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Brandenburg University of Technology Cottbus

Megacity Research Project TP. Ho Chi Minh

Integrative Urban and Environmental Planning Framework

Adaptation to Climate Change

2. DPA – Megacity Project Roundtable

Building Climate Change Adaptive Capacity in Urban Planning

Ho Chi Minh City
Department of Planning and Architecture
March 15, 2012

Workshop Report

2. DPA - Megacity Project Roundtable on

"Building Climate Change Adaptive Capacity in Urban Planning"

Thursday, March 15, 2012; 10.00 am – 12.00 am & 1.30 pm – 5.30 pm

Ho Chi Minh City
Department of Planning and Architecture (DPA)

ARC Meeting Room & 1st Floor Conference Room
168 Pasteur, District 1
Ho Chi Minh City

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Outline & Purpose

The mega-urban region of Ho Chi Minh City (HCMC) is one of the world's regions most affected by climate change. It is argued that inclusive and effective urban planning holds the key for a climate change adapted urban development. The basic motivation of the Megacity Project is to increase the response capacity of HCMC by strengthening the urban planning system and mainstreaming climate change action.

The roundtable aimed to discuss and clarify formal top-down oriented approaches and instruments for a readjustment of the legal framework that frames lower order decisions and processes as well as informal and non-binding approaches to improve local climate change response capacity in the urban planning and construction sector. The significance of urban planning as mandated discipline to manage a sustainable and climate change adapted urban development was stressed by all presentations and during the discussion.

The morning workshop at the Architecture Research Centre (ARC) was focussed on recent findings of DPA's study on living pattern and housing typologies in HCMC's rural areas and on first results of the exemplary urban design studies by the Megacity Project. The afternoon session started with the signing procedure of a renewed Memorandum of Understanding (MoU) between the DPA and Megacity Project. The roundtable gave information on Design Guidelines/ Design Coding, Strategic Environmental Assessment and Land Use Planning as formal planning instruments and subsequently on design handbooks as informal and communicative approaches for mainstreaming climate change knowledge into planning.

The exchange of views, strategies, and experiences concerning climate change response reached a common understanding on how better urban planning can contribute to climate change adaptation and how urban planners and related professionals can equipped best to deal with these issues.

The roundtable aimed primarily to strengthen administrational capacity in the DPA, subordinated departments (e.g. Urban Management Divisions at district-level) and other relevant authorities (HCMC Institute for Development Studies, Urban Planning Institute, Departments of Natural Resources and Environment, of Transport, of Planning and Investment, etc.). Therefore, it was intended to assemble experts from these institutions. Additionally, the audience was broadening to representatives from local academia (HCMC University of Architecture) and to private stakeholders engaged in the fields of planning and building (planners, architects, representatives from developers, etc.).

Welcome & Introduction

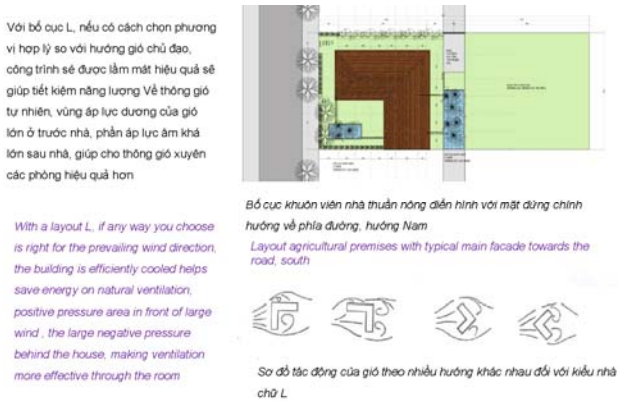
Frank Schwartze
Vice-Project Leader
Megacity Research Project
University of Cottbus

Visiting Prof. Frank Schwartze opened the morning session and welcomed all participants. He introduced the programme and pointed out, that in contrast to the afternoon agenda this session will focus on approaches and findings for a climate change adapted urban form.

Living Pattern Study and Housing Model Design

Nguyễn Anh Tuấn & Nguyễn Ngọc Uyên
Vice-Chief & Assistant
DPA's Architecture Research Centre

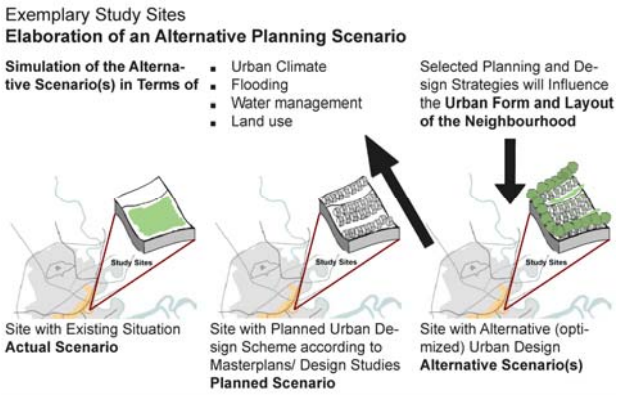
Mr. Nguyễn Anh Tuấn and Mrs. Nguyễn Ngọc Uyên, both working for DPA's subordinated Architecture Research Centre (ARC) gave insights into the recent "Living Pattern and Housing Model Design Study", conducted within the framework of the city's "Rural Housing Research Programme". An initial analysis of the traditional rural living pattern in HCMC concludes with the evidence of different ecosystems and therefore of slightly different living styles and traditional housing typologies in the rural north and the rural south of the city. The ARC developed a newly L-style rural house typology, which takes among others natural ventilation, solar gain, rainwater harvesting and natural building materials into account.



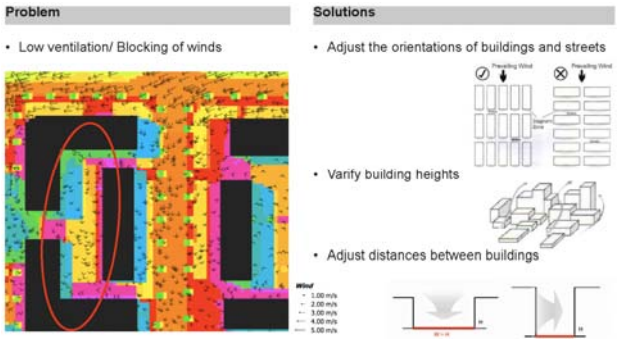
Planning Studies for Climate Change Adapted Neighbourhoods

Ronald Eckert &
Huỳnh Lê Hai Châu
Megacity Research Project
University of Cottbus

As main part of the morning session Huỳnh Lê Hai Châu and Ronald Eckert presented interim results of their current research on climate change adapted urban design. The two presented case studies play a significant role in the applied research of the Megacity Project, downscaling the city-wide climate and environmental assessment and demonstrating applicable adaptation measures on exemplary sites and real development projects in HCMC. The existing as well as the planned situation will be simulated regarding the urban microclimate, flood risk, water management, land use (and optional regarding the local traffic) for both sites. The research will develop different planning scenarios with an optimized neighbourhood layout and urban design as alternative to the existing design schemes.

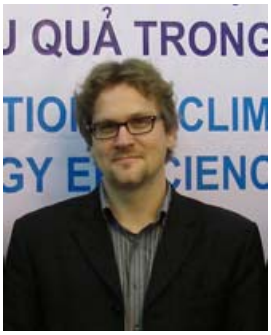


The first case study site between the Districts 5 and 6 is part of a larger development corridor along the newly opened East-West-Highway. This climate-sensitive inner-city area will be redeveloped to new urban quarters with a much higher building density in the future. The second site is a typical “green field” new housing development on wetlands and flood-prone areas in District Nha Be.



The research in this initial phase focused on the climatic simulation of different urban design schemes. The proposed new development for site one with high-rise buildings and lower ground coverage would enhance the local ventilation compared to the very dense and low-rise urban structure, today. However, there are options for optimization in terms of increasing the ratio of vegetation, the use of permeable pavements and the use of light coloured materials for buildings and the open space. For both sites the urban design scheme could be optimized in orientating the buildings and streets to the prevailing wind conditions and in varying the proposed building heights to support local wind turbulences. Additionally, first approaches for the integration of flood protection and storm water management strategies into the case study design schemes were presented.

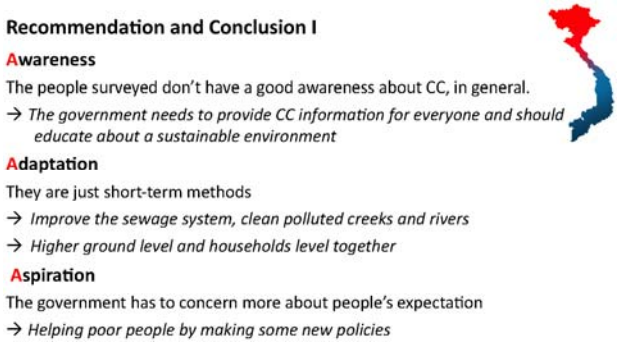
As local builders have still a large impact on the design of houses and neighbourhoods, a questionnaire to selected developers was recommended by the colleagues from the DPA. This survey should clarify the expectations and possible doubts from private development companies. Higher investment costs for climate changed adaptation should result in lower long-term maintenance costs.

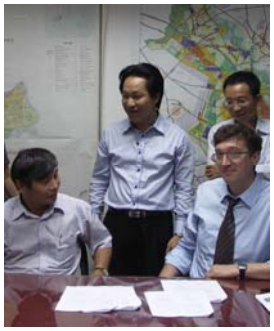


Awareness, Adaptation & Aspiration to Climate Change

Michael Waibel
Megacity Research Project
University of Hamburg

Michael Waibel completed the picture for case study site one with results from a survey on climate change awareness among local people in the Districts 6 and 8. The surveyed households are generally aware of urban flooding and react with local individual adaptation. There is an antagonism between expectations and fear towards external governmental adaptation measures.





Welcome & Introduction

Trần Chí Dũng &
Director
Department of Planning and Architecture HCMC
Frank Schwartze
Vice-Project Leader
Megacity Research Project
University of Cottbus

Mr. Trần Chí Dũng, director and host of the DPA and Frank Schwartze, vice-project leader of the Megacity Research Project opened the roundtable and welcomed all participants. Mr. Dũng stated that the DPA is in charge to advise the HCMC People's Committee and are about to report on this workshop. He was asking all participants to contribute to the discussion. He mentioned that the topic of climate change is at the top of the agenda in all departments and institutions of HCMC and he formulated his expectations towards the Megacity Research Project to contribute to DPA's climate change programme.

Frank Schwartze pointed out the purpose of the workshop, being the discussion on different top-down and bottom-up oriented approaches and instruments to mainstream environmental and climate change related concerns into urban and land use planning. Additionally, he introduced the main topics of the workshop, which were Guidelines & Zoning, Strategic Environmental Assessment and Land Use Planning as formal planning instruments and the Handbooks for Green Housing and Climate Change Adapted Urban Design as approaches for the dissemination of climate change related knowledge. Furthermore, he introduced the invited speakers.

Afterwards, Mr. Nguyễn Anh Tuấn gave an overview on the morning session to all new participants. He stated that the Megacity Research Project is on the "right track" regarding the case study work. But there still is the need of numeric validation to give more precise data to administration as well as investors.

Before getting into the thematic presentations and discussions the initial round finished with the official ceremony for the signing of a renewed Memorandum of Understanding (MoU) between the DPA and the Megacity Research Project. The attached Action Plan clarifies joint research action, events and products in the framework of the Megacity Research Programme and concretizes the contributions of the research project to the current climate change adaptation programme of the DPA.

Ho Chi Minh City Urban Planning and Climate Change Adaptation

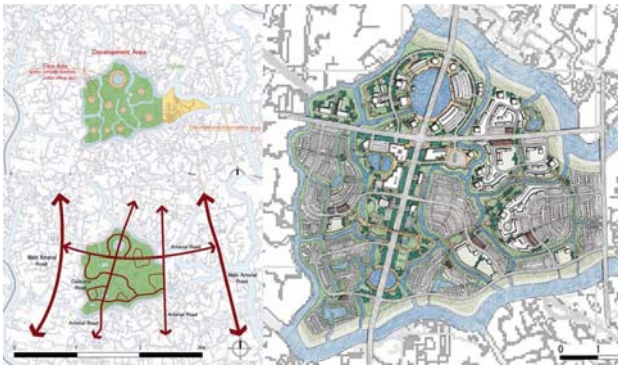
Lý Khánh Tâm Thảo
Vice-Chief
DPA's General Planning Management Division

Mr. Lý Khánh Tâm Thảo, vice-chief of DPA's General Planning Management Division started the afternoon session with an overview on the integration of climate change adaptation aspects into HCMC's newly adopted Master Plan 2025. He highlighted exemplary results from the preparatory study, done by the Japanese consultancy office of Nikken Sekkei, which surveyed the land conditions for the overall administrative area of HCMC.

Mr. Thảo presented two general concepts for the urbanization of rural areas. The "Eco-Belt Concept" proposes a high urban and building density along a green eco-belt for "good land" conditions, which basically mean elevated land above 2m MSL. The eco-belt should act as recreation area as well as climate function area, providing space for natural ventilation and rainwater retention. The "Cluster Development Concept" proposes an insular urban development for "bad land conditions", which basically mean wetlands and flood-prone areas below 2m MSL. This concept limits new urban projects on slightly elevated areas, while keeping the natural canal and river network preserved.

According to Mr. Thảo some of the basic principles of climate change adaptation recommended by the study are implemented into the new Master Plan. The challenge is nevertheless not only the mainstreaming of adaptation into specific plans, than the integration into urban planning in general. He raises the question on how to legalize urban planning guidelines. Additionally he mentioned repeatedly the conflict between climate change adaptive measures and economic benefits.

Khu vực đất xấu: Phát triển theo cụm
Bad land condition: Cluster Development



Tools and Instruments for Climate Change Adaptation in Urban Planning

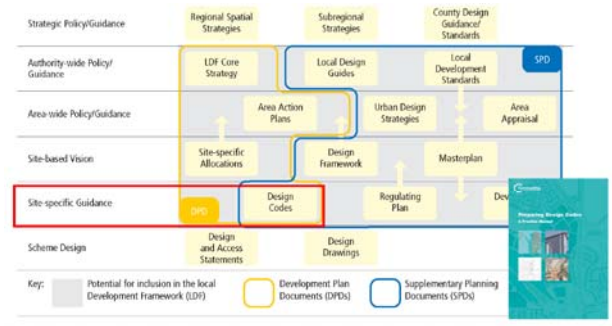
Ronald Eckert
Megacity Research Project
University of Cottbus

Ronald Eckert started with a brief overview on the complementary top-down and bottom-up approach by the Megacity Project to mainstream climate change adaptation into urban planning and with a systematization of binding and non-binding planning instruments related to different planning levels.

Integration of Climate Change Aspects - Design Coding & Zoning

Ronald Eckert
Megacity Research Project
University of Cottbus

At the urban design level Ronald Eckert presented the approach of Design Coding as a promising tool which is being used within recent climate protection initiatives of different countries. This approach considers that guidelines at the national or municipal level could be too general to effectively respond to the specific conditions of a site or project. Design codes are a distinct form of detailed design guidance that prescribes the three dimensional components of a specific development project and how these relate to one another but do not prescribe the overall outcome. A Design Code is therefore a set of specific and illustrated components with rules to guide their use in order to generate the urban form of a site. Design Codes could be easily combined with planning requirements at the zoning level.



Set-up of Specific Urban Design Requirements (Mandatory for a single Developer/ Project)

Integration of Climate Change Aspects - SEA & Climate Proofing

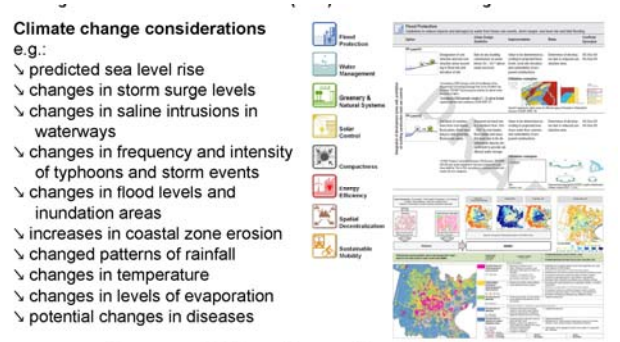
Ralf Kersten
Megacity Research Project
University of Cottbus

With his presentation on Strategic Environmental Assessment (SEA) and Climate Proofing Ralf Kersten added an approach for mainstreaming climate change adaptation into development projects and strategic plans, in particular at the city level.

The linkage between Urban Planning and environmental assessments in urban plans on every spatial level is formally set within the Law on Environmental Protection from 2005 and within the Urban Planning Law from 2009 in Vietnam. However, specifications for the procedure and utilization of SEA are lacking, yet and the implementation only started recently. The upcoming specification of SEA procedures in the field of planning and construction gives a “window of opportunity” to integrate climate change considerations like predicted sea level rise, changes in temperature, and changed precipitation pattern from the outset.

While SEA assesses the impacts of urban development plans and projects on the environment, the concept of Climate Proofing acts as some kind of reverse impact assessment, evaluating the impacts of the environment and in particular of climate change on urban projects. This approach, discussed as additional tool in western countries, could be incorporated in an integrated assessment method for Vietnam.

Mr. Hoàng Tùng stated that there is still a conflict between urban planning and environmental planning, represented by the two national ministries MoC and MoNRE, as both authorities declare its responsibility to specify environmental assessments. Additionally, he highlighted the current imbalance of economic and ecologic aspects in the decision making processes.

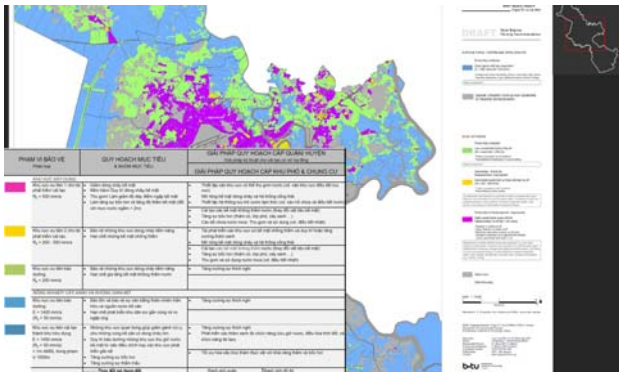


Content of SEA and Integration of Guidelines

Integration of Climate Change Aspects - Land Use Planning

Manfred Goedecke
Megacity Research Project
AG Goedecke & Welsch

Manfred Goedecke changed the focus on the potentials to integrate climate change aspects into HCMC's land use plan, prepared by the Department of Natural Resources and Environment (DoNRE). He explained the method from assessing environmental and climate change related criteria via the development of land use planning recommendations to the integration into formal planning documents on the example of stormwater management.



On the basis of assessed and simulated data regarding the soil coverage and surface run-off, Mr. Goedecke presented planning recommendations for different zones within HCMC's administrative area.

Handbook for Green Housing in Vietnam

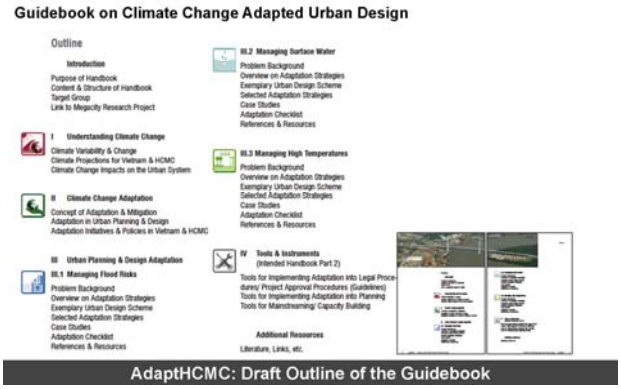
Christoph Hesse
Megacity Research Project
University of Darmstadt

Christoph Hesse introduced the audience to the Handbook for Green Housing, prepared by the Megacity Project and published jointly with Vietnamese partners. Contrary to the presented formal approaches, the handbook seeks to mainstream adaptation from bottom up. The book presents principles of climate change adapted and energy efficient buildings and tries to convince local building owners and developers.

Guidebook on Climate Change Adapted Urban Design

Ronald Eckert & Ralf Kersten
Megacity Research Project
University of Cottbus

At the end of the afternoon session Ronald Eckert and Ralf Kersten presented another handbook approach. While the Green Housing handbook focusses on the building level, the Guidebook on Climate Change Adapted Urban Design will illustrate climate change adaptation and energy efficiency measures at the neighbourhood level and will demonstrate their applicability and feasibility through urban design case studies.



AdaptHCMC: Draft Outline of the Guidebook

The Guidebook will act as a support tool for decision makers at local governments, in particular in the field of planning and construction (DPA, DoC, DoT, and Urban Management Divisions at city- and district-level). It was argued that the Guidebook should also act as urban design recommendations for private developers and investors.

Frank Schwartze is summing up the roundtable and thanking all participants for the discussion. The helpful remarks will be included into the preparation for the Urban Design Guidebook. He highlighted that climate change has to be seen as being part of a bigger picture of urban development and the integration of climate change needs integrated planning procedures like those presented in this roundtable.

Mr. Hoàng Tùng gave some additional closing remarks, also thanking all participants and expecting a continuously good cooperation with the Megacity Research Project, in particular after having signed a new Memorandum of Understanding. He looks forward to the next meeting to discuss a draft version of the Urban Design Guidebook.

Participants

(to be completed)