Local green tax as a driver towards a green transformation: Lessons from the Yokohama green tax

Yusuke Takagi

Key messages

- A locally introduced green (environmental) tax is an effective policy option to harmonize urban development with environmental conservation.
- Green taxes help municipal governments reorient incentive schemes towards an environmentally favorable direction.
- Accountability and citizen engagement are primary factors in successfully introducing green tax in cities.

Background

The city of Yokohama is the second largest city in Japan with a population of 3.7 million, located southwest of Metropolitan Tokyo. The city is abundant in attractive natural environments, closely located to residential areas. However, due to rapid urbanization accompanied by a population increase, the city has experienced deforestation and green space degradation since the 1970s. As the figure below shows (Figure 1), the amount of available green space in the city has been inversely proportional to population growth. The city’s green coverage ratio has fallen to approximately 29.8% in 2009, from 50% in 1970 (Figure 2). In particular, the annual green space (forests and agricultural fields) losses have amounted to 100 hectares.

Figure 1: Population Growth and Green coverage in city of Yokohama

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Green space shrinkage and degradation possibly have negative effects on Yokohama because green space is imperative for the city to maintain multiple ecosystem services such as groundwater recharge, flood risk mitigation, prevention of heat-island effects, biodiversity conservation and landscape maintenance. Citizens recognize the significance of green space. According to a citizen survey conducted in 2008, about 98% of citizens responded that green space should be increased or, at least, sustained in Yokohama. The city government also acknowledges that green space is a precious public asset that is extremely difficult to restore once it is lost.

Figure 2: Transition of Green Coverage Ratio in Yokohama


Policy measures

Addressing this challenge, the city of Yokohama has initiated the Yokohama Green-Up Plan in FY 2009 with the aim of preserving a green-rich city of Yokohama for future generations, which is accompanied by the introduction of the Yokohama Green Tax.

The Yokohama Green-Up Plan started as a five-year plan, aimed at preserving precious green space for the next generation by conserving and enhancing both quantity and quality of green space. It is a holistic policy measure composed of three policy spheres: 1) forest conservation; 2) farmland conservation; and 3) greenery promotion. Core policy contents are summarized below.

Table 1: Policy contents in the Yokohama Green-Up Plan

<table>
<thead>
<tr>
<th>Policy areas</th>
<th>Policy contents and projects</th>
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<tbody>
<tr>
<td>Forest conservation</td>
<td>- Designate forested lands under the green space conservation system</td>
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<td></td>
<td>- Purchase privately owned forests</td>
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<tr>
<td></td>
<td>- Forest maintenance and management</td>
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<td>- Utilize forests for educational purposes</td>
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The primary intention of the Yokohama Green-Up Plan is to effectively put a brake on the pace of green-space shrinkage and degradation in a cost-efficient manner. Therefore, the priority focus is placed on this policy domain. In particular, forest designation and acquisition are core elements for the plan. Since most of remaining forested lands in Yokohama are privately owned, the city needs to designate those lands as a “green space conservation area,” where development is restricted. Additionally, it is required for the city government to purchase designated lands in cases where land owners cannot retain ownership due to several reasons, such as difficulties in forest management and property succession.

In addition to forest designation and acquisition, one of the unique features in forest conservation is that the city has established a policy framework to encourage citizen’s involvement in forest maintenance/management by offering training opportunities and subsidies. This enables the city to ensure both cost-efficiency and citizen involvement simultaneously.

Farmland Conservation

Farmlands have several crucial functions in the city’s overall environment, such as water cycle promotion and biodiversity protection. The city of Yokohama is mainly addressing the following two issues in this policy area. Firstly, the city is trying to preserve rice fields in order to maintain the agrarian landscape. The other focus is put on agricultural promotion. In particular, “Local production for Local consumption” is aimed at revitalizing urban farming in Yokohama.

Greenery Promotion

Greenery promotion in an urban setting is another crucial policy element specifically in enhancing the quality of green space and making a liveable city. The most remarkable policy framework in this policy sphere is “Community-based greenery planning,” which enables local communities to make a unique greenery plan reflecting context-specific needs and preferences in each district. The Green-Up Plan supports this community activity by consultation and a subsidy provision.

The Yokohama Green Tax

The Yokohama Green Tax was introduced, based on an ordinance in FY 2009, with the aim to accelerate green-space conservation. This is a special-purpose tax where spending is restricted to projects within the Yokohama Green-Up Plan. This green tax is imposed on residential taxes in the form of a per-capita levy. As the table below shows, it is imposed on both individuals and corporations. Revenues from the Green Tax have amounted to approximately 10 billion JPY in the first phase of the plan (5 years: from FY2009 to FY 2013), which is approximately equivalent with one-fifth of overall project costs in the plan.

<table>
<thead>
<tr>
<th>Types</th>
<th>Amount of Green Tax</th>
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<tbody>
<tr>
<td>Individuals</td>
<td>900 JPY per year in addition to residential tax</td>
</tr>
<tr>
<td>Companies</td>
<td>9% of the annual corporate inhabitant tax levy</td>
</tr>
</tbody>
</table>

Why was it introduced?

The Green Tax was needed to underpin “the Yokohama Green-Up Plan,” primarily because it requires an adequate and stable funding source to effectively conserve privately-owned forested lands. This is because forest designation entails a commitment for the future possibility of purchase, which means that the city has to be financially prepared for acquisition of forested lands.

Securing a stable funding source from the Green Tax was also considered beneficial in leveraging effectiveness to utilize other funding sources, such as the general budget, city bonds and national subsidies. Since revenues from the Green Tax function as a security, the city can fully utilize other funding in an efficient manner.
Accountability and the Yokohama Green Fund

Securing accountability is a primary concern, when introducing a special purpose tax. The city of Yokohama has set up “the Yokohama Green Fund” to manage revenues from the Green Tax separately from other funding sources. This also enables the city to coordinate the budget beyond an annual basis, meaning that the city is able to save up for the green fund when revenue exceeds expected expenditures, while allocating the fund money to project costs when more budget is needed.

Results

The most prominent achievement can be seen in forest conservation. In the first phase of the plan, the amount of annual forest designation has increased to five times more than before. In short, the pace for forest conservation has been successfully accelerated during the plan.

In addition, cost-effectiveness has steadily improved chiefly because of stable funding and reoriented incentive schemes. Since revenues from the Green Tax were secured as a stable fund, the city could use its budget in an efficient manner, such as allocating subsidy provisions toward favourable green projects, including forest management and community-based greenery planning.

As intended, reorientation of incentive schemes was valuable in view of cost-effectiveness. Furthermore, it was also effective in stimulating citizen’s and corporate engagement through subsidy provisions.

Lessons learned and the way forward

Green spaces are highly valuable public assets to maintain ecosystem services and ensure a better quality of living. However, urban green space can be exposed to risks of shrinkage and degradation caused by rapid urbanization. In such a circumstance, a locally introduced green tax is one of the most effective tools to mitigate a negative urban development impact on the natural environment. While an environmental tax, based on the principle of taxing environmental ‘bads’ and providing tax relief for environmental ‘goods’ (OECD, 2011) is recognized as a highly effective policy option taken by national governments, a locally introduced special purpose tax can complement it by satisfying locally-specific environmental needs.

One of the critical impacts of an environmental tax is the induced behavioural changes among citizens and corporations. The case of the Yokohama Green Tax revealed the potential application of a local environmental tax based on the concept referred to in TEEB (2010), which argues for the principle of the “beneficiary pays” to support new incentives to drive the engagement of private and public sector actors in the ecosystem service provision. More precisely, this case suggests that a cost-effective use of revenues from a green tax, accompanied by reorientation of incentive
schemes, can encourage citizen engagement in a green transformation. However, it is also true that clear public communication is essential to ensure public acceptance of a green tax. In this regard, annual reporting and project verification have played a critical role in the case of Yokohama.

It is also worth noting that policy makers need to recognize the variable nature of local environmental needs and circumstances when considering taxation methods and purposes. In the case of Yokohama, it is now expected that the primary focus of green space policy will shift from first-aid green space conservation based on designation and acquisition towards a more sustainable policy measure. This suggests that a gradual transformation from conservation to maintenance/management is required for a future green space policy in Yokohama.

Potential for replication

Urbanization is a particularly striking trend in Asia-Pacific region. As of 2014, 54% of the world’s population lives in an urban setting, and it is predicted that urban population will significantly increase in Africa and Asia over the next four decades. This suggests that rapid urban development could adversely impact the natural environment in urban areas in Asia and pose challenges in the pursuit of Quality of Growth in cities. Therefore, it is necessary for cities to take policy measures in securing funds. In such circumstances, introducing a locally specific green tax could be one of the feasible options to tackle the challenges reflecting local environmental needs. For successful application, both purposes and taxation methods of a green tax should be scrutinized, based on circumstances and capacity in each city. In addition, it is a pre-requisite for a city government to secure transparency and citizen’s acceptance to introduce a special purpose tax.

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Yusuke Takagi received his Msc in Social Policy and Development from the London School of Economics. He is currently working on urban greenery promotion in Yokohama, Japan. He has also worked at UNESCAP and the Institute for Global Environmental Strategies (IGES).

References


City government designates forested lands as “Green space conservation area” based on “the Urban Green Space Conservation Act” enacted by the national government. Once a land is designated, it must be conserved as a green area; therefore, development is restricted. Land owners are benefited by designation through tax deduction or subsidy provision.
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City of Yokohama has started the second phase of “the Yokohama Green-Up plan” in FY 2014 with some modifications in policy contents. United Nations, Department of Economic and Social Affairs, Population Division (2014).