

A Study on the Conservation Plan of the Regional Green Space in the Tokyo Metropolitan Area - A Case Study of the Minuma Tanbo Area -

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Abstract

This surveillance research drafted a conservation plan of regional green spaces, on a metropolitan area level, geared toward the Minuma Tanbo area of 1260 ha, located in Saitama City, in the suburbs of Tokyo. It was an effective method, applied to an area where Japan's current issues on regional green space were epitomized, as it formed symposiums consisting of various personnel, and the opinions of the citizen had been reflected.

Key Words : Regional Green Space, Citizen's Participation, Green Space Planning, Seminar, Minuma Tanbo Area, Tokyo Metropolitan Area

I. FOREWORD (BACKGROUND AND THE PURPOSE OF THE SURVEILLANCE RESEARCH)

Both, the National Land Planning of Kanto, 1936, and the Green Space Planning of Tokyo, 1939, can be named as part of the green space planning of large metropolitan areas of Japan. The Law for the National Capital Region was revised in 1965, and the planning of the Green Belt was proposed: however with the application of the Law for the National Capital Region, the Law for the Conservation of Green Belts Around the National Capital Region was established in 1966, and the area within the range of 10 km was settled as an area "for the development of a systematic city and for the conservation of its green

space." Thus, while being characterized as an area with potentials for development, the need of wide green spaces was positioned within its contexts.

Yet, Japan's initiatives, apart from a wide planning

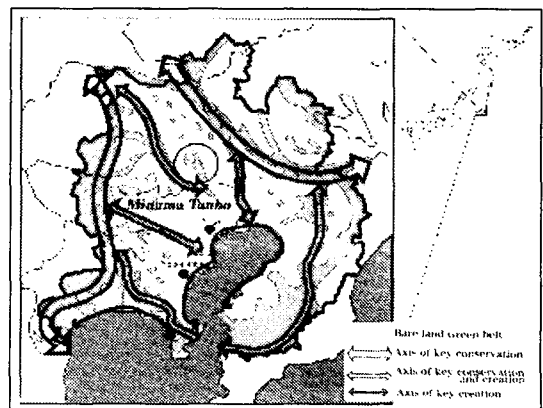


Fig. 1. Structure of the a Regional Green Space in the suburbus of the Metropolitan area¹⁰⁾.

on a metropolitan area level, were limited to just the specification of green spaces and park maintenance on a municipal level. Therefore, there are only a few instancial plans on the concrete methods of how each municipality should preserve their green space positioned within urban planning. This research will firstly try to reach the awareness of the value of the positioning of the need of wide green spaces on a municipal level, and after marshaling its current situation and its challenges, it will later try to clarify the plan and the process of the drafting, as well as an efficient method for planning a municipal conservation method that can be shared with its citizen^{1,2,3,4,5,10}.

II. NATURE AND METHOD OF THE SURVEILLANCE RESEARCH

1. Selection of the Subject for the Surveillance Research

The selection of the Minuma Tanbo (M.T) area, as the subject for this surveillance research, was due to the following reasons: (i) it is an area in which several projects are actually being embodied as part of the green space planning, for metropolitan areas, (ii) the land is mainly used for agriculture, it is an area that needs to be conserved, and there is a pressing need for drafting a conservation plan, (iii) it is an area that has proposed the importance of regional green space in all national, prefectural, and civic levels, (iv) historically, its land use has been changing drastically, leaving them with a need to have proper conservation plans considering such factors, (v) it is an area where various civic activities take place in its regional green space, and the drafting and establishing of an administrative plan is being demanded by its citizens.

2. Nature of the Surveillance Research

Following is the nature of the surveillance research: (i) considering the historical land use of M.T, (ii) setting in order the current situation and the challenges M.T faces as a regional green space, (iii) considering and organizing the issues of each project related to the M.T area, as a subject to regional green space conservation planning, (iv) Considering future green space planning projects as a suburban regional green space within the Tokyo metropolitan area.

3. Surveillance Research Methods

Since the plans for land conservation have the need to be shared with its citizens through their participation, and since its effectiveness as an administrative plan is also essential, it formed seminars consisting of academic experts, representatives from private citizen groups, people engaged in agriculture, etc., which discussed its most current situations and problems, as well as the planning itself. At the same time, workshops and symposiums were organized, and ideas were publicly solicited, in order to have an active participation from the part of its citizens to reflect their perspective into the planning, while they also lead to a better understanding of the actual state.

III. OVERVIEW OF THE AREA SUBJECT TO THE SURVEILLANCE RESEARCH

The M.T area, target area of this surveillance research, is a Y-shaped low-lying land of 1260 ha, 14 km north to south, 44 km of peripheries, within the 20 km~30km range from Tokyo.

The history of the land began as an inlet, and was succeeded to this day through its times of ash and wetland, reservoirs, and rice paddies. In the 1950s, according to the expansion of the Tokyo metropolitan

area, the conversion of land use began partially. Yet its capability as a drainage basin was focused after suffering damage from the typhoon in 1958, and the "Minuma Sangensoku (The Three Principles of Minuma, 1965)," which restrains development from the viewpoint of water control, was institutionalized. Development pressure increased over the M.T area after that, due to the progress of urbanization in the recent years, changes within the farming environment, as well as other elements. On the other hand, movements to preserve the green space of the M.T area, as one of the few large-scale green spaces in the suburbs of the metropolitan area became active, leading to the establishment of a new standard for land use, the "Master Plan for the Conservation, Utilization, and the Creation of the Minuma Tanbo, 1995", to take over the "Minuma Sangensoku", which was conceived by representatives of Saitama Prefecture, related cities, academic experts, land owners, and leaseholders.

At present, it is forming a conglomerate large-scale green space consisting of separately managed, various land-use styles in their quality and forms, and while mainly used for agriculture, it is also used as parks,

green spaces, public facilities, playing fields, residences, and corporate sites^{6,7)}.

IV. CURRENT SITUATION AND CHALLENGES AS A REGIONAL GREEN LANDSCAPE

The array of the current state and the problems as a regional green space was based on the basic information such as land usage, vegetation, or existing plans. It also tried to have a grasp of the awareness and intentions of the citizens, through the above-mentioned discussions, workshops, and by publicly seeking ideas, etc.

1. The M.T area, as an Area for Agricultural Production

Approximately 40 % out of the 1260 ha is agricultural land, and 104.5 ha of it had been lost in the 4 years from 1997. What is thought to be behind the remarkable decrease of farm land, and the increase of waste land, is the increase of idle farm land due to the decrease in the farming population⁶⁾.

2. The Minuma Tanbo Area as a Habitat for Wild Life

The area was formerly specified as a national Special Natural Monument, as a heronry, but it was unspecified in 1984. The decrease of agricultural land, as well as the modernization in agriculture, are thought to have caused the decrease in the number of animals. However, at present, in addition to about 200 kinds of wild fowls, all kinds of rare species have been found, making it one of the few wild life habitats in the suburbs of the metropolitan area^{8,11)}.

Table 1. Land use in Minuma Tanbo Area^{6,7)}

Land Use	Minuma Tanbo Area					
	Saitama City		Kawaguchi City		Area (ha)	%
	Area (ha)	%	Area (ha)	%		
Rice field	94.8	7.9	1.8	3.1	96.6	7.7
Field	413.5	34.5	7.8	13.4	421.3	33.5
Wasteland	105.0	8.8	—	—	105.0	8.3
Residence	55.8	4.6	—	—	55.8	4.4
Business Site	56.2	4.7	—	—	56.2	4.5
Public Facilities	69.0	5.7	0.2	0.3	69.2	5.5
Parks / Open Space	124.5	10.4	23.4	40.3	147.9	11.8
Wood Land	2.5	0.2	0.1	0.2	2.6	0.2
Parking Area	2.6	0.2	—	—	2.6	0.2
Bare Land	9.4	0.8	0.1	0.2	9.5	0.8
Road	108.0	9.0	0.2	0.3	108.2	8.6
River / Waterway	88.9	7.4	1.4	2.4	90.3	7.2
Check Dam	69.2	5.8	23.1	39.8	92.3	7.3
Total	1,199.4	100.0	58.1	100.0	1,257.5	100.0

3. Conservation of the Slope Forests through a Citizen Trust

Although it is an essential constituent element of the M.T area, it has not been addressed as part of the M.T area, subject to the "Master Plan for the Conservation, Utilization, and the Creation of the Minuma Tanbo" the restrictive measures for development. Thus, while a large part of such slope forests has been lost through development, Saitama Prefecture obtained the land as the first "Saitama Green Trust Conservation Area, with the Saitama Green Trust Fund, financed by Saitama Prefecture and Saitama Green Trust Cooperative Foundation.

At present, civic volunteers are in charge of its administration and maintenance, welcoming a large number of citizens, as a scenic site within the M.T area^{9,13)}.

4. Conservation of Its History and Culture

The M.T area has an old history, and temples and castle ruins remain on the plateau around the M.T area. The "Minuma Daiyousui (irrigation ponds)," constructed during the development of new feld era, Edo period, as well as the oldest lock-gate-type canal, "inuma Tusenbori," which is also officially designated as a historical site, are both valuable cultural assets which enables to hand down construction technology, and distribution economics of the modern times to posterity. It is also said that the three old shrines standing straight in line on the plateau, overlooking the M.T, were built during the ash and wetland era, and together they constitute one large shrine which its divine object is the Minuma. There are also quite a few ancient anaconda and dragon legends in Minuma, and traditional events related to these take place to this day^{8,9,11,12)}.

5. The Minuma Tanbo as a Rural Setting

Slope forests, homestead woodlands, rivers, Minuma Daiyousui, paddy fields, and regular fields can be found everywhere, in spite of neighboring several cities. However, there are very few areas that preserve such a precious overall rural view, paddy field areas containing all of its natural elements are on a downward trend. There are also on-going developments in the slope forests area. The country view found in the M.T area must be passed down for generations as the true landscape of Saitama City. Although there are future plans for building expressways and town planning roads, special considerations should be made to protect its landscape^{6,7)}.

6. Improvements Related to Parks and Recreational Facilities

There are large numbers of parks and recreational facilities within the M.T area, as it is an open area neighboring cities. Parks and green spaces take up about 12 % , approximately 150 ha, of the whole area, and there are also city parks, playing fields, allotted gardens, folk house museums, botanical gardens, biotopes, and regulated ponds servicing as bird sanctuaries. Green ways or promenades have also been constructed along the neighboring Minuma Daiyousui, where colorful cherry blossoms and cluster-amaryllises color them up, and people can take strolls or cycle about them^{6,7)}.

V. CONSERVATION, UTILIZATION AND CREATION PLAN FOR THE MINUMA TANBO^{6,7)}

Taking into consideration the current situation and its related issues, we were able to draft a plan based on the various viewpoints which included above-mentioned experts, representatives of citizen groups,

as well as people engaged in agriculture, and the ideas directly deriving from citizen's participation, through workshops and by inviting public participation. We have opted for such methods, as the fore coming drafting and execution of an administrative plan needs a discussion with a wider range of viewpoints, and especially because the active participation of the citizens, as the anchor of conservation of the regional green spaces is truly essential to it.

Following are the points at issue: (i) a new viewpoint to consider M.T area as a green space is needed, (ii) within this plan, land use conversion through zoning is impossible in a regional green space including agricultural fields: thus there is no need for a clear-cut land use zoning, (iii) whether the great part of the embodiment should focus on enriching existing features of the present state of land use or not, (iv) The use of the subdivided land should be thoroughly examined, and detailed measures to enrich each quality should be necessary, (v) such various green spaces should be orchestrated, adding to it the function of a regional green space, (vi) Having an empirical trial viewpoint that would pile up various methods to maintain its functions as a regional green space, (vii) methods to orchestrate green areas as a regional green space should be "forming a network" and "cooperative labor of by its citizens", (viii) creating a regional green space network connecting various green areas, enabling citizens to use it as a whole, (iv) Linking all of the different owners in order to create a general concept to tie the regional green space as one, (x) They should not be enclosed nor regulated, but should be encouraged to come together to preserve the land.

Such arguments have been organized and incorporated in the following plan:

1. Basic Perspective

<Basic Idea>

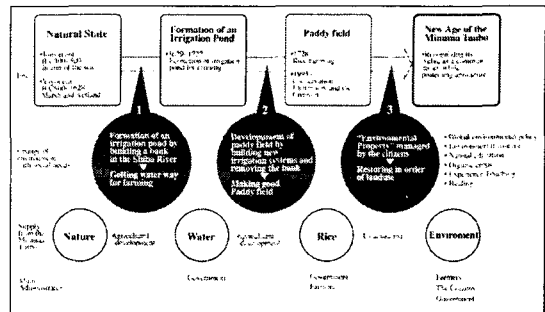


Fig. 2. Path to the New age of the Minuma Tanbo⁶⁾

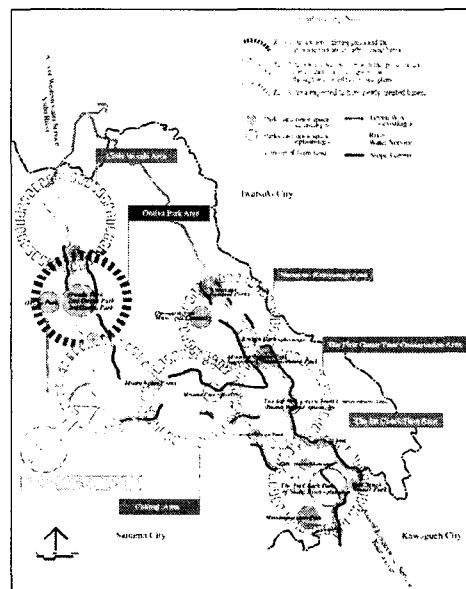


Fig. 3. Network of Water and Green system^{6,7)}

The basic idea should be "to leave the precious nature, history and a culture of Minuma for posterity, based on the understanding of the 'Minuma New Age.' "

<Basic Policy>

(a) Passing on the history and culture of M.T to future generations, so as to make good use of them.

(b) Proceeding with the overall conservation, utilization and creation within the various forms of green areas.

(c) Forming a regional network of water and green

system.

2. The Future -The Network of Water and Green System-

This plan proposes "The Network of Water and Green System" to indicate the path which M.T's conservation, utilization, and creation should take, based on its basic idea and its basic policy. It will link both existing and newly created bases through green ways, rivers, irrigations and slope forests, expanding it to the whole M.T area, civic, prefectural, and metropolitan level, as a larger network of water and green system.

〈Base Foundation for the Water and Green System〉

(a) It will form a nucleus in every 7 areas, settled according to the land use status.

(b) Such 7 areas can be classified into 3 types: "existing," "to be improved in the future," and "newly created."

〈Securing the Continuity of the Water and Green System〉

(a) It shall improve the continuity of green ways, rivers, irrigations and slope forests, and should also attempt to enrich the two axes in the east and west.

(b) The west should be enriched for "citizen use," while the east should be enriched as a place in which "ecological network meets nature."

3. Embodying Methods (Implementation of Measures and Policies)

Following are the proposals as the means for the realization of "The Network of Water and Green System," which we presented as the future image.

〈Forming Environmental Assets〉

(a) Conservation and recovery of the waterside environment:

(b) Conservation of the slope forests

(c) Conservation of the agricultural land

(d) Implementation of a nature-environmental investigation

〈Forming of a Base and Nucleus〉

(a) Existing or newly planned parks to be used as base points / reorganizing green spaces

(b) Creating a Central Park (tentative name) as the nucleus

〈Forming of a Network〉

(a) Forming a wide ecological network

(b) Forming a park-green area etc. networks

(c) Forming a pedestrian-bicycle network

〈Creating Space for Citizen's Participation and Cooperative Labor, and Forming a System〉

(a) Creation of sites for activities and learning opportunities for the citizen

(b) Creation of a site for cooperative citizen labor

(c) Environmental management and managing system

〈Enhancing Administrative Agencies and Cooperation with Related Organizations〉

(a) Enhancing administrative agencies

(b) Cooperation with the country, Saitama Prefecture, and Kawaguchi City

VI. CONCLUSION (THE MEANING OF THIS PROJECT)

This plan has taken on the role as the basic policy of Saitama City, and some of the propositions have already been researched, planned, and actually

implemented.

The fact that such plans have been embodied as an administrative plan can prove the effectiveness of the following planning process as well as the plan in itself: (i) establishing seminars as a forum to exchange various viewpoints, (ii) Understanding the awareness and intentions of the citizens through a wide range of methods, such as local visitations, workshops, publicly inviting over ideas, or symposiums, (iii) Reflecting multiple ideas gathered through such methods, (iv) Sharing the overall contents of the plan through these opportunities.

Therefore, it can be said that a planning process embodying of a plan with the participation of farmers, landowners, and a large number of citizens is essential to the conservation of regional green space, and this surveillance study has fully responded to these challenges.

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