

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

The graduation plan consists of at least the following data/segments:

Personal information	
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Studio	
Name / Theme	Happy cities
Teachers / tutors	Marta Relats, Taneha Bacchin, Marcin Dabrowski
Argumentation of choice of the studio	<p>This thesis topic is supported by both Complex Cities and Delta Urbanism research groups. This thesis project will explore the governance and policies as well as how they support or hinder the sustainable development in the context of China. Complex cities focuses on investigation the role of urbanism in complex situations and in the context of internationalization. Besides, they also focus on the relations among design, planning and politics. This is highly relevant in the case of eco-city development in China, which showcases a mislink between planning, design, policies and implementation. On the other hand, this topic is also highly relevant to Delta Urbanism research group due to the location of chosen eco-city case - Guangming Shenzhen. Guangming is the new eco-city project announced by central government of China. It locates strategically between Guangzhou and Hongkong. Moreover, Guangming locates at one of the most urbanized delta area of China - Pearl River Delta. In that sense, this thesis will also explore the relation of urbanisation and ecosystem within the context of a highly urbanised delta region.</p> <p>Eco-city discourse will not achieve success without paying attention to either environmental technology, governance and discussion on visions. Hence, it is important to explore this issue with equal support from both research groups. The result will contribute to the topic of 'happy cities', which investigates the quality of life; and 'delta interventions', which explores the environmental design in relation to governance in the context of urbanized delta.</p>

Graduation project

Title of the graduation project	From eco-city to urban ecology – Exploring a new approach for Chinese eco-friendly new town planning
Goal	
Location:	Guangming, Shenzhen, China
The posed problem,	China’s rapid urbanization has resulted in extraordinary resource consumption and serious environmental degradation. In order to cope with these new challenges, China has been seeking for a new approach to urbanization. Thus, ‘Eco-city’ has become the most popular and widely adopted urban development concept. However, in the Chinese eco-cities practice, there is still a missing link between the ecological visions and the implementation process. Eco-city concept should be understood as a process that transforms the existing development approach to one that improves ecological qualities, restores ecosystem services and finally leads to changes of the present lifestyle. An integrated framework of guiding this transformation is urgently needed.
research questions and	How to incorporate urban ecology into the Chinese eco-city planning process to provide a strategic framework that could guide future development with ecological qualities and restore ecosystem services?
design assignment in which these result.	To create a strategic spatial framework that guides Guangming new town’s future development with more ecological qualities. By doing that, this thesis will also summarizes a reflection on general Chinese eco-city planning approach.

Process

Method description

In order to understand the phenomenon of eco-city development in China, and its differences from eco-city literature. Literature review as method is conducted in the first phase of research. After having a general idea and sources from various researchers, a fieldwork with interviews is used as method to have deeper understanding of the real conditions of Guangming eco-city, which is chosen as a test site to reflect this general phenomenon. Besides, mapping is also used as method to investigate the spatial dynamics between different systems in Guangming. At last, in order to compare different planning approaches' effectiveness, ecosystem services evaluation is used as method to come to the conclusion of whether more ecological qualities can be achieved by using urban ecology as framework to guide the strategic development.

Literature and general practical preference

The structure of theoretical framework for this thesis are composed by three topics that have supported to understand the eco-city phenomenon from different perspective. Eco-city as a discipline coined by Richard Register has broader and longer history of discussing the environmental friendly urban settlements.

As a discipline itself, eco-city theories vary from the discourse on the ecological urban form to principles of utilizing green technology. It also expands the discussion to different interpretation of eco-city. For example, from the article by Chien, it explores the understanding of eco-cities in China as land speculation local entrepreneurialism (Chien, 2013). Different observations and discussions on modern eco-cities in China will contribute to in depth understanding of this new urban planning model both in theory and in practice.

On the other hand, in the history of utopian thinking, ecological friendly urban environment has also been discussed in various literature on utopias. From Thoreu's utopia of ultimate simplicity to Howard's utopia of garden cities, the visions of imaging a perfect urban environment in harmony with nature has been contributing to formulating the visions for the modern discussion on eco-city.

At last, in order to put eco-city theory into practice, practitioners and policy makes also took reference from the literature exploring the urban ecology theory. Ian McHarg's 'Design With Nature' proposing utilizing environment assessment for land use planning has been widely used in the eco-city planning.

Therefore, by connecting three realms of three theories, the vision, ideology and action of eco-city will be clear. From the theory, it will lead to further discussion on alternative approaches of eco-city planning.

Reflection

Relevance

Social relevance

The scale of urbanization in China is without precedent in human history. The transformation is happening at an unbelievable speed and a vast scale, which results in huge growth as well as ultra complex problems. China's cities, already home to more than half the country's people, are growing by roughly the population of Pennsylvania every year. By 2030 they will contain around a billion people—about 70% of China's population, and perhaps an eighth of humanity. China's fate, and that of the Communist Party, will be determined by the stability of its cities.

Due to the drastic urban transformation, the environmental degradation becomes more and more severe. A study out just now from Berkeley Earth in California, written by Robert Rohde and Richard Muller, deserves attention. It concludes that air pollution in China, familiar to everyone, in fact does more damage than is generally recognized. The study finds that as a result of this pollution, some 1.6 million Chinese people per year, or more dramatically well over 4,000 per day, are dying prematurely.

With a huge scale and population, the policies Chinese government adopted will not only affect 70% population of China, it will also severely affect the surrounding countries, moreover the whole world. In that sense, the sustainability discourse in China is highly relevant not only to Chinese urban development, it is also an inevitable challenge for humankind.

Scientific relevance

In the past years, the cities around the world have been engaged in the discourse about sustainable development by diverse initiatives. Eco-city is one of the major discourse worldwide. Original eco-city concept was first raised by Richard Register, co-founder of 'Urban Ecology'. He wrote the book *Eco-city Berkeley: Building cities for a healthy future*, defining the eco-city as one built according to the principles of living within the means of environment (Register, 1973). Over time the term has been embraced by a growing number of academic and policy specialists, with the attempt to translate the general definition into workable principles for construction, production and consumption. However, no commonly agreed definition has emerged to date (De Jong, 2014). Consequently, the number of critical reviews of its actual policy intentions and implementation has grown significantly in recent years, especially with regard to its implementation in China (Cugurullo et al. 2013). Hence, it is crucial to explore the missing link between eco-city discourse and its implementation in China, and search for a way to let original academic ideas contribute to ongoing practice. Besides, it is crucial to critically review the motivation and how Chinese government implements the concept into practice before new eco-city projects create more environment degradation instead of prevent it.

Nevertheless, the 'eco-city' category's relatively high frequency over time and central positioning reflects the concept's long-ranging and broad-based treatment in the academic and policy debates (De Jong, 2014).

Time planning

Time frame for this thesis can be divided into three major parts. Theory and phenomenon research are the first part, which lasts from September 2015 to January 2016. Major content of this part will be delivered in P1 and P2, utopian envisioning research will last until middle of February. Second part will be the site study, which partial conclusion will be carried out for P2, and the site study will continue until P3. Last major part will be the strategic framework for eco-city development, using Guangming as a test site. Final result of this part will be showcased as a planning product, which will be reflected in a spatial design. In the end, an integrated conclusion will be carried out which focuses on the eco-city as an urban phenomenon in China, utopian visions behind Chinese eco-cities and a strategic framework for Guangming eco-city's development. Last but not the least, a reflection on the eco-city discourse and happiness in urban planning in general will be carried out, as well as a reflection on the process of this thesis research.

