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## RESEARCH ARTICLE

# LAND READJUSTMENT SCHEME AS POLICY OPTION FOR IMPROVEMENT OF INFORMAL SETTLEMENT IN CONTRIBUTING, TO ACHIEVE VISION OF SUSTAINABLE DEVELOPMENT GOAL, NEW URBAN AGENDA, AND PARIS AGREEMENT

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### ABSTRACT

Rapid urbanization is accentuating urban challenges, mostly leading to urban sprawl and development of informal settlements in the cities, as result affecting the reduction of agricultural land, natural and rural areas surrounding the cities. Increasing level of improper consumption of land, threat sustainable development, destroy the earth's regenerative capability. The most important is the worsening state of climate change. In fact, the cities and urban areas are more responsible for climate change. Therefore, the rapid urbanization is not without negative impacts on residents of urban areas such as demographic and migration patterns, change in the production and consumption pattern, as well as threatening of climate changes toward basic services and infrastructure. Cities are then called to find the urgent and proper solution for, not only for decreasing the missions affecting climate change, but also to adapt to challenges posed by climate changes to decrease the disaster in the metropolitan areas. Apart from climate change the lack of basic services, infrastructure, shelter, public amenities and development of slums, informal settlement, are prioritized issues to be addressed by using integrated approaches to tackle urbanization problems. In addition, these approaches must ensure design, management, and development of sustainable cities. Therefore, this paper aims to evaluate the Land Readjustment Scheme as policy option in addressing the urban issue to contribute in achieving vision of SDGs, New Urban Agenda and Paris Agreement.

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## INTRODUCTION

Rapid urbanization is accentuating urban challenges, mostly leading to urban sprawl and the unplanned, uncontrolled and unmanaged development of cities, as result affecting the reduction of agricultural land, natural and rural areas surrounding the cities (Tollin & Hamhaber, 2017). Furthermore, rapid urbanization leading to mobility issues and increased length and number of daily displacement, with consequence of increasing traffic congestion as well as transportation-related emission (Satterthwaite, 2016). Increasing level of improper consumption of land, threat sustainable development, destroy the earth's regenerative capability.

The most important is the worsening state of climate change, in fact the cities and urban areas are more responsible for climate change (Satterthwaite, 2016; Tollin & Hamhaber, 2017). The rapid urbanization is not without negative impacts on residents of urban areas such as demographic and migration patterns, change in the production and consumption pattern, as well as threatening of climate changes toward basic services and infrastructure (Abroet al, 2017). Cities are then called to find the urgent and proper solution for, not only for decreasing the missions affecting climate change, but also to adapt to challenges posed by climate changes to decrease the disaster in the metropolitan areas. Apart from climate change the lack of basic services, infrastructure, shelter, public amenities and development of slums, informal settlement, are prioritized issues to be addressed by using integrated approaches to tackle urbanization problems (ICLEI,2015; Un-Habitat, 2017).In addition, these approaches must ensure design, management, and development of sustainable cities. Thus, it requires international cooperative, therefore, the United Nations'

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focused more on international policies, such as Millennium Development Goals (MDGs) following that Sustainable Development Goals the new Urban Agenda and Paris Agreement to integrate the approached in order to tackle the urban issues in metropolitan areas (ICLEI,2015; Un-Habitat, 2017).

## Literature Review

**Sustainable Development Goals:** The United Nations General assembly approved and accepted on 25 September 2015, the Post 2015 development agenda, “under the title transforming our world; the 2030 Agenda for the Sustainable Development Goal (Tollin & Hamhaber, 2017)”. The Sustainable Development Goal following the Millennium Development with 17 goals and 169 objectives for 15 years to address five key issues, poverty, planet, prosperity, peace and partnership (ICLEI, 2015; DIIS, 2016). 11<sup>th</sup> Goal of SDGs indicates on sustainable cities, to make the cities and human settlement inclusive, safe, resilient and sustainable (ICLEI, 2015). Making the cities sustainable and safe means ensuring access to safe and affordable housing, upgrading slum settlement, affordability of public transportation, providing the green space areas and improving urban planning and management in way which both participatory and inclusive (ICLEI, 2014; DIIS, 2016). Thus, according to Tollin & Hamhaber (2017), SDGs aims to address urban issues with consideration of the following:

- Providing affordable housing, basic services, and slums upgrade,
- Transport: affordable, accessible and sustainable transport, and infrastructures,
- Urbanization: participatory, integrated and sustainable planning and management,
- Heritage: protection and safeguard of natural and cultural heritage,
- Disasters: reducing human and economic losses due to disasters,
- Environment: reducing the environmental impact of cities, particularly air and waste-related,
- Public space: providing universal safe, inclusive and accessible public space and greenery.

The SDGs 11<sup>th</sup> Goal in fact, addresses the relevance of cities and local government in fighting poverty and achieving sustainable development by 2030 (ICLEI, 2015). Besides the 11<sup>th</sup> Goal other goals of SDGs are relevant to urban issues as well, such as 6<sup>th</sup> Goal of SDGs aiming to provide clean water and sanitation for all residents. Moreover, 7<sup>th</sup> Goal of SDGs aims to provide affordable reliable sustainable and modern energy for all. Furthermore, 13<sup>th</sup> Goal of SDGs aims to take urgent action to combat climate change and its impacts. In fact, all 17 goals of SDGs related to urban issues (DIIS, 2016). Therefore, 11<sup>th</sup> Goal of SDGs can be driven by the combination with other Goals and targets. Therefore, according to ICLEI (2015), the urban authority can contribute to achieving the SDGs by the following approach.

- Foster inclusive governance and sustainable urban planning and management,
- Ensure that the housing services are affordable adequate and safe,

- Improve resilience to disaster and climate change especially of the most vulnerable neighborhoods and population groups,
- Reduce environmental impacts and resource of footprint of cities through low carbon development strategy, sustainable waste management and closed material cycle,
- Transition towards sustainable urban mobility and inclusive public transport,
- Provide access to green and public spaces and enhance cultural and natural heritage for quality of urban life,
- Engage in city region cooperation to support positive economic, social and environmental link between urban, peri-urban and rural areas,
- Foster vibrant, sustainable local economic and technological development through strategic partnerships with businesses and green public procurement.

## New Urban Agenda

In 2016 the Habitat III, the United Nation Conference on housing and sustainable urban development took place in Quito Ecuador (Tollin & Hamhaber, 2017). In which the New Urban Agenda has been adopted which represents a shared aim for better and sustainable future (Tollin & Hamhaber, 2017). According to the New Urban Agenda, the cities offer equal rights, benefits and opportunities for all people to promote the inclusivity, best use and enjoyment of cities, towns and villages (Satterthwaite, 2016; UN-Habitat, 2017). The New Urban Agenda designed to produce safe, healthy, accessible and sustainable cities and human settlements which essentially contributes to better prosperity and quality of life for present and future generations (Garschagen *et al*, 2018). Furthermore, New Urban Agenda presents the “principle and standard for the planning, construction, development management and improvement of urban areas (UN-Habitat 2017).” Moreover, the new Urban Agenda would be incorporated to address urban issues with five main pillars of implementation: national urban policies, urban legislation and regulation, urban planning and design, local economy and municipal finance and local implementation (Satterthwaite, 2016; UN-Habitat 2017). The New Urban Agenda insisted on linkages between proper urbanization and job creation, livelihood opportunities and improvement quality of life which must consider and include in each of renewal policies and strategies (Garschagen *et al*, 2018). Therefore, according to Tollin and Hamhaber (2017), the New Urban Agenda would be contributed in addressing urban issues by considering the following approach.

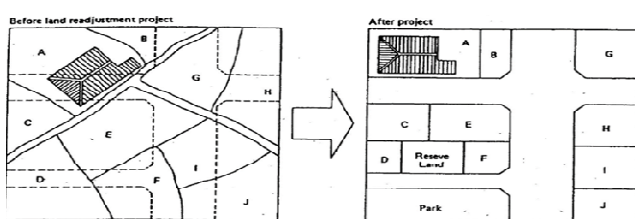
- Suitable and inclusive urban prosperity and opportunity for all
- Sustainable urban development for social inclusion and poverty eradication
- Environmentally sound and resilient urban development
- Building the urban governance structure, establishing a supportive framework
- Planning and managing urban spatial development.

**Paris Agreement:** The Paris Agreement adopted on 12 December 2015 at the Paris Climate Change Conference (COP21), with participation of 196 parties to UN Framework Convention on Climate Change (Yun, 2016). After 14 days’ hard negotiation created a global mechanism to tackle climate change (Yun, 2016).

In Paris Agreement it has been giving the clear and unequivocal signal that climate change is real and unprecedented challenges for humanity, which require an unprecedented and urgent global action, based on the collaboration and contribution of all countries (Streck *et al*, 2016). Human settlements especially the cities due to the concentration of human life and activities are responsible for the current climate change trend (Reckien *et al*, 2018). At the same time, the cities are vulnerable to the increasingly negative effects of climate change (Reckien *et al*, 2018).

Therefore, cities are then called to find the urgent and proper solution not only for decreasing the missions affecting climate change but also the cities must to adapt to challenges posed by climate change to decrease the disaster in the metropolitan areas. The Paris Agreement is the universal and binding agreement and targets to tackle climate change, which is related to very ambitious mitigation targets (Yun, 2016). Therefore, article 2 of the agreement indicates that “to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius”. Thus, the Paris Agreement would be contributed to addressing climate change by emphasis that the strong and more ambitious climate action requires the full support of, cities policies, civil society, and sub-national stakeholder, domestic policies. Moreover, the Paris Agreement insists on the cities to increase and upscale their efforts for mitigation and reducing the emission and building resilience, to adapt to impact of climate change (Tollin & Hamhaber, 2017). The Paris Agreement encourages the creation of a dedicate platforms to exchange experience and share best practices for addressing and responding to climate change, and the cities are playing the central role (Yun, 2016). Therefore, the Paris Agreement incorporating to address urban issues by enhancing mitigation because of that more 400 mayors signed on the Compact of Mayor, a global initiative to reduce the emission in cities around the world (Dasgupta, 2015).

**Land Readjustment:** According to Nagamine (1986) “The Land Readjustment is a technique based on the re-assembling of land parcels by a new layout plan together with the development of new urban infrastructures, by means of changing shapes and conditions of land parcels, and construction or reallocation of public facilities in order to increase the utility of sites and improve the public facility.” According to this approach from all plots, the specific proportion of plot will be deducted, and this deduction land will use to provide public space, greenery space, improved the street condition to make it width, and provide the sewage system drainage system, and electricity line, the rest of the land will be sold to cover the cost of the project. Figure 1 shows the Land readjustment scheme.



Source: Nagamine, (1986)

Figure 1. Land Readjustment Scheme

### Incorporation of Urban Governance into Implementation of Land Readjustment in Contributing, to Achieve Vision of Sustainable Development Goal, New Urban Agenda, and Paris Agreement:

Land Readjustment scheme is one of the complicated approaches to addressing the Urban issues. Even though it is a self-sponsored scheme and the government does not pay money and does not allocate the budget for this scheme, but the agreement of the landowner is very important. Therefore, it requires the government and urban governance leadership, to convince the landowners to allocate small proportion of their plots for implementation of Land Readjustment scheme. Furthermore, this scheme requires urban governance incorporation to manage land allocation for public facilities, including roads, greenery space, public amenities, and to manage and govern that which proportion of land should be sold to cover the project cost. On the other hand, the landowners are not expert in urban planning, then, the national urban governance or local urban governance should manage the formulation of basic concept, the creation of plan for the scheme, removal and relocation of public facilities, and the registration of land plot in government cadastral authorities. In the following it would be analyzed that how the Land Readjustment scheme can contribute to achieving the vision of SDGs, New Urban Agenda and Paris Agreement. Firstly, lack of drainage system and sewage system polluted the environment and underground water in informal settlements of metropolitan areas. In addition, in informal settlement of metropolitan areas the lack of water supply is huge challenge for the residents. On the other hand, 6<sup>th</sup> Goal of the SDGs insists on providing clean water and sanitation in metropolitan areas.

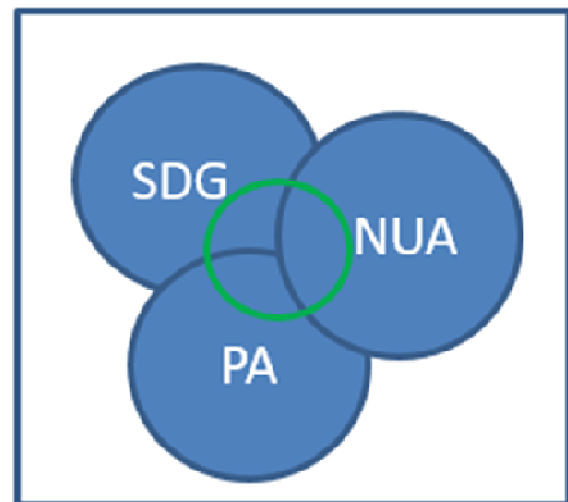
Implementation of land readjustment scheme includes the provision of sewage systems and drainages system. On the other hand, improvement of sewage system and drainage system decrease the underground water pollution in the informal settlement of metropolitan areas. Apart from that, the Land Readjustment scheme includes the provision of water supply, thus, by implementation of Land Readjustment scheme, it is possible to provide clean and regular water supply which is the 6<sup>th</sup> goal of SGDs. Secondly, the Land Readjustment supports the 7<sup>th</sup> Goal of the SDGs which insists on provision of affordable and clean energy. In informal settlement of metropolitan areas, there is no proper electricity, gas or other government facilities. Therefore, the residents of informal settlements are using energy of wood and coal for cooking and heating especially in the winter, and fossil fuels for mobility. Thus, the fire of wood and coal which use for cooking and heating increases the emission of CO<sub>2</sub>, Greenhouse Gas which increases air pollution. In addition, because in informal settlement the streets are unpaved and narrow, as well as there is not street hierarchy to facilitate the use of public transportation. Thus, people are forced to use private cars. The use of private cars increases the use of fossil fuels, on the other hand, increasing the usage of fossil fuels increases the emission of Greenhouse Gas. With implementation of Land Readjustment, the areas will recognize as part of urban fabric and clean energy like electricity will exchange the use of wood and cool. Moreover, by implementation of Land Readjustment scheme, the conditions of the streets will be improved with proper hierarchy which will facilitate the use of public transportation, which will decrease the use of old private cars. Therefore, by provision of clean energy the Land Readjustment scheme can contribute to achieving the 7<sup>th</sup> Goal of SDGs.

Land Readjustment scheme also contributes to achieving the 11<sup>th</sup> goal of SDGs, and the New Urban Agenda “which aims to make the cities and human settlement inclusive and safe and resilient, and sustainable” as the following:

- The Land Readjustment scheme changing shapes and conditions of land parcels by providing, basic infrastructure, basic services, water supply systems, recreation areas, public amenities.
- Moreover, after implementation of land readjustment the informal settlement will recognize as part of urban fabric, it can prevent future displacement and ensures access to safe and affordable housing.
- Apart from that, in the Land Readjustment scheme, the adequate proportion of allocated land will use for recreation and public spaces to provide public space for women children, older and young people, which enhance the inclusive capacity for participatory, integration, among the settlement.
- Moreover, in Land Readjustment scheme the streets and roads conditions will improve with proper hierarchy, it ensures road safety and access to public transportation system.
- The residents of informal settlements not only experience lack of physical infrastructure but also social infrastructure as well. Form the prospect of SDGs goals and NUA the residents of informal settlements live in improper situations. The air pollution, polluted environment and water pollution negatively impact on health condition of residents. After implementation of Land Readjustment, it is possible the reduce the water and environmental disaster.

All of above mentioned sentences are the good reasons that the Land Readjustment scheme contributes to achieving the 11<sup>th</sup> goal of SDGs and vision of NUA. Furthermore, the implementation of Land Readjustment scheme will help the urban authority to achieve the vision of Paris Agreement and the 13<sup>th</sup> Goal of SDGs, which aim to tackle climate change. In informal settlement the residents burn fossil fuels, coal and wood which produce CO<sub>2</sub> and Greenhouse Gas. The generated CO<sub>2</sub> and Greenhouse Gas entire to climate system, and force or push the climate towards warmer. Moreover, due to lack of paved street and street hierarchy, it is not possible to provide proper public transportation systems in the informal settlement. Thus, the large number of old cars which used fossil fuels increase the production of CO<sub>2</sub>. Apart from that, in the informal settlement natural land which absorbs the CO<sub>2</sub>, converted to informal housing. On the other hand, by implementation of Land Readjustment scheme, first, the clean energy will replace fossil fuels, which would reduce the production of CO<sub>2</sub> and Greenhouse Gas. Second, the greenery and public space will be improved properly and the greenery will absorb the CO<sub>2</sub> which will help to reduce the CO<sub>2</sub> from climate system. In addition, in the Land Readjustment scheme, the proper paved street will facilitate the use of public transportation. Moreover, by allocation of land for public amenities, such as healthcare facilities, education facilities, business shops and offices it is possible to reduce the daily trip and displacement, then, CO<sub>2</sub> production based on transportation fossil fuels will be reduced. Therefore, implementation of Land Readjustment scheme will reduce CO<sub>2</sub> production which will contribute to achieving the vision of Paris Agreement and 13<sup>th</sup> goal of SDGs. Based on above

information the global initiative (NUA, SDGs and Paris Agreement) supports each other. For example, the 11<sup>th</sup> Goal of SDGs support the NUA, and the NUA supports the 11<sup>th</sup> Goal of SDGs. On the other hand, 11<sup>th</sup> Goal of SDGs support and related to other goals of SDGs. Then, there is indirect connection and contribution between the other Goals of SDGs and NUA. Moreover, the 13<sup>th</sup> Goal of SDGs and the Paris Agreement insist to tackle the impact of climate change. Therefore, the SDGs support Paris Agreement, and the Paris Agreement support SDGs. Thus, there is a connection and contribution between SDGs and Paris Agreement. On the other hand, there is also contribution and connection between NUA and SDGs. Then, it can be indirect contribution and contribution between NUA and Paris Agreement. As result, there are direct or indirect connections and contributions between Global Initiative (SDGs, NUA and Paris Agreement). Therefore, Land Readjustment as policy option for urban authority can contribute to achieving the vision of Global Initiative. Figure 2 shows connection between SDGs, NUA and Paris Agreement.



Source: Adapted by the authors

**Figure 2. Connection and Relationship between SDGs, NUA and Paris Agreement**

## Conclusion

Global initiative especially the SDGs, New Urban Agenda, and Paris Agreement are international agreements to address the urban issues effectively and properly. Moreover, Sustainable Development Goals, New Urban Agenda, and Paris Agreement initiated to manage the transition toward sustainable urban development. Thus, it is essential to harmonize and integrates policies, strategies and action plans to be tried to achieve the vision of Global Initiative (SDGs, NUA and Paris Agreement) mutually. Land Readjustment scheme can be a policy option that contributes to achieving the vision of SDGs, NUA and Paris Agreement mutually.

## REFERENCES

- Abro, A. A. Saeed.N & Burfat. A. 2017. Pakistan on the Achievement of Sustainable Development Goals and Role of Social Attitude in Urban Areas, Towards Climate Change and Challenges. *The Government: Research Journal of Political Science*, Vol. V, Supplementary Edition, 158-164.

- Dasgupta, A. 2015. COP21 highlights importance of city actions in the climate fight. Available online at. <https://www.wri.org/blog/2015/12/cop21-highlights-importance-city-actions-climate-fight>.
- DIIS, 2016. *Urban governance and sustainable development cities on the agenda*. Danish Institute for International Studies, 04. Østbanegade 117, DK-2100 Copenhagen, Denmark.
- Garschagen. M, Porter. L, Satterthwaite. D, Fraser. A, Horne. R, Nolan. M, Solecki. W, Friedman. E, Dellas. E & Franziska Schreiber. F. 2018. The New Urban Agenda: From Vision to Policy and Action/Will the New Urban Agenda Have Any Positive Influence on Governments and International Agencies? /Informality in the New Urban Agenda: From the Aspirational Policies of Integration to a Politics of Constructive Engagement/ Growing Up or Growing Despair? Prospects for Multi-Sector Progression City Sustainability Under the NUA/Approaching Risk and Hazards in the New Urban Agenda: Commentary/Follow-up and Review of the New Urban Agenda. *Planning Theory and Practice*, 19 (1), 117-137, DOI:10.1080/14649357.2018.1412678
- ICLEI 2014. *Cities and the Sustainable Development Goals*. ICLEI Briefing Sheet - Urban Issues, No. 02. Kaiser-Friedrich-Straße 7, 53113 Bonn, Germany.
- ICLEI, 2015. *The importance of all Sustainable Development Goals for cities and communities*. ICLEI Briefing Sheet - Urban Issues, No. 04. Kaiser-Friedrich-Straße 7, 53113 Bonn, Germany.
- ICLEI. *Towards the New Urban Agenda: Linking with international processes*. ICLEI Briefing Sheet - Urban Issues, No. 07. Kaiser-Friedrich-Straße 7, 53113 Bonn, Germany.
- Klopp. J.M & Petretta. D.L. 2017. The urban sustainable development goal: Indicators, complexity and the politics of measuring cities. *Cities*, 63, 92-97.
- Nagamine, H. 1986. The Land Readjustment techniques of Japan. *habitational*, 10 (112), 51-58.
- Reckien. D, Salvia.M, Heidrich. O, Church.J.M, Pietrapertosa. F, Hurtado. S.D.G, D'Alonzo. V, Foley. A, Simoes. S.G, Lorencova. E.K, Orru. H, Orru. K, Wejs. A, Flacke. J, Olazabal. M, Geneletti. D, Efrén Feliu. E, Vasilie. S, Nador. C, Riekkola. A. k, Marko Matosovi. M, Paris A. Fokaides. P.A, Ioannou. B.I, Alexandros Flamos. A, Niki-Artemis Spyridaki. N.A, Balzan. M.V, Fülöp. O, Paspaldzhiev. I, Stelios Grafakos. S & Dawson. R. 2018. How are cities planning to respond to climate change? Assessment of local climate plans from 885 cities in the EU-28. *Journal of Cleaner Production*, 191, 207-219
- Satterthwaite, D. 2016. Successful, safe and sustainable cities: towards a New Urban Agenda *Journal of Local Governance*, Issue 19.
- Shin Kao, L. Chiu. Y.H. & Tsai, C. Y. 2017. An Evaluation Study of Urban Development Strategy Based on of Extreme Climate Conditions. *Sustainability*, 9, 284; doi:10.3390/su9020284.
- Streck. C, Keenlyside. P & Unger. M.V. 2016. The Paris Agreement: A New Beginning. *Journal for European Environmental and Planning law*, 13, 3-29.
- Tollin, N & Hamhaber, J. 2017. *Sustainable and Resilient Cities: SDGs, New Urban Agenda and the Paris Agreement*. Technical University of Catalonia, Spain. DOI:10.12910/EAI2017-001.
- UN-Habitat, 2017. Action Framework of the New Urban Agenda. UN-Habitat.
- Yun, G. 2016. China's response to climate change issues after Paris Climate Change Conference. *Advances in Climate Change Research*, 7 (4), 235-240.

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