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BOOK OF ABSTRACTS

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Nature-based solutions for urban climate regulation and air quality

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The increase of population in cities associated with climate change impacts can create innumerable environmental, economic, and social problems, around the world. Urban areas have become more impermeable, with an increase fragmentation of habitats, ecosystem degradation, intensification of the heat island effect, water, air, and land pollution and consequently leading to deterioration of human wellbeing and disconnection to nature. The strategy for changing territories dynamics involves the use of Nature-Based Solutions (NBS) to promote multifunctional areas, operating at different scales and relying on nature to generate environmental (e.g., biodiversity conservation or adaptation to climate change), economic (e.g., job creation and property valuation) and social (e.g., water drainage) advantages.

The aim of the present study is to identify and characterize the main NBS that are being applied to mitigate two problems that many of Asian cities, including Macau, face: poor air quality and heat urban effect. The intention is to gather quantitative data to support a proposal towards a more sustainable city. The methodology will proceed with a state-of-the-art assessment followed by a systematic review focused on selected NBS. Statical analysis will be carried out for data assessment.

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