Yokohama, Japan

Tax mechanisms to conserve privately-owned green areas: Yokohama Greenery Plan

ICLEI Local Governments for Sustainability

The City of Yokohama is a large city with 3.7 million inhabitants. Its mountain forests and farmland has decreased year by year due to urban development. To preserve precious green areas for its citizens, the city has introduced a new tax system. The city uses the revenues to conserve privately-owned green areas and their biodiversity and encourage citizens, corporations and developers to take part.

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Abstract

Yokohama city has designated and managed forests by using the special green conservation area system of the government. To protect productive green areas, tax reductions are offered mainly to farmlands in urbanized areas. These farmlands cannot be developed or resold. Municipalities in Japan are pro-actively using these systems or expanding the scope of their operation. Unique regulatory systems for green conservation of farmland and forestry are being established.

Importance of green areas

In Yokohama city most of the precious forests and farmlands are privately owned properties. About 100 hectares of mountain forests and farmland are lost every year, as they are sold or developed, not least due to the decline of forestry and agriculture. Access to water and green areas for urban residents has also decreased. Habitats for species have dramatically changed with the development of concrete river walls and fewer open water channels, with the remaining green areas being increasingly isolated.

Despite various conservation measures, nearly 100 hectares of forests and farmland are lost every year in the city's administrative district, and the green coverage rate fell from 35 percent in 2004 to 29.8 percent in 2009.

The aging of farmers, shortage of successors, and falling incomes are the major causes for the decrease in farmland. Conserving farmland has multiple advantages, including disaster prevention, beautification of the landscape, agricultural economy in suburban areas, and the development of new farms. In light of this situation, the city has studied ways to step up its efforts since 2006.

Population / Land area
~ 3.7 million (2010) / 435 km^2

Municipal budget
Approx. 1,451 billion Yen (2010)
(17.2 billion US$)

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Case Study

Yokohama Water and Greenery Master Plan

Yokohama has integrated its basic plans related to water and green areas into a long-term plan for the 2006-2025 period, the Yokohama Water and Greenery Master Plan, setting up a system to implement water and green policies in an effective and comprehensive way. A basic indicator adopted in the plan was the "water and greenery rate", the rate of green coverage plus the area of urban parks, sporting grounds, school playgrounds and water surfaces.

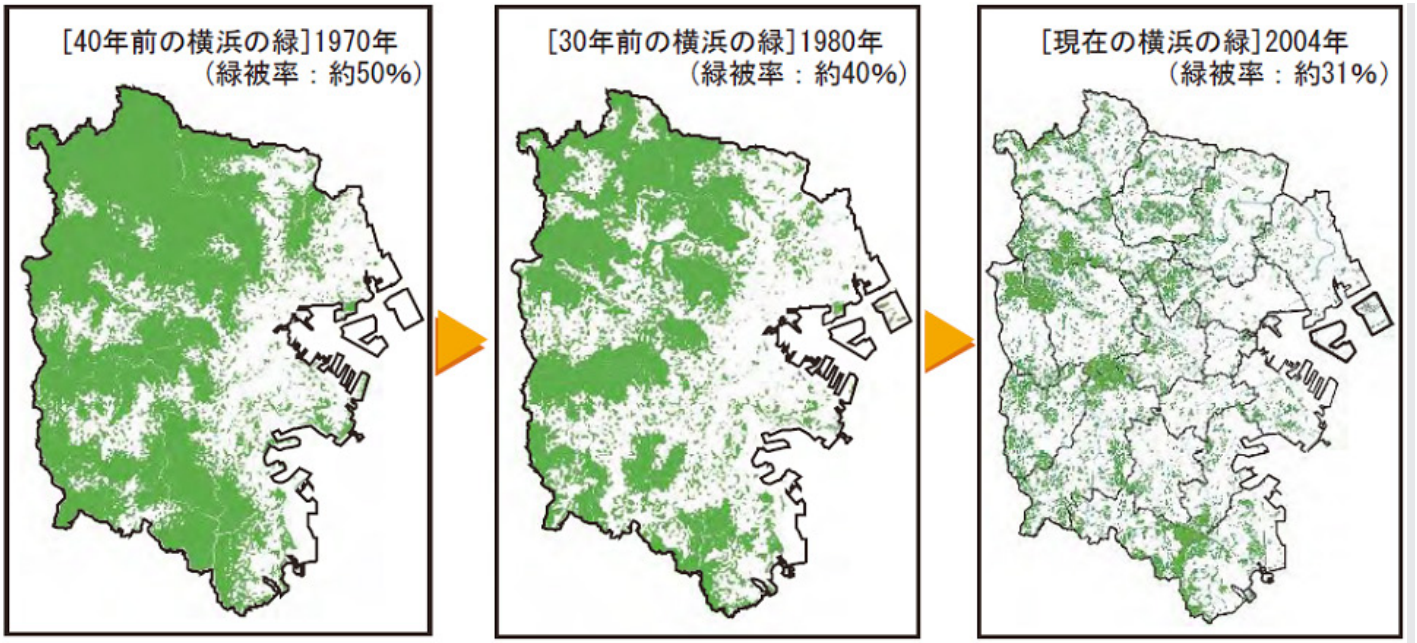
City context

The City of Yokohama is located about 30 kilometers south of central Tokyo. Facing the Tokyo Bay, this port city has flourished throughout history. Within the Tokyo metropolitan area, where about one fourth of Japan's population is concentrated, the city's strategic location is particularly advantageous. The population has increased from 2.2 million in 1970 to 3.7 million in 2010, making the city one of the most densely urbanized areas in Japan.

The geography of the city's administrative district is rolling, with a plateau and terraces stretching from the Tama Hills, lowland, and reclaimed lands for industrial districts. Farmland makes up 3,419 hectares. Of the city's gross product, the primary sector accounts for 0.1 percent, the secondary 21.7 percent, and the tertiary sector 82.3 percent.

The water and green land area in 2004 was about 35 percent of the total land area (green coverage 31 percent, forest 18 percent, farmland seven percent, and grassland six percent, school playgrounds three percent) and water surfaces (rivers, rainwater catchments, retarding basins, etc.) one percent. This area has dropped to 29.8 percent in 2009.

Image: Yokohama Greenery Plan, , Yokohama City



Changes in greenery in Yokohama

In 1961, the City of Yokohama, ahead of other municipalities across Japan, established a park protection association, a system in which the city delegates tasks to citizen volunteers such as the park management and the use promotion.

In 1971, the city established an original "citizens' forest" system. This system allows the city to conclude forest conservation agreements covering 10 years or longer with owners of forests of two hectares or larger, and provide green development incentives to maintain forests and make them accessible to citizens. Local organizations have participated in this conservation effort. The city has designated 31 sites, or a total of 451 hectares. Currently, nearly 90 percent of the parks in the city are managed by community groups.

The city has designated a total of 10 priority conservation areas to protect waters of each river in the city and large green areas in their basins, and developed a "corridor of greenery and water" by using various conservation systems of the government and other unique systems.

Incentives to promote privately-owned green areas

From the citizens' perspective valuable green areas should be publicly managed as common properties. As most of the forests and farmlands are privately owned, cooperation with landowners is essential. With the decline of the economic value of mountain forests, more and more forests are left without appropriate thinning or care. If a forest is designated as a green conservation area, it is eligible for various tax reductions and conservation subsidies.

Cooperation with landowners has been slow, because the system was not fully publicized, and there remain uncertainties around the source of land and funding. In addition, land is subject to a considerable amount of inheritance tax, and therefore tends to trigger division, sale or development. If the city guarantees that it will purchase forests and farmland at a certain price in the future, it may be able to conclude conservation agreements with landowners more easily. In cases where already-high land prices are expected to increase further, especially in metropolitan areas, such conservation efforts are challenging.

Launch of comprehensive initiatives

Aiming to promote conservation measures for privately-owned lands, the City of Yokohama decided to introduce a new tax to secure funding, and carry out comprehensive initiatives by adopting various methods and integrating policies. The city has set goals for the five-year period from 2008, and has been evaluating and verifying achievements on a regular basis. Key measures and policies include:

- Introducing the Yokohama Greenery Tax to secure a stable revenue source.
- Enhancing operations of various tax reductions and incentive systems to encourage cooperation.
- Expanding mandatory greening as well as green conservation areas in tightening regulations.
- Using the power of corporations, eg. corporate entry into agriculture, job creation, and Corporate Social Responsibility (CSR) activities for forest maintenance.
- Developing civil organizations for managing forest, offering farming experience, and community-based greening.

Five-year goals and the evaluation system

Forests: The city government estimates 2,830 hectares of valuable forest can be protected in Yokohama. The goal is to increase the designated green conservation area from current 830 hectares to two thirds of this valuable forest.

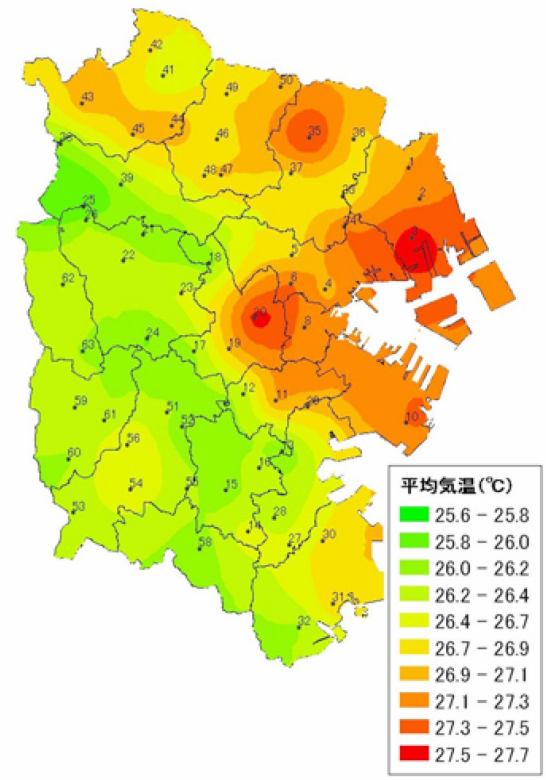
Farmland: To conserve farmland of about 50 hectares by supporting the maintenance of farmland and its continued use, as well as mediating land transactions or purchasing quality farmland. To develop and maintain community-based private farmland to encourage citizen participation in agriculture.

Greening: To create street-side hedges of one kilometer and carry out greening of public facilities of a total of ten hectares. To encourage citizens to draft local greening activity plans.

Yokohama Greenery Tax

In response to the results of a questionnaire survey with 10,000 citizens, symposiums, public comments, and reports from experts in a one-year study, the Yokohama City Council adopted an ordinance in December 2008 to introduce the Yokohama Greenery Tax in April 2009. To share costs among citizens and corporations, the Yokohama Greenery Tax is added to the residential tax for both. This is expected to bring about 2.4 billion Yen (approx. 29 million US$) per year on average (about 1.6 billion Yen, approx. 19 million US$, from individuals and 0.8 billion Yen, approx. 9.5 million US$, from corporations).

Image: Yokohama Greenery Plan, , Yokohama City



Changes over time in average temperature in the City of Yokohama and small- and medium-sized cities.

Ecology against urban heat island effect and global warming

More buildings and paved surfaces increase the heat absorption rate on surfaces and its reflective heat, which raises surface temperatures. To improve and stabilize the temperature in a city, it is desirable to have evapotranspiration from forests and farmlands, and to have a green land area of 30 per cent or larger of the total city land area.

In 2007, 19 million tons of CO_2 were emitted in the administrative district of Yokohama. Aiming to become a low-carbon city, the City of Yokohama has set a goal to reduce CO_2 emissions per person by at least 60 per cent relative to the 2004 level by 2050. To that end, the city decided to expand green areas on rooftops and walls, which curb the heat island effect and capture and store CO_2 emissions.

Evaluation system: It was decided to establish the Civic Promotion Council, which was made up of five experts, five related organizations, and five citizen representatives, to provide information to citizens, evaluate policies and projects, and submit opinions and proposals to the city.

Results and impacts of the project

The Civic Promotion Council 2009 Report highlights the following initial results:

Increase in designated forests. In the past, 10 to 20 hectares of forests were designated as green conservation areas per year. In 2009, the area of designated forests jumped to 87.8 hectares, probably because people better understood the conservation system and became acqainted with the idea of a Greenery Tax. The area of purchased land was 9.6 hectares. Future expansion of designated areas and an increase of land purchases are expected. Although various activities were carried out in the conservation areas, citizen participation remains still low.

Farmland contraction. The target to contract conservation paddy fields was 50 hectares, but achieved were 89 hectares. To sustain agriculture, the report also highlighted the need to develop coordinators who connect farmers suffering from a labor shortage and people who wish to engage in agriculture.

Green space in privately owned lands increased. Greening of privately-owned lands (eg. corporate greening efforts in industrial zones) as well as the green areas in kindergartens, day-care centers and schools have steadily increased. However, it may take some time to draft green community development plans at the local community level.

Policies for biodiversity combined with green space conservation. Every three years since 1973, the City of Yokohama has conducted surveys to monitor organisms in sea and rivers, and evaluate water quality by using unique organism indicators. The protection of biodiversity has been recognized as inseparable from policies for green conservation and expansion.

Lessons learned

Need for a transparent, flexible and responsible tax system. When introducing a new tax it is important to secure the full understanding of the citizens. The city also needs to ensure that the use of the revenue is transparent and the goals are clear and that a management and evaluation system is in place. The city also ensures that it could make its policies flexible in response to social and economic change. The city has responsibilities to steadily implement its policies and clearly present the results.

Integrated policies are important. It is not uncommon that parks and other green areas, river management, and water resource management are handled separately by different departments so that consolidated management and coordination is often difficult. Having integrated its water and green policies, the City of Yokohama became able to facilitate activities and implement new measures, including measures for biodiversity.

Securing policies for cooperation with landowners. The key to gaining cooperation of landowners is that policies are secured, compensation for purchases offered, and the system is reliable. The city secured funding to promote its policies, which worked effectively.

Widening stakeholder involvement. Rooftop vegetable gardens, school vegetable gardens, welfare farms, and other opportunities for urban residents to become familiar with agriculture should be expanded to increase the number of urban agriculture enthusiasts and successors. At the same time, consumer-initiated movements for "local production for local consumption" are needed.

Public participation of citizens and corporations. Even though the city can facilitate implementation of various measures, it takes time to expand participation of citizens and corporations, promote their activities, and expand the green community development at the local level. Steady publicity efforts, encouragement, development of leaders, and support for civic organization activities are required. And these factors may be decisive in determining the direction of the city's projects to be implemented five years from now, and may lead to long-term commitments in the development of the water- and green-rich city.

National systems related to green conservation

The City Planning Act of Japan provides regulations for the control of urbanization to regulate building construction and development activity. The City of Yokohama has designated about 25 percent of its administrative district as urbanization control areas.

Replication

Green conservation in urbanized areas is an important issue for any large city. Advanced initiatives of the City of Yokohama may present examples of securing revenue sources, implementing comprehensive policies, and promoting measures for privately-owned lands and corporate properties, some of which can be applied to other municipalities.

Budget and finances

Total operations budget for 180 staff of the Greenery Promotion Department, under the Environmental Planning Bureau, is 12 billion Yen (approx. US$ 143 million) per year (including the revenue from the Yokohama Greenery Tax of 2.4 billion Yen [approx. US$ 28.5 million] per year). The amount equivalent to the revenue from the tax is being accumulated into a fund for new projects and enhancement projects. The accumulated fund and an additional general revenue source are made into a special account.

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Local Action for Biodiversity

The Local Action for Biodiversity (LAB) program is a global urban biodiversity program coordinated by ICLEI - Local Governments for Sustainability´s Global Biodiversity Centre, in partnership with the International Union for Conservation of Nature (IUCN). The LAB Pioneer program began in 2006 with a selected group of local and regional authorities from around the world, representing over 54 million citizens. The program provides an accessible and enabling platform for committed, leading local governments from around the world. This is achieved by profiling and promoting the importance of urban biodiversity and the role of local governments in its management, as well as by sharing the experiences, successes and challenges of urban biodiversity management in the participating cities and local authorities.
ICLEI provides guidance in assessment, planning and implementation; strategic networking opportunities; profiling opportunities for the participating local authorities at global and regional events; and creates a platform for local authorities to contribute to global advocacy on biodiversity issues.
www.iclei.org/biodiversity

Sources

- Water Conservation Section, Kumamoto City
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