

The Impact on Waste production on Sustainability and the Metabolism of a City

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Abstract

With the majority of the world's economic activities and nowadays more than 50% of its residents concentrated in urban areas, cities have a vital role to play in the recognition of a Green Economy. The requirement to abide cities and urban development on the global sustainability agenda has been recognized and identified from environmentalist, stakeholders' mainly governmental bodies as well as industries (Shahrokni et al. 2015). Furthermore, according to European Environment Agency, (2006) more than one-quarter of the region of the EU has now been affected by urban land use. City metabolism is a multi-disciplinary and integrated platform that studies resources and flows of energy in Cities, LA as complex systems as they are shaped by various economic, environmental and social forces as well as from political parties

Also with a rising level of prosperity in industrialized countries, an increasing number of products and services are being produced and consumed. The amounts of municipal solid waste (MSW) have been increasing for years in many countries. This development is reflected in the amount of waste generated. According to the latest official Eurostat statistics (Eurostat 2011), the total waste generation in the EU-27 was more than 2.62 billion t. The statistics indicated that the total amount of municipal solid waste is continuously rising (Zorpas et al., 2015, Zorpas and Lasaridi, 2013, Salhofer, et al., 2008). At the same time Worlds Bang report (2012) focuses on waste generation (projection for 2025) indicated that in all Regions we will have a continual waste amounts and the per capital waste production varies from 0.77 Kg/day for SAR (South Asia Region) to 2.1 Kg/day for OECD (Organisation for Economic Co-operation and Development, region). The contradictions between urban development and the ecological environment became more and more important since modern industrialization has been implemented. Moreover the concept of Circular Economy is receiving increasing attention worldwide as aim overcome the current production and consumption model based on continuous growth and increasing resources input. The vision of a sustainable city includes modern buildings and vehicles, a vibrant economy, urban ecosystems and healthy living. The implementation of the circular economy strategy is directly related to the urban metabolism and the typical infrastructure that a modern city needs to minimized its environmental impacts and increase quality of life (Zorpas et al., 2017)

This paper aim to presents the drivers that affect the sustainability and the metabolism of the city due to the continual production of waste as well as to indicate the need for strategy development

Key words: city metabolism, strategy development, urban metabolism, circular economy, sustainable development, waste management, social attitude, social behaviour

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