Ecuador-Quito-Eco-Efficiency tool for the Metropolitan District of Quito

Award Scheme	**Guangzhou Award**
Sustainable Development Goals	**Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable**

Summary

The Eco Efficiency Ordinance for the Metropolitan District of Quito is a regulation approved by the Metropolitan Council, which allows new buildings to buy more floors if they are located close to the Bus Rapid Transit (BRT) stops and the future Metro stations.

Background and Objective

The Eco Efficiency Ordinance for the Metropolitan District of Quito is public policy at the local government. This regulation is framed on a national law of land use and land management planning. Origins Transportation is one of the main impacts of the ecological footprint in Quito. This situation is going worse with the accelerated urban sprawl and the intense real estate expansion towards the peripheral rural and peri-urban areas; forcing its inhabitant to move for long periods between their residencies and places of work. For this reason, the Municipality has created this tool that optimized public transport, guiding Quito towards a more compact, diverse and efficient city. The Municipality has developed this policy that aims to transform Quito into a denser, more compact and diverse city; especially in the urban areas directly influenced by the integrated public transport system. This regulation, in addition, to promoting a compact city, encourages development in areas that have all basic services reducing the urban sprawl toward the rural al peri-urban areas. It is important to mention that this instrument is the first approach related to environmentally responsible design in new buildings. This policy allows the increase of floors above what is established in the Land Use and Occupation plan, for new buildings that are implemented in areas close to the public transport systems and that comply with environmentally responsible design parameters. These parameters seek efficiency in the use of resources such as water, energy, as well as contributions in the fields of seismic, safety and bioclimatic design. Additionally, this public policy has been very well accepted by the private sector, generating important incomes for urban development under the concept of land value capture Municipality The construction sector in the city of Quito has been very active and participatory in the development and application of the Eco-Efficiency regulation; however, the initiative is from the Municipality. The Secretary of Territory, Habitat and Housing is the local entity in charge of generating public policy around land use, habitat and public spaces and housing for the Metropolitan District of Quito. In this sense, the main resources that have made it possible to implement the Eco-Efficiency regulations are human, technical and managerial resources. The Secretary has a multidisciplinary technical team that has been working on these projects, for a long time. Currently, the review of Eco-Efficiency projects is in charge of private companies that have been accredited by the Municipality for this propose, based on the local regulations and guidelines issued by the Secretary of Territory, Habitat and Housing

Outcomes and Impacts

To date, 35 buildings have been approved under this norm. These buildings have contributed to the environment through the reduction of water and energy consumption, and other resources during the construction process and in its useful time. One of the main outcomes for the Metropolitan District of Quito is the support of densification and consolidation of the city around the public transport system, reducing urban sprawl. In economic matters, these buildings have generated $10’ 669. 816,00 dollars for the Municipality under the concept of land value capture. The Eco-Efficiency tool has 20 parameters divided y 3 categories: (1) Water Efficiency, (2) Energy Efficiency and (3) Technological, Urban and Environmental Contributions, each of them has been prioritized with a score that reaches in total of 100 points. Each category establishes a baseline indicator that let the Municipality collect information related to the amount of rainwater collected and used, permeable soil area, diversity of uses, use of local material, waste management, implementation of bicycle parking, reduction of waste during construction, etc. This policy has allowed the application of new incentives in the construction sector, mainly in new buildings, for the use of environmentally sustainable technology and designs. This has forced the creation of a baseline of information qualification methods for each parameter of the Eco-Efficiency model, having for the first time a baseline of indicators of this type in Quito. The methodology has been developed based on the situation and availability of local technology. Some of the main stakeholders that supported the policy and the technical information behind it are the real state sector, the academy and guilds like the collage of architects of Ecuador. This involved multiple professionals such as urban plans, architects, environmental engineers, economists and others. The initiative has generated incentives for the projects that include social housing as part of the program. The buildings that include at least 10% of the total units as social housing are completely exonerated from paying the value of the extra floors. This incentive allows offering affordable homes in strategically located areas. To date, 1 building has

applied this model. In the spatial aspect, the method to value the projects include urban design strategies that integrate the ground floor with the public space, this generates benefits in the surroundings of the public space of the building. Yes, the initiative focus and applies to the areas that are influenced by the public transport system of the city including the Bus Rapid Transit Lines (2 BRT) and Metro (1 line). There is a map (Annex 1 and 2) with the areas that can apply this instrument. There are 35 projects built under this concept, and new ones are coming. These buildings tend to include a mix used (Commercial, office and residential) with approximately 150 additional floors in total between all projects, benefitting people who live and work in these buildings that are close to the public transport system facilitating their mobility and access to other basic services.

Sustainability and Scalability

Measures to sustain innovation Currently the land use plan of the city in s being updated, which is incorporating obligatory parameters of eco-efficiency as well as other parameters in rural areas, guaranteeing that the new buildings reduce their carbon footprint. Learning aspects The policy is very practical because, unlike other global green certifications, this one is very well suited to the particularities of the city. It is a strategy that, in addition to certification generates other important benefits; for the real estate developers the extra floors, and for the Municipality the payment of land value capture is very important because these buildings allow the city to invest in other public works that have not been financed for years. The Eco-Efficiency policy has been shared in some international spaces with other cities that seek to generate other incentives and adapt this tool to their localities. Considering the particularities of the territories and the incentives of each market it is a replicable tool. It is an innovative policy that has “force” developers to apply strategies of environmental design in new buildings.

Initiative Contribution

Promote measures that support cleaner cities Tackling air pollution in cities is good both for people’s health and for the planet. In the Agenda, leaders have committed to increase their use of renewable energy, provide better and greener public transport, and sustainably manage their natural resources. Strengthen resilience in cities to reduce the risk and the impact of disasters Many cities have felt the impact of natural disasters and leaders have now committed to implementing mitigation and adaptation measures to minimize these impacts. Some of these measures include better urban planning, quality infrastructure and improving local responses. Take action to address climate change by reducing their greenhouse gas emissions Leaders have committed to involving not just the local government but all actors of society to take climate action taking into account the Paris Agreement on climate change which seeks to limit the increase in global temperature to well below 2 degrees Celsius. Sustainable cities that reduce emissions from energy and build resilience can play a lead role. Improve connectivity and support innovative and green initiatives This includes establishing partnerships with businesses and civil society to find sustainable solutions to urban challenges Relevance of Actions to the Each of the Selected Commitment(s) The Eco-Efficiency policy reduces emission from the constructions sector, support the development of ecological community initiatives such as waste management and urban orchards and encourage the use of transport system and other means of sustainable mobility.

Innovative Initiative

The initiative is considered revolutionary in the local and national context. The purchase of extra floors is an urban development instrument that has been implemented by several cities. In the case of Quito, other mandatory parameters are included in the benefit of reducing the environmental impacts of the new buildings sector. The regulation understood very well the necessities of the real estate sector, which is interested in growing in height; so the Municipality allows them in exchange of environmentally responsible design as well as the payment for the purchase of extra floors, which in this case can be paid directly by the developer with the execution of a public work such as infrastructure, public services or facilities and other works related to public space. Within the development of this policy, one of the main obstacles identified was the availability of information that allows establishing a baseline of each parameter that measure energy efficiency, water consumption and other technological and landscaping contributions. Fortunately, the construction of the baseline was supported by academia and other public companies; they contributed on their knowledge and allowed to establish a first Eco-Efficiency baseline, which will be the indicator that measures the impact of the public policy in the future.

Conclusion

Relevance of the initiative to the Sustainable Development Goals and the New Urban Agenda (1) Sustainable Development Goals Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable Target 2: Access to safe, affordable, accessible and sustainable transport systems for all Target 3: Participatory, integrated and sustainable human settlement planning and management Target 6: Improve air quality and manage municipal and other wastes Target 7: Universal access to safe, inclusive and accessible green and public spaces, in particular of women, children older persons and persons with disabilities Target 9: Improving resource efficiency, mitigation and adaptation to climate change, resilience to disasters and implementing holistic disaster risk management Target 10: Support least developed countries in building sustainable and resilient buildings utilizing local materials Relevance of the initiative in relation to the goals The Eco-Efficiency policy starts from the principle of promoting compact, multi-use and sustainable city around the existing public transport system. Relevance to the targets of Goal 11: The Eco Efficiency policy incorporates environmental responsible design

for new buildings and optimized the existing public transport system, guiding Quito towards a more compact, diverse and efficient city.