Forum: Economic and Social Council

Issue: The question of promotion and integration of sustainable urban growth

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Introduction

Sustainable urban growth has become an increasingly significant issue over the past few years as the world is becoming more aware of environmental issues that are being brought to light, such as the deteriorating ozone layer due to pollution, and also the lack of self-sufficient cities. Non-governmental organisations (NGOs), enterprises, and also governmental agencies have been actively promoting and experimenting with sustainable urbanism practices aiming to make cities completely self-sustainable by reducing the environmental footprint of urbanisation by using locally sourced resources. Some governments are providing economic incentives to support investments in drainage systems and sanitation with incorporated green framework such as rain gardens and permeable pavements.

Sustainability affects investment patterns, especially in developing countries' cities where population will increase by more than double by 2050. "Green" power generation, such as wind, water, and solar sources is growing exponentially, and the leaps and bounds of improvement on this front will decrease prices to make green energy an easy choice to be made.

Definition of Key Terms

Sustainable Urbanism

Sustainable urbanism is the application of sustainability principles to the planning and operation of cities.

Compactness

Also known as density, compactness is an essential role in sustainable urban development as it supports the reducing of resources used per-capita, and also benefits public transport projects. Sustainable urbanism requires minimum development densities to be approximately four times larger than two units of living

per acre. Low-density urban development is an attribute of urban sprawl, the major cause of contingence on private ownership of automobiles, loss of farming space, loss of natural habitats, and pollution. Low-density development exacerbates non-point source pollutant loadings by using up absorbent open space and increasing impermeable surface area while increased densities can protect water resources.

Biophilia

E.O. Wilson introduced and popularised the concept of Biophilia hypothesis in his book, *Biophilia,* in 1984. It defines as the "urge to affiliate with other forms of life", ergo that humans are biologically programmed to care for nature. Additionally, Douglass Farr's *Sustainable Urbanism: Urban Design with Nature* associates man-made open spaces of relaxation such as parks, as well as self-motivated sustainable food production and agricultural land practices, with the relationship and concern between humans and natural systems.

Sustainable corridors

Sustainable corridors are of a similar concept to a wildlife corridor in that they link one area to another efficiently and safely. They are used to allow people to move without having to use wasteful products that are harmful to the environment, as well as allowing for easier co-existence between animal and man.

Resilient city

A resilient city is one that has developed capacities such as becoming wholly self-sufficient in order to assist in absorbing future shocks to its various infrastructures so as to still be able to maintain normal functions and identity, such as addressing the exhaustion of resources by creating locally distributed resources to replace global trade or supply in case of international disruption.

United Nations Framework Convention on Climate Change (UNFCCC)

An international environmental treaty negotiated at the Earth Summit in Rio de Janeiro in 1992 and put into force in 1994. Its main objective is to stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

Kyoto Protocol

An international treaty negotiated in 1997 and put into force in 2005. It extends the UNFCCC that commits states to reduce greenhouse gas emissions, based on the premise that (a) global warming exists and (b) man-made CO_2 emissions have caused it.

Carbon Credits

A carbon credit is a financial instrument that represents a tonne of CO_2 removed/reduced from the atmosphere from an emission reduction project. In simple

words, it is a permit for a country/area to emit a tonne of CO_2 gas. If this amount is exceeded the exceeded amount will be taxed.

EcoCity Movement

Also known as Ecological Urbanism, the EcoCity movement is one of the main projects related to sustainable urbanism practices, and primarily looks to develop cities entirely based on ecological principles, similar to green urbanism.

Arab Financing Facility for Infrastructure (AFFI)

"A partnership between the World bank, the International Finance Corporation (IFC) and the Islamic Development Bank (IsDB) to foster infrastructure investment in Arab countries for economic growth and regional integration."[1]

West Nile Electrification Project (WNEP)

"The World Bank's first sub-Saharan project to issue carbon credits,"[2] featuring a 3.5 megawatt hydroelectric power plant as well as a 1.5 megawatt oil-fuelled power plant issuing more than twenty thousand carbon credits.

World Conservation Strategy

A global conservation document / implementation prepared by the International Union for Conservation of Nature and Natural Resources (IUCN), the United Nations Environment Programme (UNEP), the World Wildlife Fund (WWF), the Food and Agriculture Organisation of the United Nations (FAO), and the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1980.

Brundtland Commission

Also the World Commission on Environment and Development (WCED), the Brundtland Commission is a commission aiming to unite countries in pursuing sustainable development.

Background Information

Recognition and commitment to sustainable development

"Sustainable development" as a term had yet to be introduced into the international policy debate until the World Conservation Strategy (1980), the first time in which governments, experts, and non-governmental organisations (NGOs) had been involved in preparing a global conservation document. Sustainable development as a paradigm was established as a new global paradigm after "Our Common Future", one of the reports from the Brundtland Commission, was published in 1987. This was then followed up by the United Nations Earth Summit 1992.

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[1] AFFI, 2011
[2] *Sustainable Infrastructure for Urban Growth*, Katherine Sierra, 2013

Despite the abundance of attention focused on the sustainable development concept, the core message of sustainable development remained unclear, having ambiguity in separate parts – in the South sustainable development was seen as poverty alleviation and South-focused development, whereas in the North it was seen as referring to issues of eco - development. One of the main objectives of the Brundtland Commission was to settle the feud between the two positions, and this was done by focusing on global environmental systems and by having a globalist view without ignoring the inequalities in responsibility, influence, and power. The Commission succeeded in creating a win-win type situation by organising debate around the topic of sustainable development.

Key Issues

The Sustainable Development Goals of 2015 - 2030

The Sustainable Development Goals of 2015 to 2030 were adopted on the 25th of September 2015. There are 17 main goals: Poverty, food, health, education, women, water, energy, economy, infrastructure, inequality, habitation, consumption, climate, marine eco – systems, eco – systems, institutions, and sustainability.

- Energy: To ensure global access to sustainable and affordable energy
- Economy: To promote sustainable growth
- Infrastructure: To promote sustainable industrialisation
- Eco – Systems: To promote, protect, and restore sustainable use of eco – systems

The Kyoto Protocol

The Kyoto Protocol, adopted in Kyoto, Japan, in 1997 and entered into force in 2005 is a link to the the UNFCCC, the link being a commitment by its parties by setting internationally binding emission reduction targets. Countries under the Protocol should primarily aim to meet set targets through national measures; however the Protocol offers 3 other means of reaching the targets through market – based mechanisms:

- Clean Development Mechanism: Allows "countries with an emission commitment under the Kyoto Protocol to implement an emission reduction

project in developing countries; such projects can earn saleable certified emission reduction (CER) credits (equivalent to 1 tonne of CO2)".[3]

- Joint Implementation: Allows "countries with an emission commitment under the Kyoto Protocol to earn emission reduction units (ERUs) equivalent to 1 tonne of CO2 from another Party under the Protocol".[4]
- International Emissions Trading: Allows countries to sell excess capacity of emission units set by the Kyoto Protocol to countries over targets.

Major Parties Involved and Their Views

European Union

The European Union (EU) is active in the field of urban development and has a major role in supporting major cities in becoming competitive and cohesive even though there is no legal basis for urban policies in the treaties forming the EU and the European Communities (EC). Within the past 20 years, the EU has passed a number of major community initiatives and political documents supporting urban regeneration. These programmes mainly focus on four political objectives:

- Strengthening economic prosperity and employment in cities;
- Promoting equality, social inclusion and regeneration in urban areas;
- Protecting and improving the urban environment, in order to achieve local and global sustainability;
- Contributing to good urban governance and local empowerment.

Denmark

Two studies were carried out in Denmark in 2010 and 2011, the IDA climate plan 2050 and the Danish Commission on Climate Change Policy. These studies investigated the achievability of running Denmark on 100 percent renewable energy starting 2050 by analysing the benefits and the obstacles of doing so. Several Danish cities have already been promoting 100 percent renewable energy such as Aalborg and Frederikshavn. Aalborg University has also recently introduced a new master's program on sustainable cities.

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[3] UNFCCC, http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php

[4] UNFCCC, http://unfccc.int/kyoto_protocol/mechanisms/joint_implementation/items/1674.php

Germany

Germany is known to be one of the leading members states in eco – city projects. Vauban, Freiburg is a "sustainable model district", where the district is designed to be completely car – free and also the houses being built to low energy consumption standards. Freiburg im Breisgau has a Green mayor, and is renown for its developed solar energy industry. There are countless other sustainable city projects in Germany such as in Hannover, Hamburg, Munich, and Frankfurt.

Australia

Newington is a suburb in western Sydney in Australia. It was built on a brownfield site, developed in 1997 and was home to the 2000 Summer Olympics and Paralympics. After the 2000 Games, Newington prompted the Australian market for sustainable development, and became a village housing approximately 5000 people. However conveniences within the vicinity of this village were not built, and therefore encouraged automobile dependence. The two main thresholds of sustainable urbanism in Newington are the aforementioned biophilia linked to use of sustainable corridors, and high performance buildings.

- 90% of the plantings in Newington are native species
- Solar panels installed on every house, saving approximately 1309 tons of carbon dioxide from being released into the atmosphere annually
- Majority of houses are designed to use 50% less resources such as energy and water than the typical house by being designed with wool insulation and efficient water installations etc.
- Stormwater runoff is used in providing habitats in ponds
- Haslams Creek was remediated into a natural water channel from a concrete channel

China

China was and is one of the original countries heavily involved in sustainable development; with several cities such as Tianjin, Shanghai, Nanjing, Shandong, and Chengdu planning for ecocity development.

Tianjin: A collaborative agreement with Singapore in order to develop a resource-conserving and environmentally friendly city in China. Plans for the city, named, "The Sino-Singapore Tianjin Eco-City (SSTEC), (simplified Chinese: 中新天津生态城)" were made in 2011 and development is projected to be complete in late 2020 and estimated to be the home to approximately three hundred and fifty thousand people.

Shanghai: One hour from downtown Shanghai, the "world's first eco – city" lies abandoned in Dongtan, a development in Eastern Chongming Island. It attemped to become the first city in the world to become completely carbon neutral and self - sufficient. Wind turbines with solar panels are to be the source of the majority of the energy needed for the city, as well as the Combined Heat and Power system (CHP) which will convert waste into energy. The development is supposed to be complete in 2050; however the project has been delayed due to financial issues.

Nanjing: Nanjing is undergoing a three – stage urbanisation plan across approximately 750 hectares (about one half of the island) to be finished in 2020. This is a plan developed by the City of Nanjing, Jiangsu Provincial Government, and the Sino – Singapore Eco High Tech Island Development Company, aiming to create an environmentally friendly city with high – rise residential housing mostly run on renewable sources incorporated into the island's scenery without destroying it. The appropriately named "garden city" plans for water reclamation and green energy, partnering with Bayer Material Science to help design these features.

South Korea

A city, Songdo International Business District (송도국제무역단지), in Incheon (인천) has incorporated eco – friendly features such as a 75 percent waste recycling system, a park irrigated with seawater.

Timeline of Relevant Resolutions, Treaties, and Events

Date	Description of Event
1980	International Union for the Conservation of Nature publishes a world conservation strategy that includes one of the first references to sustainable development.
1982	The United Nations World Charter for Nature (UNWCN) raises the 5 principles of conservation "by which human conduct affecting nature is to be guided and judged".
1987	The United Nations World Commission on Environment and Development (UNWCED) releases the Brundtland Report (Our Common Future), which includes one of the most widely recognised definitions of sustainable development.
1992	UNWCED publishes the Earth Charter, and outline of the building of a "just, sustainable, and peaceful global society in the 21st century."

2012	The United Nations Conference on Sustainable Development (UNCSD), also known as Earth Summit 2012, was held in Rio de Janeiro. Also known as Agenda 21.
2013	30 – member Open Working Group (OWG) established by the UN General Assembly. Tasked with preparing a proposal on the SDGs for consideration during the 68th session of the UN General Assembly.
2015	Sustainable Development Goals 2015 – 2030 implemented. "Global Goals".

Evaluation of Previous Attempts to Solve the Issue

Previous Conferences

The United Nations Conference on Sustainable Development (UNCSD) held in Rio de Janeiro in 2012 aimed to reconcile the economic and environmental goals of the global community. The main outcome of this conference was the development of the Sustainable Development Goals that aimed to promote sustainable progress and eliminate inequalities globally. However, after the conference, little to none nations met the definition of sustainable development established by the WWF in 2006. The Sustainable Development Goals (SDGs) were not made in vain however, as they were the foundations of the Millennium Development Goals made at the Millennium Summit in 2000, the SDGs defining that "the process of designing sustainable development goals, should be "action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries while taking into account different national realities, capacities and levels of development and respecting national policies and priorities".

The projected time span of the MDGs was 15 years, finishing in 2015. Further discussion was needed to agree and develop goals from 2015 to 2030, known as the Post 2015 Development Agenda. This was started in advance, with the first report being released by the United Nations System Task Team identifying four dimensions as part of a global vision for sustainable development: Inclusive Social Development, Environmental Sustainability, Inclusive Economic Development, and Peace and Security. On the 25th of September 2015, the 17 new Sustainable Development Goals were adopted.

Possible Solutions

Despite the existence of countless world summits and sustainable goals, having the governments of individual countries direct their focus onto these aims put forward will be the quickest and most accurate way of ensuring that sustainable

urbanism will be integrated into society efficiently. The Sustainable Development Goals, also known as the Global Goals, have been met with resistance from several governments due to the independent nature of this campaign being implemented without agreement from United Nations member states. The term "Global Goals" is also being defined as ambiguous, with some member states concerned that the Global Goals are referring to other projects unrelated to the UN. Furthermore, Douglas Farr, the chair of the LEED – Neighbourhood Development (LEED - ND) initiative, mentions in his book, *Sustainable Urbanism: Urban Design with Nature*, that sustainable urbanism is to be effectively implemented by clear and unambiguous communication and leadership in cities.

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