resources to the best effect for policy goals.

The comparison of the inclusionary housing approach and community land trust approach occurs in England due to its geographical proximity for data collection purposes and the possibility of seeing both approaches implemented in practice by public authorities. The field work compares one rural location (in Cornwall in South-West England) and one urban location (the Borough of Lambeth in London) regarding the issue of productivity. Regarding durability and affordability, for each approach calculations followed to establish how much the value of the properties increased upon sale. Locational advantages are explored for each approach to determine each site's average distance from key facilities.

The inclusionary housing approach is better in terms of productivity than the community land trust approach. This is because: a) inclusionary housing is entailed by market developments; and b) inclusionary housing approach functions through a combination of already existing strong institutions such as market-driven developers, housing associations and various funding sources. In the case of the community land trust approach, supporting and implementing bodies have only recently been developed.

In terms of durability and affordability, the community land trust approach ensures a longer period of affordability, in other words there is a lower appreciation rate in general. Nevertheless, the inclusionary housing approach in practice might provide affordable homes

at a lower price than the community land trust approach. When there is a ceiling on rent appreciation, which could work quite similarly to a resale covenant, or other variables such as mortgage rate are taken into account, the durability and affordability of inclusionary housing might not be that much lower than the community land trust approach. This finding applies to the context of the English planning system, which has relatively stronger regulations compared to the USA.

In terms of the locational advantages of each approach's affordable homes, both approaches demonstrate no significant differences. The location of the site is likely to depend on the scale of development, in other words, the number of built homes, rather than on whether it is built following the inclusionary housing approach or following the community land trust approach. However, this generalization only applies to rural areas. In highly urbanized areas even the scale of development does not make any significant difference because the main facilities for living are already spread across the area and are interconnected.

In a nutshell, the inclusionary housing approach is a stronger tool to increase the volume of production of affordable houses because it utilizes planning obligations borne by market developers for the production of affordable homes. In contrast, the community land trust approach often lacks such an obligatory framework to gain access to land. Even so, the community land trust approach can ensure long-term affordability in comparison with any other model by taking land off of the market. At the same time, locations of affordable housing sites depend on the accessibility of land through land-use regulations and planning regulations which apply to both approaches in general. In that sense, it is not inconceivable that the inclusionary housing approach might be used as a tool to ensure the initial supply, and that the community land trust approach could be used as a tool to ensure long-term affordability, and that they in this way are implemented in combination by the public in a mixed form.

SUMMARY 27

Assessing Low-Income Housing Redevelopment Projects to Derive a Financially Viable and Sustainable Model for Mumbai, India

Author Deepti Talpade

Country India

Supervisor Aloysius Bongwa, MA (IHS)

This thesis describes the development of a low-income group housing project where the author currently works. The project takes an alternative approach to the conventional housing redevelopment mechanism in the city. It is community-driven where the community is currently struggling to find an equal space in the development processes in Mumbai. The thesis stems from being part of this struggle with the objective to bring about socioeconomic improvement through a redevelopment programme and to reinforce the idea of equity by helping the community obtain equal opportunities within the decision-making process of development in the city.

The thesis identifies the composition of the housing model applied in this alternative redevelopment project using international literature on housing delivery systems to explore the history of self-help housing and the factors influencing current delivery of housing. It demonstrates that housing delivery systems that dominate world housing for low-income groups are: either market-driven, community-driven or a hybrid of the two, with the extent of government involvement varying in all cases.

The thesis identifies factors that affect the financial viability of a housing project and also the sustainability of the housing model with a focus on economic, socioeconomic, institutional and physical factors. The strengths and weaknesses of the project are assessed using the derived financial viability and sustainability indicators and these are compared with typical redevelopment mechanisms in the city. The process reveals that it is not only financially viable but the most sustainable model too.

Other local and international case studies are compared with the project to explore other ideas that could be used to improve the alternative approach and maybe point to relevant options to achieve the objectives of sustainability and equitable development.

The study shows that the alternative approach not only has a very high potential to succeed in providing solutions to affordable housing for the low-income communities

but it also has drawbacks in terms of lack of government assistance, a long lead-up time before development, very few examples of community initiated projects and a politically unsuitable scenario for the private sector developer lobby. Before suggesting improvements, the research learnt from the case studies assessed the drawbacks of certain mechanisms that would affect sustainability and incorporated those lessons into the suggestions within this document.

It further suggests approaches that lead to greater involvement of government bodies, NGOs, the private sector and the community at the local level to make the development process more collaborative rather than predominantly single-actor driven.

SUMMARY 28

Educational Infrastructure

Enhancing Quality and Sustainability through an Integrated Approach to Design, Finance and Function

Author Mubeen Ahmad

Country Pakistan

Supervisor Aloysius Bongwa, MA (IHS)

The provision of educational infrastructure around the world is generally deemed to be the responsibility of respective governments. It is widely acknowledged that investment in educational infrastructure facilitates the sustainable economic development of any urban region. It is, therefore, imperative that the educational infrastructure, particularly in developing countries, is capable of meeting modern-day educational requirements and is result-oriented in terms of physical, curricular and managerial aspects.

However, in practice, most developing countries continue to follow conventional methods for the delivery of educational infrastructure, which are either too rigid, unsustainable or bear no relation to the economic development requirements of modern times. In the context of the prevailing economic recessionary pressures, it has become all the more important that we ensure that the educational infrastructure is optimally utilized and efficient in educating the present (and future) generations of students capable of meeting the challenging demands of the twenty-first century. This warrants a critical look at the current public school system and a rethink of its design, financing mechanisms and functionality in order to improve the overall quality and provision of education.

This thesis seeks to address this dire need and proposes an alternative integrated approach to the better design, sustainable financing and optimal functioning of educational infrastructure, including the possibilities of Public-Private Partnerships, with a particular emphasis on education in developing countries.

This thesis reviews the prevailing models of educational infrastructure with a view to identifying the underlying challenges and results in finding ways to strengthen the sustainable functioning and output of public school systems. Through an objective evaluation of existing models focused on two case studies, one in a developed country (USA) and the other in a developing country (Pakistan), this research determines that an integrated approach to design, finance and function can help to achieve better results

and also bring all stakeholders into a durable and mutually beneficial arrangement for the successful delivery of education. Through the better use of Public-Private Partnerships, and with greater private sector involvement, governments can share the burden of their responsibility to provide quality education.

SUMMARY 29

Assessing Value for Money in Public-Private Partnership Infrastructure Projects in Zambia *The Case of Lusaka City Council*

Author Andrew Kalemba
Country Zambia
Supervisor Aloysius Bongwa, MA (IHS)

In many developed and developing countries Value for Money (vfm) is the primary objective attracting governments to Public-Private Partnerships (PPPs). When a project does not promise to deliver vfm, it is better off being procured through other means. The attraction to PPPs in many countries arises through the need to meet the growing infrastructural challenges arising from rapid urbanization, globalization, decentralization, informality and climate change. In addition, the inability of governments to reduce the infrastructure gap due to inadequate resources in terms of local taxes, intergovernmental transfers and borrowing has necessitated recourse to PPPs. Although vfm has been viewed as a primary objective for the use of PPPs, other reasons such as the need to shift capital expenditure to the private sector and to enhance the efficiency in infrastructure delivery and services are also relevant. Regarding the need to shift the capital expenditure to the private sector, Morillos and Amekudzi (2008) argue that the ability to shift the financial burden for providing and maintaining infrastructure services is the major reason for the use of PPPs in countries facing financial constraints on their infrastructure budgets.

In Zambia, Lusaka City Council first used PPPs in early 2000 in the delivery of infrastructure. It signed joint venture agreements with two firms to construct the Luburma and ChaChaCha Markets on a Build-Operate-Transfer basis. These projects' challenges included: contract management, contract monitoring and enforcement, identification and allocation of risks, tender evaluation criteria and processes, and undertaking of feasibility studies to determine the reasonable payback periods for the private parties to recoup their investments.

With the foregoing, the central question was: Are the two market projects generating any vfm to the Lusaka City Council given the challenges that it has encountered in the process? Therefore, the main objective of the study is to establish whether or not the urban market's PPP infrastructure projects have delivered vfm to the Lusaka City Council and to make appropriate recommendations on how vfm can be achieved, maintained and/or enhanced.

The findings reveal that the projects did not incorporate the key factors that affect achieving vfm, which are optimal risk transfer, competition, output-based specifications, contract duration, private sector management skills and performance measures and incentives. Risks are not optimally transferred while competition is nonexistent in the Luburma Market project and very low in the ChaChaCha Market project. In terms of specifications the project inputs do not correspond to the output-based specifications approach of PPPs. Although the contract durations are long enough to warrant the private parties to recoup their investments, these are not linked to the alternative service delivery approaches or to the whole life costing mechanisms to ensure that facilities are well maintained and perform according to specifications. In terms of private sector management skills, the study shows that the award of contracts to the private sector very much depends upon past experience in similar projects and on financial skills. This means that no attention is paid to cost reductions, efficiency in delivery or incorporation of private management skills in the design and construction standards. The findings also reveal that the contracts contain no measures and incentives to enhance the performance of the private parties.

Furthermore, it is evident that no vfm analysis features in these projects. Although no vfm assessment models exist in Zambia, competitive bidding is the norm to get the best offer possible. The research also discloses that although risks are considered to be an integral component of PPP projects, no processes are in place to evaluate them. Instead, there is a reliance on just tabulating the risk, likely impacts and then indicating who is likely to bear them. The study also highlights that the major hindrance to undertaking vfm assessments is a lack of human capacity. Additionally, political interference certainly affects the PPP procurement process and in this way undermines the undertaking of rigorous assessments of the projects.

Overall, the conclusion is that the local government is not getting vfm in the Luburma and ChaChaCha Markets following the absence of the key vfm drivers in the structuring of the projects. Ironically, the private sector parties are getting vfm through the long-term nature of the contracts. However, the study does highlight a few benefits accruing to local government such as a favourable trading environment, the generation of income for local government and the creation of employment opportunities for citizens.

The study recommends that to achieve vfm in PPP projects, there is a need to ensure that there is an optimal risk transfer, a high level of competition and that specifications need to be outlined as outputs. Furthermore, contract durations should be linked to alternative service delivery approaches and whole life costing and they should be separate from facilitating any recouping of the investment. In addition the study is in favour of a full utilization of private sector management skills and the inclusion of performance measures and incentives in contracts. It is also recommends that capacity building measures take place to enhance the skills of local government staff in various areas of structuring PPP projects. There is also a need to turn the PPP unit into a stand-alone quasi government institution to mitigate the occurrence of political interference in order to enhance achieving vfm in projects.

SUMMARY 30

Particulate Suspended Matter (PM₁₀) and Cases of Respiratory Diseases in Shenyang, China

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Country China

Supervisor Ogenis Brilhante, PhD (IHS)

Shenyang is one of the largest cities in China with a strong economy and convenient transport networks. The economy of this city mainly relies on manufacturing and heavy industry, so during its rapid development, air pollution has been one of the major problems facing this city. Several initiatives to address the air quality issues of the city have already been pushed by local government. Nevertheless, given the long-term exposure of the population to air pollution, the health impacts cannot be ignored.

There are many types of air pollutants and many kinds of airborne diseases, this thesis highlights suspended particulate matter, or PM₁₀, as an indicator for air pollution, and explores the links of respiratory disease to airborne particles.

Therefore the aim of this study is to investigate the existence of a possible relationship between suspended particulate matter levels and cases of respiratory diseases using a systematic sample of medical and air pollution records in the metropolitan area of Shenyang. The three main research questions are: (1) What is the level of PM₁₀ in the study area and how does it vary during the winter and summer seasons?; (2) How much does the level of respiratory disease fluctuate with the increase in air pollution (PM₁₀) and changes in the winter and summer seasons?; and (3) What are the perceptions of local people concerning the increase in air pollution and the increase in the occurrence of respiratory disease?

This is an exploratory study. The research strategy includes questionnaires and an analysis of the archives. The field work took place in the Guanbei community, which is located next to two district heating stations and the Renji hospital. The concentration of air pollutants is constantly measured by the Huanggu Monitoring Station also situated in this area. Data collection included administering 60 questionnaires and ten interviews. Records of emergency cases in the year 2010 (months of January, February, June, July, August and December) come from Renji hospital and data on suspended particulate matter PM₁₀ for 2010 (months of January, February, June, July, August and December) come from the Huanggu Monitoring Station.

The most important findings are: (1) In general, the PM₁₀ concentration (24 hours) during the six months (January, February, June, July, August and December) is higher within the research area than the municipal guidelines allow (150ug/m³ 24 hours), and it varies with the seasons. The level of PM₁₀ in wintertime is noticeably higher than in the summertime; (2) The number of respiratory cases varies with the increase in air pollution (PM₁₀) and the changes between winter- and summertime. The data from Renji hospital reveal that cases of respiratory diseases occur more frequently during the winter months than in the summer, with winter having higher concentrations of PM₁₀. The data covering 2005 to 2010 also shows that the increased number of respiratory diseases varies with increases in PM₁₀ concentration; (3) Most citizens (58 per cent) realize the possibility of a relationship between the increase in air pollution and the increased number of cases of respiratory disease. The research shows that citizens believe long-term diseases such as Chronic Obstructive Pulmonary Disease (COPD) and Pulmonary Oedema are the most common illnesses related to air quality.

The thesis suggests that there is a possible relationship between the increase of air pollution and the rise in the number of respiratory disease cases.

SUMMARY 31

The Role of Government and csos in Promoting Sustainable Consumption

The Case of Domestic Water and Electricity Use in Cairo, Egypt

Author Mahmoud Zakaria Hussein Talaat Hussein Kamel

Country Egypt

Supervisor Marijk Huysman, MA (IHS)

In 2007 the Government of Egypt (GoE) signed an agreement for a ten-year African Framework Programme that aims to introduce a Sustainable Consumption and Production (SCP) programme to the City of Cairo. Subsequently, a SCP report, of 2008, reviews the relevant policies for Sustainable Development at both national and local levels covering four different thematic areas. However, the report fails to cover household service consumption behavioural patterns.

Therefore, this research aims to look into policy and strategic options for achieving sustainable household consumption in the City of Cairo, focusing on water and electricity use. This is done through studying the factors affecting consumer behaviour. In addition the report investigates the role of both the government and Civil Society Organizations (CSOs) in influencing household service behaviour. It uses the perspective of stakeholders to identify effective policy instruments to promote sustainable service use with regard to water and electricity.

This is an exploratory policy-related research. The main tools and instruments of the research, besides the literature review, are in-depth interviews with government officials and CSOs involved in the field of household water and electricity consumption. Moreover, the study employs a survey of one district within the City of Cairo, the Al-Manial district, to review the factors that influence household water and electricity consumption behaviour and discover their perceptions on how sustainable household water and electricity consumption needs to be promoted.

The findings document the instruments currently used by the national government and civil society to arrive at more sustainable water and electricity consumption patterns. These instruments include the passing of new water and electricity legislation, the existence of service pricing and the use of different types of awareness campaigns. However, these do not always specifically target sustainable consumption.

The research also offers a clear understanding of the factors that affect household service behaviour. These include: the level of awareness, the level of responsibility, following conservation practices and the level of trust. However, there is a direct relationship between these factors and the level of income, education and religious beliefs of the consumers. Generally, the attitude of households is very favourable for receiving awareness campaigns given the current situation in Egypt. Moreover, awareness campaigns seem to be the most effective policy tools currently in use.

The topic of sustainable service use is essential in city development and management. Therefore, it would be considered vital to allocate more time for professionals and experts to work on finding alternative sustainable solutions for water and energy resources, which may help in improving the consumers' quality of life.

Finally, sustainable service consumption is an issue that requires a lot of effort in order to remove all the current barriers and challenges facing the implementation of this concept in Egypt. Further research needs to be done on a large scale in the city in the field of household service behaviour of Cairo, to provide a strong basis for knowledge on the subject.

SUMMARY 32

Pune's Information Technology (IT) Industry *A Boon or a Bane?*

Author Tasneem Hashim Balasinorwala
Country India
Supervisor Stelios Grafakos, MSc (IHS)

Touted as one of the important IT hubs in India, Pune also has the dubious distinction of being one of the most highly polluted cities in India. The IT industry is one of the biggest industries of Pune, and this thesis tries to explore the widespread spin-off effects this has. The IT industry was welcomed with open arms into the city in accordance with the IT policy of the state government of Maharashtra.

Many environmentalists have often stated that Pune is growing out of control because of the IT industry. That the various tax concessions and allowances are not contributing enough, and that the massive development that has taken place affects the city's environment. This thesis explores the reality of these perceptions. The main objective is to map the range of economic and environmental effects of the IT industry on the city of Pune. The OECD Pressure State Response (PSR) framework is the tool the thesis uses to identify and analyse various environmental effects. Where data is unavailable, scenarios project the scale and level of the possible effects of the IT industry on the city. The study explores the two-fold effect of the IT industry on the city's environment, namely: at the industry level and at the employee level. The reason to include the latter is to examine the entire gamut of environmental effects due to the industry in the context of high migration and high consumption by employees. The available data is analysed in a variety of ways to be able to draw conclusions. In terms of environmental effects at the industry level, e-waste and transport congestion feature very strongly compared to electricity consumption.

An overview of what the additional pressures on land (housing) and basic services, electricity and transport are aims to quantify the effects at the employee level. The effects of these pressures arising from industry on the city are seen as being high.

The taxes and revenues that the city receives from the IT industry and the employment created help to quantify the economic effects. These can be either direct or indirect effects. From the data gathered and most importantly from the interviews, the economic effects

on the city are high. Unfortunately, the city does not have a way to monitor these effects through a cost and benefit analysis. The thesis seeks to explore these connections through calculating the carbon dioxide mitigation costs, or the cost of recycling one ton of PC e-waste.

The thesis also looks at the implementation of the IT policy in Pune. The city does not implement every clause of the policy. This is mostly related to the collection of the goods tax and property tax, for which the IT policy basically gives waivers. In terms of the effects of some of the clauses, the thesis tries to put into perspective the connection between traffic congestion and the allowance of double Floor Space Index (FSI) for the IT industry.

Given the nature and scope of the thesis, it was not possible to dwell in depth on each aspect. Also given that wherever data is not available, it has sometimes been necessary to project scenarios to explore the possibilities, but these may not be considered absolute. The analysis of the environmental effects using the PSR framework helps to scientifically define various indicators and establish a cause and effect relationship. Improvisations can be made on the basic model, and can be used for other kinds of analysis as well. In conclusion the thesis sheds light on the overall effects of an economic policy by mapping the economic and environmental effects that arise from that activity.

SUMMARY 33

Formalizing Bicycle Taxi Operations as a Sustainable Means of Public Transport in Mzuzu City, Malawi *Views of Operators, Users and Local authorities*

Author Mphatso Chibvunge-bvunge Kadal
Country Malawi
Supervisor Marijk Huysman, MA (IHS)

This thesis seeks to explore how informal bicycle taxi operations (as paratransit) can be formalized and explores their contribution to sustainable public/urban transport in Mzuzu city, Malawi. The main objective of this thesis is to explore how bicycle taxi (Sacramento) operations contribute to sustainable urban transport and the policy options for its formalization in Mzuzu city. The research poses the following questions: What are the characteristics of bicycle operators and what is the current organizational set-up of the operations? Do bicycle taxi operations contribute to sustainable urban/public transport in Mzuzu City, and what are the major advantages and challenges? How do different stakeholders conceive the future of bicycle taxi operations in Mzuzu City? What are the policy and support mechanisms required to facilitate bicycle taxi operations in Mzuzu city?

The research methods include: (1) a background literature review which provides a conceptual framework for the study; (2) a questionnaire survey of various stakeholders, i.e. bicycle taxi operators, bicycle taxi users, other road users, city authorities and government departments; (3) individual case interviews; and 4) photography. The background literature covers issues pertaining to sustainable urban transport, paratransit/informal transport operations, the bicycle as a means of paratransit, bicycle transport and safety, advantages and challenges of paratransit, and the regulation of the non-motorized paratransit.

The main findings and analysis of this study mainly focus on: (1) Operator characteristics; (2) Organization of bicycle operations; (3) Sustainability of the bicycle taxi operations (advantages and challenges); (4) Future perceptions of bicycle taxi operations; and (5) Policy options and support mechanisms to facilitate the formalization of bicycle taxis.

Bicycle taxis are operated by young to middle-aged males with a poor background, most of whom have a responsibility to support their families. These men usually stay within the city, in traditional and high-density unplanned settlements. The analysis also shows that, despite the existence of associations as reported by government officials,

most of the operators do not subscribe to the associations since these associations lack good leadership. The findings also reveal that the bicycle taxi operations lack proper regulation.

The study shows that the bicycle taxi operations are socially, economically and environmentally sustainable since they are reliable, promote social equity, affordable, accessible and do not cause any harm to the environment. This is despite the current perception that the bicycle taxis are not safe and comfortable. The analysis also leads to the surprising finding that most people still prefer that the operations continue, since they are regarded as essential because they are a source of informal employment to the urban poor and they also offer cheap and easy mobility to the city residents and their goods. All the stakeholders make suggestions for a number of improvements and these have been incorporated in the thesis's final recommendations as policy options and support mechanisms to facilitate and formalize bicycle taxis. Some of these include formulating city by-laws to regulate the operations at city level, the introduction of bicycle infrastructure, operator/bicycle registration and licensing, and strengthening the activities of the operator associations.

SUMMARY 34

Implementing Congestion Charge in Jakarta, Indonesia

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Supervisor Mansee Bal, MSc (IHS, EUR)

Transportation Demand Management (TDM) is one of the popular approaches in a sustainable transport policy. TDM consists of strategies to change travel behaviour through a demand-based approach in order to achieve efficient transport resources, improved environmental conditions, and to generate revenue. Road pricing is one of the incentives TDM strategies employ to encourage alternative modes of transport and reduce traffic volumes. A congestion charge is one of the options available as a road pricing mechanism. To date it has mainly been cities in the developed world, such as Singapore, London and Stockholm, that have implemented congestion charges.

Being the centre of the country's political, economic, trading and social activities, Jakarta is becoming increasingly congested every year. Apart from natural population growth Jakarta also has to deal with the commuters from the surrounding municipalities. As a consequence, this leads to severe congestion in the city, particularly in its central area on the radial highways during rush hours in both the mornings and in the afternoons.

To help reduce this traffic congestion Jakarta now employs TDM strategies as one approach. These strategies are made up of road pricing (toll roads), the Bus Rapid Transit system, and traffic restrictions (the so called three-in-one system). Despite these efforts there has been no significant improvement in Jakarta's traffic congestion. The authorities expect the planned introduction of congestion charges (as one of the TDM strategies) to be key in solving Jakarta's traffic crisis. This system aims to replace the 'three-in-one' system.

The research aims to assess the effects of implementing a congestion charge in Jakarta as a road pricing mechanism for TDM. This research has been developed through the review of relevant literature, examining congestion charge applications in theory and practice as a road pricing mechanism for TDM. It assesses the current transport infrastructure and any related policies for accommodating the congestion charge in Jakarta and examines the opportunities and challenges and the measures needed for its implementation.

The research notes the opportunities and challenges of implementing a congestion charge in Jakarta. These are classified in the following five aspects: (1) institutional capacity (including the legal framework, technology and enforcement); (2) political support; (3) the public transportation system; (4) the road network system; and (5) public acceptability. The research looks into these opportunities and challenges in detail. Then it suggests the measures necessary to implement a congestion charge in Jakarta based on these aspects.

A congestion charge can be implemented in Jakarta as a road pricing mechanism for TDM as long as measures for implementation as mentioned in the fourth part of the research question are fulfilled. However, given the government's target for implementation of the end of 2012, many remain pessimistic about whether this target is realistic.

SUMMARY 35

Customers' Satisfaction with Clean Drinking Water Provided by the Lahore Cantonment Board (LCB), Pakistan

Author Omar Saeed

Country Pakistan

Supervisor Ogenis Brilhante, PhD (IHS)

Clean drinking water supply lies at the heart of household activities and the maintenance of public health. Recently, a phenomenal increase in demand for water, mainly in urban areas, has created an urgent need for improved water management. Urban water distribution networks all over the world are under immense pressure to supply clean drinking water for household customers at all times. Any disruption or inconsistency in this service, no matter how short, has serious ramifications on all kinds of customers. For these reasons water supply agencies as well as their regulators are becoming more and more sensitive to consumer protection issues and customers' opinions about the quality of service and its performance. To ensure customers' satisfaction public utilities are adopting benchmarking concepts with a view to comparing their own practices and processes with top performers in the same trade. In the context of customer satisfaction this approach helps them to identify and adopt best practices to improve their own processes.

This aim of this research is to find out the level of satisfaction of the residents of Lahore Cantonment with the clean drinking water provided by the LCB. This investigation revolves around three main research questions that encapsulate the main aspects of clean drinking water that are vital for the customers of LCB for judging their level of satisfaction. The first research question is about the overall satisfaction of people with the clean drinking water whereas the second one focuses specifically on the aspects of the water when customers complain, such as quality, quantity, continuity and price. The last question concentrates on customer satisfaction with the way in which the LCB responds to their complaints.

A survey serves as the main investigative tool in order to address the aims of the research. The research in Lahore Cantonment (population 268,166) examines two kinds of households with regard to income, i.e. high and low income. The data include primary and secondary data. The research instruments consist of a combination of a survey with questionnaires, and in-depth and semi-closed interviews. Questionnaires are used to

collect primary data from customers with respect to their response regarding the quality, quantity and continuity of water, the monthly tariff, and the handling of complaints by the LCB authorities. Semi-structured and in-depth interviews are used to collect primary data from the officials of the LCB, and others. The secondary data comes from readily available compendia and reports of LCB. Frequency distributions and percentages are the main analytical methods.

During the fieldwork it became clear that LCB's water supply systems are characterized by contamination of drinking water through sewerage wastewater entering the old and rusty water pipelines, a lack of proper treatment other than chlorination, an intermittent water supply (8-10 hrs a day), a low per capita water supply per day, and low responsiveness to customer complaints. The results of the research initially show that a majority of customers belonging to both the high- and low-income areas are generally satisfied with the clean drinking water provided by LCB. However, a deeper analysis of questionnaires, surveys and interviews (corresponding to the second and third research question) reveals that due to various reasons more than a quarter of them are not satisfied with various aspects of the drinking water supplied.

It is a matter for concern that the LCB has no mechanism in place to ascertain the customers' satisfaction and neither is it using any form of benchmarking and key performance indicators to measure, monitor and improve its performance. This explains why more than a quarter of the customers in both the income groups have serious reservations about the various aspects of the drinking water supply, such as quality, quantity and continuity, and the responsiveness of the staff to customer complaints. The situation is expected to get worse if immediate corrective actions are not taken by the LCB.

SUMMARY 36

Assessing Urban Rail Transit Ridership and System Sustainability in Los Angeles, USA and Rotterdam, the Netherlands

Author Stephen Kentfield Hickox

Country USA (Country of research: the Netherlands)

Supervisor Harry Geerlings, PhD (EUR)

As current trends show the urbanization of metropolitan areas increasing, so too does the number of automobiles congesting the urban fabric of cities around the world. This has been created as society sprawls towards the periphery for cheaper land with longer commutes towards the economic centre. Local governments then construct public transit infrastructure in an effort to decrease automobile use around their surrounding environs.

As infrastructure projects are completed, congestion problems remain within and around the urban region, with most governments choosing to build more roads to cater to society. Urban rail transit can cater for the mobility needs of large urban regions with the help of contingent multimodal policies and measures. Despite the popularity of the private car, this study aims to assess the ways that local governments and transit authorities can implement specific policies and strategic measures towards increasing urban rail transit ridership in Los Angeles and Rotterdam. This international comparison will highlight the differences between American and European transit planning practices. The study reviews policy documents and contextual studies from local, regional and national governments as well as undertaking in-depth interviews with officials from government and transit authorities.

A set of criteria are set out to develop the comparison between the urban rail transit systems in Los Angeles and Rotterdam. The LA Metro system currently operates two heavy and three light rail lines with an average of 301,501 passengers every weekday. In comparison, Rotterdam's RET system consists of five heavy rail and nine tram lines with an average of 509,600 passengers every weekday. With an urban population of 16 per cent the size of LA, Rotterdam outperforms its urban rail transit passenger rides by 70 per cent. These figures have been derived from indicators (policies and measures) developed from this studies' conceptual spider models. The major factors that have contributed to the increase in ridership is the use of parking policies, transit oriented development,

fare pricing and mobility management. LA has achieved a 16.7 per cent increase in urban rail transit ridership over the past five years, from 2006 to 2010, but still has yet to achieve higher levels than Rotterdam. With varying governmental and transit authority levels, Rotterdam has accomplished a greater coverage and modal choice selection than LA. As LA consists of a single transit agency, a future increase in the number of passengers using the urban rail transit system is highly feasible.

A sustainability assessment of each city's rail systems indicates that Rotterdam's choice in purchasing electricity from a company that produces 100 per cent renewable energy will provide great benefits for future generations as the RET aims to achieve its goal of a 50 per cent reduction in emissions by 2025. In contrast, LA is also attempting to tackle climate change through expensive internal measures that are costly in nature and will only have a marginal effect on the climate.

Overall, for Rotterdam to achieve further increases in urban rail transit passenger numbers, policies and measures along with minimal infrastructure will be the solution as the current rail infrastructure supply is apparent and working well. As with the case of LA, the need to couple increased rail infrastructure supply with policies and measures that lead toward a multimodal split for system integration are critical in the coming years. Ultimately, policies and measures are never going to be enough, so there is a need for a systematic connection with infrastructure implementation for a more sustainable public transport system in the future.

SUMMARY 37

Factors Influencing Affected Group Participation in Urban Redevelopment in Addis Ababa, Ethiopia

The Case of Senga Tera-Fird Bet I Project

Author Ezana Haddis Weldeghebrael

Country Ethiopia

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The city administration of Addis Ababa is undertaking the Senga Tera-Fird Bet I Project and 14 other urban redevelopment projects. However, so far no study has been conducted that critically analyses affected group participation in the redevelopment process in Addis Ababa. This study, therefore, aims to assess the factors that facilitate or hinder affected group participation in the urban redevelopment process in Addis Ababa by taking Senga Tera-Fird Bet I Project as a case study. The study employs an in depth interview with 26 key informants, a desk review of relevant publications and an archival research of official records. The findings are analysed using both qualitative and quantitative methods of analysis.

The study reveals that the Senga Tera-Fird Bet I Project is the first urban redevelopment exercise undertaken by the new city administration with determination to make it more participatory. The implementation of the project has been delegated to the sub-city with close follow-up of the senior city officials. The project office at the sub-city level has sufficient staff, but some of the staff lack communication skills and a mandate to negotiate. The planning process, however, is expert driven with a one-way information flow through surveys. The public consultation commenced immediately after the finalization of the Local Development Plan with a view to convince the public of the benefits of the project. Among the few concerns raised by the public are: affordability, job creation and a revision of the compensation on offer, some of which have been partially met. There are three organized groups of residents, namely: public rental housing, private homeowners and commercial premise renters which together make up a government representative committee. Apart from the first group, the latter groups have been successful in pressurizing the city government to get some of their concerns at least partially met. This was mainly due to the leadership capacity, organizing and resource mobilizing capacities of the two groups.

The project has benefited the livelihood of some while at the same it has also adversely affected that of others, particularly those who moved into other public rental housing. The study suggests that the affected group and the government have different opinions about the outputs of participation. The majority of the government officials believe that the project is very much demand driven, very efficient and really effective; while the majority of informants from the affected group see it otherwise. The project has led to the breakdown of the social network of the key informants of the study and has led to the resettlement of many residents in the about to be demolished areas. On the other hand, the project offers on-job training for the sub-city and the city administration, however, the new guideline gives less room for participation.

Based on the findings, the study concludes that political leadership by city and sub-city officials, institutional arrangements and organizational and resource mobilizing capacities of the residents' representative groups has facilitated the participation process. However, the participation process has been negatively impacted upon by the following: the overemphasis given to the landscaping of the area, the manner of initial consultations during implementation; the limited 'consultation' status of resident's participation; and an instrumental view of participation and the technocratic nature of the planning process. In addition, the project is seen by some sections of the affected group as being less uniform in terms of its coverage, less responsive, less efficient in use of resources, and less sustainable, suggesting a degree of failure in achieving its objective regarding participation. The study concludes by seeing greater flexibility in the implementation and participatory planning in a resettlement plan as being essential.

SUMMARY 38

Transnational City-to-City Partnerships as Strategic Tools for Sustainable Urban Development

The Case of the Haarlem (the Netherlands)-Mutare (Zimbabwe) City Link

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This thesis seeks to explore the value of north-south transnational city-to-city partnerships otherwise known as c2c, as instruments for sustainable urban development, through the case study of the Haarlem-Mutare City Link. Through c2c, communities may assist one another by means of knowledge sharing, transfer of resources and technology and joint cooperation.

However, despite the apparent added value of these partnerships, they are often met by scepticism or suspicion due to a lack of knowledge concerning their very existence, let alone their benefits. Often labelled as just another waste of tax-payers' hard earned cash, c2c face other criticisms such as public ignorance or apathy, strange choice of cities i.e. compatibility and in the case of north-south c2c, asymmetrical power relations and learning.

In light of this, the main objectives of the study are to establish what factors contribute to the performance of the Mutare-Haarlem city link in terms of processes and outputs of the partnership, and also to establish motives for participation from both parties. In addition, it seeks to establish who the actual and intended actors are in the partnerships and their level of participation. By also exploring notions of mutuality, given that north-south c2c operates under different socioeconomic, institutional and political conditions, the study's aim is to offer a holistic view of the processes, actors and outputs of c2c in Mutare and Haarlem, including challenges and success factors.

Primary data comes from in-depth interviews with respondents from four main categories: those solely involved with the City Link, or the municipality, those with dual roles in the municipality and the City Link, and those associated with the City Link indirectly through some advisory role or in a role as an observer. Secondary data methods include documentary and archival material. The literature review explores concepts such as partnership, mutuality, sustainable urban development and north-south cooperation linkages. Embedded into these are topics such as c2c success factors, weaknesses and outputs.

Key findings indicate that the City Link has made several contributions, both tangible and intangible, to the sustainable development of both cities in various sectors. Findings also indicate that the Haarlem-Mutare City Link exhibits some characteristics that are arguably atypical for successful c2c as highlighted in literature. For example, due to political tensions, the role of the local authorities has devolved from active to almost non-existent and yet the Link continues to develop. Another atypical characteristic exhibited is that of not just personal learning but also institutional learning in the north from the south through adaptation of various Mutare educational projects in Haarlem. Although the research reveals mixed sentiments regarding the issue of reciprocity, there is a general satisfaction among participants that the partnership is indeed a reciprocal one.

In addition to this, from the findings, enough evidence exists to exonerate the City Link from other criticisms pitted against c2c in that it has minimal reliance on public funds. However, the extent to which the criticism pertaining to public apathy can be disputed is inconclusive in this study. Recommendations include a more concerted effort in Mutare to woo business sector involvement. Also, as a model c2c is recognized not only by international organizations such as the UN but also admired by fellow cities, Mutare should take the opportunity to help develop a framework for c2c policy in the country. Essentially, the study shows that c2c can indeed be a useful tool for sustainable urban development if the two cities put in their best efforts.

SUMMARY 39

The Impact of Information and Communication Technology on Improving Small and Medium Enterprises Performance in an Urban Kampung

The Case Study of Kampoeng Cyber RT 36 Neighbourhood of Patehan, Yogyakarta, Indonesia

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ICT (Information and Communications Technology) is an interesting phenomenon, specifically in the business world. It contributes to significant changes in many parts of the world where new SMEs (Small and Medium Enterprises) emerge and challenge the domination of established corporations. However, although many SMEs are able to seize its benefits, others are not so successful. Therefore, this study is interested to find out exactly how ICT can impact the performance of the SMEs. Several research questions, consisting of one main question and several sub questions were used to address the issue. The main research question was: How can SMEs utilize ICT to improve their business performance? The research also wants to discover: To what extent has ICT been implemented by SMEs? How did SMEs perform before and after ICT implementation? What is the capacity of SMEs to absorb ICT?

The research pursued the answers to these questions through devising a descriptive-case study. Data comes from in-depth interviews, secondary data collection activities and field observations. The research includes 11 interviews with respondents from a neighbourhood in Yogyakarta City, called RT 36 of Patehan. Ten of the respondents are SME owners, while one is the neighbourhood leader.

The research findings suggest that despite Internet illiteracy and limited resources, the residents of RT 36 have been able to build a computer-Internet network providing a 24-hour-a-day Internet connection. They call the network the 'Kampoeng Cyber' network. Most of the SMEs in the Kampung have integrated ICT into their businesses. The performance of these businesses as a result mostly saw improvement. A number of SMEs even managed to achieve exceptional improvements. However, some discrepancies are also recognized in which the respondents with more extensive ICT interventions have less performance improvement than some with less extensive ICT. This finding indicates that the performance of the SMEs does not automatically improve following

ICT interventions. Further analysis suggests that the degree of improvement may relate to the Absorption Capacity of the SMEs. Absorptive Capacity has four aspects, namely: Acquisition, Assimilation, Transformation and Exploitation. Of the four aspects, significant variations among the respondents are evident in terms of Transformation. The SMEs that manage to significantly improve their performance are able to combine the new innovation with their old knowledge. It enables them to put ICT into the context of their existing business processes and they are then in a position to properly merge the new innovation into their working environment. The research also indicates that Absorption Capacity shows a strong relationship to entrepreneurship, social capital and networking by the SMEs. These aspects help the SMEs to overcome the barriers to ICT absorption.

The research finally concludes that SMEs can effectively utilize ICT to improve their business performance by having sufficient levels of Absorption Capacity. Although all aspects should be present, Transformation play a significant role since it relates to placing ICT into the specific context of the SMEs. SMEs should also possess entrepreneurial capital, adequate networking and an appropriate understanding of the purpose of ICT interventions. Mere investment in ICT without full understanding of its own situation may make it more difficult for an SMEs to integrate ICT into its business processes and hamper its optimum utilization for performance improvement. This finding is relevant for policymakers. Providing grants from revolving funds without any proper assistance to the SMEs might not be enough to improve their performance. Intensive campaigns and training to improve their Absorption Capacity are essential to ensure that SMEs can maximize their resources and potential for grasping market opportunities.

SUMMARY 40

Effects of Land Titles on Access to Credit

A World Bank Programme in Lima, Peru

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This thesis focuses on the effects of land titles on access to formal credit as a means to invest in small businesses in two settlements in Lima, Peru. It is about a programme carried out by COFOPRI and promoted by the Peruvian government and co-financed by the World Bank aiming to alleviate poverty and improve the livelihoods of the new formal settlers through three specific goals:

- To facilitate the access of the low-income population to formal sector credits using their title deed;

To promote the formal real estate sector market in poor urban neighbourhoods; and

- To provide incentives to invest in small enterprises, housing and basic services.

This land titling programme is based on the theory of Hernando De Soto, which argues that informal properties can be turned into tradable commodities and thus can be used to accumulate capital for investment in better houses. Investment may also be made to start small businesses but this has not materialized. The objective of this research is to ascertain why this has not happened given the fact that the project was specifically designed to enable beneficiaries to use their title deeds as collateral to gain capital for starting small businesses.

The findings focus on different aspects of accessibility to formal credits from the perspectives of both borrowers and lenders in an attempt to answer the main research question:

Why has the increase in access to formal credit been less than foreseen by the Land Titling Programme?

In order to answer this question, the study explores the following sub-questions:

- What are the lending criteria that banks apply to the poor?
- What is the household need for formal credits in relation to business investment?
- How far can vulnerable households assume the risk of formal credit?

- What have been the sources of finance so far used by the beneficiaries of this programme?

- What have been the other benefits of having a land title?

Since De Soto argues that formalizing land tenure will alleviate poverty by increasing access to formal credit using a title deed as collateral, the concepts of informality, access to formal credit by the poor and poverty are covered in Chapter 2.

This study looks at two human settlements located in the extremely poor areas in the Northern Cone of Lima, Peru. Both quantitative and qualitative research instruments have been used, including: a survey, in-depth interviews, case studies and two focus group discussions. The researcher employs a combination of surveys and in-depth interviews and focus group discussions with the beneficiaries of the land titling programme. Data has been cross-checked using in-depth interviews with senior officials from various micro-financing agencies and with officials from the World Bank and COFOPRI.

The main research findings suggest that no title deed is required to obtain access to formal credits. Commercial banks and micro-finance lending institutions in Peru base their assessment on the ability of the borrower to repay.

Another aspect of De Soto's theory is that he assumes that all poor people are efficient entrepreneurs in possession of dead capital, that is capital that cannot be used as collateral to access formal loans, and therefore cannot develop themselves as entrepreneurs. But of the 70 survey respondents, only three were micro-entrepreneurs (4 per cent), indicating that not everybody is an entrepreneur, but rather only a very few. The majority, who are not entrepreneurs, will not make a request for a loan to develop non-existent businesses. Affordability and vulnerability are two concepts that De Soto does not take into account because when poor and vulnerable people request a formal loan it will hardly lead to business development. This may explain why fewer people than expected request access to formal sources of credit to develop their small businesses.

In the conclusion of the thesis the value of De Soto's theory was considered and recommendations are made to improve the development of settlements in poor urban areas in Peru.

SUMMARY 41

Open Building as an Approach for More Effective Core-Housing Implementation? An Exploration

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Recently, the field of urban development has witnessed a renewed interest in the core-housing concept. The rationale is to re-establish incremental housing as a proactive strategy for satisfying housing demand in rapidly urbanizing cities and as an alternative to slum upgrading. As the concept once again gains the attention of practitioners, it is crucial to integrate 'what was learnt last time around'. To avoid a strong sense of 'dèjà-vu' about the way the concept was understood in the 1970s, it would help to look for more effective implementation and to link the concept to contemporary debates on urban development. An interesting way to focus thinking may come from the field of architecture, where open building approaches are gaining in importance and leading to designs with the potential to change over time. Currently, the field is still divided in two largely disconnected disciplines, architecture and urban development (comprising housing related studies). Evaluations and conclusions are as a result rather fragmented. This thesis explores the potential of a crosspollination of disciplines: could an open building approach lead to more effective core-housing implementation for low-income households living in rapidly urbanizing contexts?

To answer this question, this thesis identifies three key elements of 'effective core housing' – sustainability, adequacy and legitimacy – and these are then simplified into a workable tool that allows for assessing the trade-offs made in the implementation process. Particularly promising as a starting point for this exploration are several common denominators in the paradigms of the 'people's housing process' and of 'open building approaches' – respectively in Turner (1979) and Habraken (1998). These common denominators centre around a discourse of 'users', 'building control', 'autonomy' and seeing 'the act of building' in the light of the temporal dimension.

Given that no core house is implemented in a vacuum, this study employs a case study method to gain an understanding of the consolidation process over time and 'on the ground'.

The core-housing implemented in Khayelitsha, Cape Town, in 1983 – a settlement occupied in 1985 – offers a unique opportunity to analyse consolidation over more than 25 years as well as to understand a project from its embedding in a tight land- and housing system. For the fieldwork, 25 plots, primarily on the basis of the level of physical consolidation of the plots, form the focus of the area selected for the study.

Several visits to the location, including semi-structured interviews and open conversations, as well as photography, aim to identify trends in the consolidation process over time. Triangulation with 1996 aerial photography and expert validation seek to verify findings and interpretations, as well as a focus group discussion with key informants and close cooperation with a local Community-Based Organization (CBO).

Five trends are identified through the case study analysis, followed by a discussion of considerations for future core-housing implementation. Possibly the most sobering finding is that, from a time perspective, the plot potential – not so much the superstructure – has been the most flexible element of the 'core-housing concept'; and that its size allowed for a variety of forms of densification. If indeed the plot is the prime enabler, the inevitable implication is that the core-housing concept requires considerable rethinking. Practitioners must engage in thoughtful consideration of the concepts' sustainability aspect in relation to plot sizes, balancing negative consequences of low-density (commonly referred to as 'inefficient land-use') – and their direct impact on low-income households – with the need to prepare room for future densification.

During the analysis of extension 'trails' (for example the timing and material use of subsequent extensions), another interesting trend arose. There has been a steady shift away from the use of impermanent material towards the use of conventional material – mainly brick or block, based on a strong intrinsic motivation of low-income households to 'achieve' these 'higher level' extensions. In the light of progressive realization of adequate housing, inherent to the core-housing concept, there is a need for a sensitive proactive approach by municipalities that moves away from perceiving impermanent extensions as 'slummification' but instead inclines towards a more safe and resilient 'product'.

The open building approach has come back on to the scene, not as a building concept, but through the principle of *zeggenschap* – or *distributed* decision-making in building control. It is argued that *zeggenschap* may serve as a fruitful principle (or 'way of seeing' the built environment) to articulate thinking on core-housing towards more effective implementation, whereby different stakeholders play different roles at different levels of the building over time.

This exploratory and qualitative research provides several indicators and considerations that may give direction to further studies and implementations towards more effective core-housing for its targeted beneficiaries. The conceptual framework of the thesis offers a useful tool to help assess the inevitable trade-offs between sustainability, legitimacy and adequacy made during the implementation process. A serious challenge for future implementation is to give targeted beneficiaries a level playing field in decision-making as early as possible in the housing process so that they take ownership of the core-housing concept.

SUMMARY 42

A Competitive Rotterdam

An Investigation into Rotterdam's Competitive Status Vis-à-Vis Its Main Challengers – Hamburg and Frankfurt – in the Global Market

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Rotterdam is considered to be an important source of revenue for the overall Dutch economy. The Port of Rotterdam is the largest in Europe and is celebrated around the globe for its efficacy in all port-related sectors. The issue is, however, that the city economy and overall urban quality are outshined by the port, and are thus gradually failing to meet the new multifaceted demands of its users. Changes in the world order define cities as the new economic, political and social driving forces, therefore Rotterdam has to improve its position and compete for higher status with other cities in the system. To obtain higher levels of competitiveness, cities work hard on their overall attractiveness and appeal to visitors, companies and investors, and on forming as many connections as possible to other cities and economic sectors that would help expand their city economy, their market share and ultimately provide all of the city's users with more opportunities and activities.

Looking at some of Rotterdam's competitors – in this case Hamburg and Frankfurt – is an important step towards reinvigorating its image as a global city. Hamburg and Frankfurt each have their own story of how they generate and maintain the allure that brings clusters and investors, as well as improve the overall quality of life in the city. In order to get an insight into the mechanics of all three cities, it is important to consider current trends in the global market, urban competitiveness, the networks that cities form in order to strengthen their positions, and ultimately the existing hard and soft factors that attract users and convince them to stay. Therefore, highlighting investment flows was the first step in identifying the locations where Rotterdam, Hamburg and Frankfurt agglomerate their economic clusters, after which further qualitative research aims to conceptualize the attractiveness of these cities. Furthermore, interviews with experts from all three cities have been undertaken, and added to material gleaned from visits to enhance the study by providing first-hand experiences, in order to fill in the gaps left by hard, more tangible data.

Hamburg and Frankfurt are much stronger competitors than Rotterdam, and the data seem to support this claim. The number of their connections to other cities and economic sectors in the global market far exceeds those of Rotterdam. Rotterdam's economy is too narrow, too port-oriented, and thus it is lacking in its capacity to expand its market share and establish more connections. This, however, is both a cause and a consequence of its current urban context, which offers promise but includes many inherent issues that need to be addressed. The economy and urban quality are inextricably interlinked; therefore improving one will most certainly have a positive effect on the other. Rotterdam, like Frankfurt, has a hard exterior, but has potential to flourish in sectors that are more in the culture and leisure sectors, something that Frankfurt has already achieved. This would humanize the city and improve its appeal to residents, allowing the city to work with investors aiming to create more spaces that users could not only work, but also really live in, which would ultimately bring other economic activity into the area, and thus offer an improved basis for network building. To find innovative ways of improving both market and residential quality, Rotterdam can learn quite a lot from Hamburg. Also a port city, Hamburg, however, is a city where living is a top priority.

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