



# MUNESCO

**Forum:** Sustainable Development (SF2)

**Issue:** Building eco-friendly and inclusive cities that are resilient to the effects of climate change, disasters and conflicts.

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## Introduction

Concept of eco-friendly city refers to the construction of a city in accordance to environmental principles. The main objective of eco-friendly city plan is eradicating carbon waste production by responding the all energy need of a city through renewable energy sources and integrating city to natural environment. Alongside this major objective eco-friendly cities also aim to reduce poverty, improve health services and infrastructure and stimulate economic development.

In a larger aspect an ecocity can also be referred as a sustainable city which is designed as a resilient habitat for its residents even under extreme circumstances. Significant examples of these cities are established all around the globe mainly by the full dedication of their inhabitants however the main objective of the international society on the future of eco-friendly city concept is widening efforts spent on their establishment especially by increasing government support. In this aspect highly populated areas of the world draws attention with the government sources they invest on ecocities. China and India are now leading actors worldwide for establishment and development of ecocities alongside Scandinavian countries.

By 2018 more than 50% of world population lives in urban areas. This is a condition which links the environmental friendliness of human kind directly to urban development. Despite of the common belief, urban life has a lot more potential to integrate to environment and become eco-friendly than rural living. Due to people and resources located within short distances it is possible to decrease energy consumption and carbon waste by increasing efficiency in daily life with methods such as public transportation.

## Definition of Key Terms

*Ecocity:* "An *ecocity* is a human settlement modeled on the self-sustaining resilient structure and function of natural ecosystems. An ecocity seeks to provide healthy abundance to its inhabitants without consuming more renewable resources than it replaces. It seeks to function without producing more waste than it can assimilate or recycle for new uses or than nature can dilute and absorb harmlessly, and without being toxic to itself or neighboring ecosystems. Its inhabitants' ecological impacts reflect planetary supportive lifestyles; its social order reflects fundamental principles of fairness, justice, reasonable equity and consensus at ample levels of happiness."



*Zero-carbon city:* According to Wikipedia.org “A zero-carbon city runs entirely on renewable energy; it has no carbon footprint and will in this respect not cause harm to the planet.”

*Ecological footprint:* According to World Wildlife Fund the term ecological footprint is defined as “ The Ecological Footprint is a resource accounting tool that measures how much biologically productive land and sea is used by a given population or activity, and compares this to how much land and sea is available. Productive land and sea areas support human demands for food, fiber, timber, energy, and space for infrastructure. These areas also absorb the waste products from the human economy. The Ecological Footprint measures the sum of these areas, wherever they physically occur on the planet. The Ecological Footprint is used widely as a management and communication tool by governments, businesses, educational institutions, and non-governmental organizations.”

*Carbon emissions:* Cambridge Online Dictionary defines carbon emissions as “carbon dioxide that planes, cars, factories, etc. produce, thought to be harmful to the environment.”

## **Background Information**

### **History of Eco Cities**

Concept of eco city is created by Richard Register in Berkeley, California in 1975. The main idea behind the concept was building cities in a way that creates a balanced relationship with nature. The idea became global with the first International Eco-City Conference held in Berkeley in 1990. Two years later Richard Register formed an organization called Ecocity Builders and gathered several conferences in various places of world with the purpose of promoting eco-friendly city concept.

### **Requirements of an Ecocity**

Eco-friendly city idea is an ideal for the sustainability of world’s future rather than a conflict needed to be solved. For that reason achieving the ecocity ideal is quite a blurry and open ended discussion. However general boundaries of an ecocity can be established in general means as follows:

1. Creating a strong self-contained domestic economy in which needed resources can be found in local market
2. Eradicating carbon waste and standardizing energy production from renewable energy sources
3. Establishing a widespread public transportation network with the aim of increasing efficiency
4. Conservation of resources by increasing efficiency of water and energy, use alongside waste management and recycling facilities
5. Lowering income gap and neutralizing differences between minorities
6. Providing affordable housing



7. Creating job opportunities of disabled
8. Improving local agricultural production
9. Decreasing material consumption by promoting simplistic lifestyle

While responding these criteria it is also crucial for an ecocity to be suitable for growing population and durable against extraordinary conditions as natural disasters.

## **Economic Aspect**

Establishment of a new eco city or transformation of an existing city to an ecocity has great economic impacts on local community. Its effects on economy can be separated into two aspects. The first one is introduction of new industries to the area therefore creating new job opportunities. The shift in energy production to renewable energy sources such as solar power, water and wind creates new industries in the related region which results with an increase in demand to labor force. This would have a positive impact on worker wages alongside increase in employment.

The second significant impact of adapting economic activities to eco-friendly city standards is potential increase in efficiency of industrial production. Because one of the main principles of eco-friendliness concept is reducing city's ecological footprint, industries have to be renovated to decrease carbon emissions. One of the few ways of reducing emission is using energy more efficiently in order to prevent the creation of excess side products, in other words carbon waste. Increasing productivity achieved by efficient use of energy would result with decreasing production cost in industries which leads local economy to a key factor for economic development, higher profits.

Overall, ecocity transformation can be a great economic burden for cities that are not financially developed enough however high costs of initiation would be compensated by the future benefits of an ecocity in a long-term economic plan.

## **Timeline of Major Events**

<b>Description of event</b>	<b>Date</b>
<b>Richard Register created eco city concept in Ca, the USA</b>	1975
<b>The first International Eco-City Conference held in Berkeley</b>	1990
<b>Ecocity Builders Organization established</b>	1992
<b>China initiated EU-China River Basin Management Programme which includes establishment of nearly 280 ecocities</b>	2007
<b>South Korea initiated Seog Piwo Programme which presumes the establishment of several</b>	2008



<b>ecocities</b>	
<b>Ecocity World Summit gathered in Melbourne</b>	12-14 June 2017

## **Major Countries and Organizations Involved**

### **Ecocity Builders**

The organization is established with the motto of “building cities in balance with nature” in 1992. Since then it works for the promotion of eco cities. It leads the global efforts for the establishment of eco cities and organizing International Ecocity Conferences annually. The organization also work on various specific projects with its task forces in Oakland and San Francisco. It also collaborates with British Columbia Institute of Technology on creating an international framework for ecocity standards (IFFS). An eco-urbanization plan cannot be think of without the involvement of the organization.

### **China**

With EU-China River Basin Management Programme and their collaborative work with Singapore in Tianjin China initiated the biggest ecocity program on Earth. The country is currently working on the establishment of 285 ecocities. Involvement of China to this revolution is both necessary for the sake of both ecocity technologies and their population. Extremely dense urban population of China pushes the government to find a way of sustainable urbanization, and this situation causes great contribution to research and development technologies for ecocities due the enormous funding of government to the issue.

### **United Arab Emirates**

United Arab Emirates also become one of the determining figures for the future of eco cities due to their investment on Masdar City project. Masdar City Project is a new city creation project funded by Emirate of Abu Dhabi as a part of the long term economic plan of the nation concerning on post-fuel based economic progress of the country.

### **Malaysia**

In 2014 Malayan government initiated Low Carbon Cities Programme has been initiated. Economic data obtained in last four years indicates to the positive economic impacts mentioned in background of the issue. Efforts made by government resulted with the establishment of 20 new research centers throughout the country and shift to renewable energy sources created 300.000 jobs so far.

## **Previous Attempts to Solve the Issue**

As listed in major parties involved significant effort is spent for the establishment of eco cities by various governments. However international effort is limited with the work of Ecocity Builders organization besides Tianjin City project of China and Singapore. Ecocity builders aims to kindle international effort by creating an international framework on eco city standards which is called International Ecocity Framework and Standards (IEFS). Their work on creation of the framework continuous for almost a decade but no decisive result could be obtained due to the lack of collaboration in international community.



## Possible Solutions

Bearing in mind that ecocities are not valuable only in a local perspective but in a global one which means that countries' effort on building eco-friendly cities has an important impact on whole world community's existence. This situation makes standardizing establishment of eco-friendly cities among all member states crucial. Widespread collaboration of countries has benefits beyond environmental aspect of the issue. Establishment of intergovernmental agencies concerning on eco city development would also be helpful for research and development of technologies because it would significantly increase the communication between states which would be a great opportunity for relatively poor countries to obtain technology and transform their cities.

## Useful Links For Further Research

<http://www.bbc.com/future/story/20120503-sustainable-cities-on-the-rise>  
<https://www.earthday.org/take-action/footprint-calculator/>  
<https://www.theguardian.com/environment/gallery/2011/apr/26/masdar-eco-city-abu-dhabi>  
<https://science.howstuffworks.com/environmental/green-science/zero-carbon-city.htm>  
<https://www.ecocity2017.com/>  
[http://www.un.org/en/development/desa/policy/wess/wess\\_current/wess2013/Chapter3.pdf](http://www.un.org/en/development/desa/policy/wess/wess_current/wess2013/Chapter3.pdf)

## Bibliography

“What Is an Ecocity?” *Go Back to the Front Page*, [www.ecocitystandards.org/ecocity/](http://www.ecocitystandards.org/ecocity/).

“Ecological Footprint.” *WWF*,  
[wwf.panda.org/about\\_our\\_earth/teacher\\_resources/webfieldtrips/ecological\\_balance/ecocity\\_footprint/](http://wwf.panda.org/about_our_earth/teacher_resources/webfieldtrips/ecological_balance/ecocity_footprint/).

“Zero-Carbon City.” *Zero-Carbon City - Wikipedia*, [www.wiki-zero.com/index.php?q=aHR0cHM6Ly9lbi53aWtpcGVkaWEub3JnL3dpa2kvWmVyby1jYXJib25fY2l0eQ](http://www.wiki-zero.com/index.php?q=aHR0cHM6Ly9lbi53aWtpcGVkaWEub3JnL3dpa2kvWmVyby1jYXJib25fY2l0eQ).

“No Joke: China Is Building 285 Eco-Cities, Here's Why.” *Forbes.com*, Forbes, 12 June 2017, [www.forbes.com/sites/wadeshepard/2017/09/01/no-joke-china-is-building-285-eco-cities-heres-why/#6291084a2fe8](http://www.forbes.com/sites/wadeshepard/2017/09/01/no-joke-china-is-building-285-eco-cities-heres-why/#6291084a2fe8).

“Ecocity Builders.” *Ecocity Builders - Wikipedia*, [www.wiki-zero.com/index.php?q=aHR0cHM6Ly9lbi53aWtpcGVkaWEub3JnL3dpa2kvRWNvY2l0eV9CdWlsZGVycw](http://www.wiki-zero.com/index.php?q=aHR0cHM6Ly9lbi53aWtpcGVkaWEub3JnL3dpa2kvRWNvY2l0eV9CdWlsZGVycw).



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“Towards Sustainable Cities.” *Un.org*,  
[www.un.org/en/development/desa/policy/wess/wess\\_current/wess2013/Chapter3.pdf](http://www.un.org/en/development/desa/policy/wess/wess_current/wess2013/Chapter3.pdf).

