

# “Certification Systems as a tool for Sustainable Architecture and Urban Planning, Case Study: Estidama, Abu Dhabi”

by Ismail Khater

supervised by Prof. Wolfgang Dickhaut and Dipl.-Ing. Anke Jurleit

Conventional building methods are continuing to stress the supply of available resources, including water, energy and materials, causing harm to the environment. In order to tackle these problems the building industry needs to embrace sustainable development methods and policies. One of the main approaches used to define and give solutions to these problems is adopting the relatively newly founded buildings and communities certification systems. As these certification systems are tremendously growing, it is important to continually examine their effectiveness, development path and results.

The objective of the proposition is to better understand the impacts, opportunities and challenges of the use of any certification system, by showcasing “Estidama”, Abu Dhabi’s certification system, addressing the local environment, social, economic and culture aspects. This is assisted by a local case study “Masdar City”, presenting two levels of study, the building and community scales. The research methods include examining available literature, as well as on site Interviews with clients, designers, engineering consultants, environmental consultants, project managers, contractors, facility managers, building information modeling experts, municipal officials, credits assessors, policy writers and government representatives, in an attempt to represent the collaborative effort from all parties involved in any project.

The interview results, as well as specific credits analyzed helped accomplishing the aim of sensitizing stakeholders and regulatory bodies about the benefits and deficiencies of rating systems. Furthermore a development of recommendations formulated in form of strategies and an action plan are presented, to aid enhancing new and existing certification procedures.

