

## Seminar on Latest Researches on Skyrise Greenery

# Re-thinking regulations: multi-scale and function-based biotic Roof Guidelines. About time for an overhauling.

#### Mr. Andrés Ibáñez G

PhD candidate, 4<sup>th</sup> year, Department of Architecture, the University of Hong Kong. 2010-2014.
Master Science in Building (Hons.), National University of Columbia, 2009.
Bach. Architecture (Hons.), National University of Columbia (RIBA certified), 2003.
Green Talents Award alumnus, BMBF, Germany 2011-2012.
Founding member, RECIVE. (Colombian Network of Vegetated Infrastructure).
Founding member of the Latin American Association of Vegetated Infrastructure, LAGIN.
Registered Architect. CPNAPA, Colombia.

#### ABSTRACT

Green roof markets have recently emerged in several cities of Latin America, such as in Bogota, being one of the most rapidly developing cities in the region. In response to the growing number of implementations, the city's Secretary of Environment published the Official Green Roof Technical Guidelines to promote and regulate the practice in 2012. These Guidelines incorporated its own distinctive elements to meet the local challenges after a process of socialized formulation: 1) New definitions and classification, 2) Function-based structure, and 3) Multi-scale and life cycle approach. These three aspects are discussed in comparison with component-based FLL guidelines.

The new definitions and classifications were based on differential scale performance, performance of components, and main purpose of the overall biotic roof. The function-based structure aimed to provide inclusive guidelines for distinctive system technologies including local adaptations and new developments, in comparison to approaches based on multi-layered systems. Guidelines were developed for 4 scales of performance: the engineered system scale, the biotic roof implemented, the overall building, and the ecological structure of the city. 5 stages of the life cycle process were addressed: Studies and design, preparation, installation, maintenance and disassembly.

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With the diversification of green roof markets and the engagement of different stakeholders in the process of local formulation, the guidelines are likely to set a proper understanding of the technology applied in local contexts, and provide new insights for the advancement of vegetated infrastructure regulation worldwide

#### CV

Andres Ibanez is a PhD candidate researching on environmental services produced by buildings in urban environments. His research aims to advance green building assessment methodologies to include appraisal of eco-productivity and environmental increments (net positive impacts) under the ecosystem service framework. He was one of the 20 young outstanding researchers awarded in Green Talents international competition, German Ministry of Education and Research (BMBF).

He is a pioneer researcher on vegetated architecture systems in Columbia and Latin America. He experimental living roof research under his master studies received honors from National University, and was awarded in local Davinci competition for postgraduate technology – based research projects, and was selected as a finalist on Innovators of America competition 2011. He is a co-founder of Latin America Green Infrastructure Association, the founder of Red Colombiana de Infraestructura Vegetada RECIVE (Columbian Network of Vegetated Infrastructure) and a member of the World Green Infrastructrure Network. He is the author of the official Green Roofs Technical Guidelines of the city of Bogota, Secretary of Environment, 2011.

Mr. Ibanez has been a teacher and a lecturer at the School of Architecture and Urbanism of Columbia, Pilot University of Columbia and T.A. at the University of Hong Kong on more than 20 courses related to sustainable architecture and building.