

# 9 - 11 September 2020 | Bilbao, Spain

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WIT Transactions on the Built Environment International Journal of Environmental Impacts International Journal of Transport Development and Integration International Journal of Energy Production and Management



The International Conference on Urban Growth and the Circular Economy was held for the first time in 2018 in Alicante. Following its success, it was decided to reconvene the event in Bilbao, Spain, in 2020.

The quest for the sustainable city has until recently focused on the efficient use of resources with the application of technical advances giving rise to the definition of SMART Cities. The economic model emphasised however is still "linear" in the sense that the design and consumption follows the pattern of extraction of natural resources, manufacturing, product usage and waste disposal.

The continuous growth of urban population has recently given rise to the emergence of a new model which responds better to the challenges of natural resource depletion as well as waste management. This model has been called the "circular economy".

The circular economy is a recent concept based on the reuse of what up to now has been considered wastes, reintroducing them into the productive cycle. The objective of the circular economy is to reduce consumption and achieve savings in terms of raw materials, water and energy, thus contributing to the preservation of resources in order to reach sustainable development.

With its roots in environmental economics, the idea of the circular economy is to implement the life cycle of products, services, waste, materials and energy. The concept needs to be embedded not only in the original design, but also in all process phases and during production, which ought to be as efficient as possible.

One of the most important of these resources is water which is becoming a scarce commodity in an ever expanding world whose population demands a better standard of living. Water is required for agricultural purposes as well as by industry, in addition to its use by the general population. The recycling of water is an essential component of the circular economy.

Closely associated to the concept of the sustainable city and the circular economy is the need to develop networks, not only within the city itself but also across other city regions to ensure governance based on cooperation.

There is no possibility for the success of a long term economic policy without addressing the problems of natural resources and environmental pollution, which will affect the reuse of materials and products.

The current market economy based on a linear model from resource extraction, manufacturing, consumption and waste disposal, has not proved a long term suitable solution, in spite of the substantial efforts made in reducing its environmental impacts. This is largely due to the continuous population growth, in a society that demands high standards of living, thus requiring an ever increasing share of natural resources.

The basis of the circular economy can be summarised as follows:

**Eco-consumption:** It starts with the evaluation of the possible environmental impacts of the process.

**Industrial Ecology:** The industrial phase is based in the principle of optimisation of components, flow of materials, energy and services.

**Economic Functionality:** The process gives more importance to use than possession; ie to the sale of services rather than goods.

**Reuse:** Aim to use waste to create new products. This phase also involves the repairs, recycling and value added procedures to prolong the life of any given products or services.

The achievements of the goals proposed by the circular economy require the cooperation of the community, as well as technological changes and advances.

The need to base suitable development on the environmental, economic and social points of view, demands an integrated approach to solve the city problems including planning and development.

# **Benefits of Attending**

#### **USB Drive**

Delegates will receive a USB drive at the conference containing the presented papers.

### **Publication**

Papers presented at Urban Growth 2020 are to be published in a Volume of WIT Transactions on the Built Environment (ISSN 1743-3509). The publication will be available both in electronic and hard copy.

# Indexing

The WIT Transactions are DOI registered with CrossRef and are currently listed in indexing services such as Scopus and Google Scholar, as well as being submitted to the Web of Science. All conference books are listed in the British Library and American Library of Congress.

# **Open Access and Digital Archive**

All conference papers are archived permanently on our electronic library where they can be downloaded for free (www.witpress.com/elibrary).

### **Peer Review**

To ensure the quality of our publications, abstracts and papers are double peer-reviewed by members of the International Scientific Advisory Committee and other experts, with manuscripts processed through CrossRef Similarity Check.

#### **Reduced Fee for PhD Students**

The Wessex Institute believes in the importance of encouraging PhD students to present and publish innovative research at its conferences. As a result, the Institute offers PhD students a much reduced conference fee.

# Networking

Participants can present their research and interact with experts from around the world, as part of a unique community.

### **Journal Publication Opportunity**

After the conference, delegates will be invited to submit enhanced versions of the conference paper to the International Journal of Environmental Impacts (ISSN 2398-2640), International Journal of Transport Development and Integration (ISSN: 2058-8305) or International Journal of Energy Production and Management (ISSN: 2056-3272).

# **Conference Topics**

The following list covers some of the topics to be presented at the conference. Papers on other subjects related to the objectives of the meeting are also welcome.

Infrastructure and eco-architecture

**Green urban areas** 

Landscape and planning

City heritage and its regeneration

**Quality of life** 

**Urban transport** 

**Energy systems** 

**Water reuse** 

Air contamination

**Water pollution** 

Waste management and recycling

**Noise pollution** 

**Waste water systems** 

Risk analysis

Recreation in the city

**Coastal cities** 

Socio-economic issues

Law and regulation

**Production of goods and services** 

**Consumption issues** 

**New design practices** 

**Smart technologies** 

Mobility in the city

**Safety aspects** 

**Smart habitats** 

**Systems resilience** 

City governance

**Community participation** 

Water heritage protection

Cicular economy at city level

Case studies

# **Conference Chairmen**

# **Stavros Syngellakis**

Wessex Institute, UK

Member of WIT Board of Directors

# **International Scientific Advisory Committee**

# Alejandro Acosta Collazo

Autonomous University of Aguascalientes, Mexico

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# **Bekir Parlak**

Uludag University, Turkey

#### Antonio Pratelli

University of Pisa, Italy

# Location

Located in North East Spain, Bilbao finds itself between the Cantabrian Sea and the Basque Mountains. The Bilbao estuary runs across the city, adding to the already beautiful landscape. Once an industrial hub, Bilbao is now a sophisticated city that is constantly evolving, known for its architectural allure and vibrant culture. The city mixes old and new, from a neobaroque theatre, an art nouveau train station and several spectacular cathedrals to Frank Gehry's Guggenheim Museum, the Zubizuri Bridge, and the Azkuna Zentroa cultural centre.

Gastronomy enthusiasts will find an abundance of restaurants and be able to discover and enjoy the famous Basque cuisine; the city has several Michelin Star awarded restaurants, pintxo bars, traditional tayerns and cider restaurants.

# **Conference Venue**

The conference will take place at the Hotel Gran Bilbao. This modern hotel has 202 rooms, underground private parking, free WiFi, a restaurant and a bar.

The hotel is only an 8-minute walk from Bilbao old town and well connected by public transport to the city's tourist attractions.



# **Submission Information**

# Abstracts of no more than 300 words should be submitted as soon as possible.

Abstracts should clearly state the purpose, results and conclusions of the work to be described in the final paper. Final acceptance will be based on the full-length paper which, if accepted for publication, must be presented at the conference.

The language of the conference will be English.

#### Online submission:

www.witconferences.com/urbangrowth2020

# **Conference Secretariat**

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