Analyzing the Community’s Perspective on the Relationship Between Landscape Characteristics and the Importance of Toponym: a study case of Matsudo-shi, Chiba-ken, Japan

I D Imara, K Furuya, and Nurhayati

1 Department of Landscape Architecture, IPB University, Indonesia
2 Department of Environmental Science and Landscape Architecture, Graduate School of Horticulture, Chiba University, Japan

E-mail: Indira_dwi@apps.ipb.ac.id, k.furuya@faculty.chiba-u.jp, nurhayati@apps.ipb.ac.id

Abstract. It is a common knowledge that every location on earth has its own names, called toponym. Essentially, the name functions as a place identity, distinguishing one place to another based on the community that lives in the area. From the perspective of the community in Japan, toponym is dynamic: it is a cultural heritage, but the name might change, become new, or disappear. This happened because local authorities assumed they own the toponym (there is no enforcement, and it is free to change or even to sale). There are 5 origin theories for toponym in Japan: terrain, Ainu language, disaster, traveller/direction, and others. Matsudo-shi is a city made from merging other small cities into one. In the case of the toponym of this city, there are 3 theory possibilities that emerged based on literatures. Even so, it is very difficult to determine which one is true, caused by the lack of records, other supporting literatures, and researcher’s language ability. Furthermore, the landscape characteristics that reflected the origin of the name in the said area also need to be defined and analysed further. This research has the purpose to trace the information about the area toponym: the origin of the name, to analyse the community’s perceptions and preferences, and to evaluate the landscape characteristics. It was conducted with three kinds of studies: literature study, field survey, and questionnaires. The result of this research is a general understanding towards toponym and the community perspective related to this in Japan. The conclusion for the result was the respondents seem to value characteristic of Matsudo-shi very much and thought that some enhancement based on the toponym history is recommended for the next town management planning.

Keywords: community perspective, landscape characteristic, Matsudo-shi, place identity, toponym

1. Introduction
1.1. Background
It is already known that everything on earth, including objects and places, have their names, called toponym. These names function as an identity of a place, distinguishing one place from another. This identity is reflected in the landscape characteristics of the place. Based on its community, every place even has its distinctive understanding and definition about it. In Japan, toponym is dynamic and alive: the name of a place is considered as an intangible cultural heritage, but the name might change, become new, or even disappear.[1] This happens every time because no authority has the duty to enforce the importance of toponym lawfully. This phenomenon happened because the local authorities assumed they own the toponym, sometimes creating 'portmanteau' names, directional-tendency names, unmatched names to the area size, and changing from Hiragana to Kanji.[2] Also, there are two terms related to
place names in Japan, endonym (a place name derived from the local community’s language) and exonym (different names of the same place used outside the community’s language).

Every toponym has its own origin which is connected to the history and culture of the community that resides there. In Japan specifically, there are 5 theories of naming origins [3]. Many of the places in Japan are named with writing characters taken from natural object names as well[4] The name technically symbolizes and reflect many aspects of a place, such as geography, environment, and cultural richness. These aspects connect directly to the community that resides in the area, as it represents important values of its history, culture, and language of the place.[5]

*Matsudo-shi* (松戸市) is a city located in Chiba-ken, Japan. It is a city made from merging 4 places: Matsudo-cho, Katsushika-gu, Takagi-mura, and Mabashi-mura.[6] Looking at its name only, we could find that the name consisted of nature writing character, ‘matsu’ (松) or pine tree. The name suggested there could be found plenty of pine trees in this area, thus the origin of the name. Even so, until now there are still other origin theories from various sources that could be accounted for as well, such as *kogane-maki ‘uma no sato’* (馬の里), *Yamato Takeru’s camp village ‘matsuzato’* (待つ里), and post *Edo town ‘matsu sato’* (待つ里). These other theories originated from various perspectives of the community that lives in this city. The variety of the origin theories shows the lack of historical and cultural records about this city regarding its name and could indicate that this city has a weak identity. With this matter in mind, it is necessary to research about the community’s perspective on the relationship between landscape characteristics and the importance of toponym in order to find out more about the identity of this city.

1.2. Objectives and research framework

There are 3 main objectives of this research:

- Identifying the information of the origin of Matsudo-shi’s toponym;
- Studying the landscape characteristics and potentials of the area; and
- Studying the community’s perspective towards the place and its toponym with the research framework written in Figure 1.

![Figure 1. The framework of this research](image-url)
2. Methodology

2.1. Research location and time
This research was conducted in Matsudo-shi, Chiba-ken, Japan (see Figure 2). In general, this place has the area of 61.38 km² with the population that almost reached 500,000 people.[7] The area was chosen because it has the name of an important Japanese plant, the Japanese pine tree (.IsDBNull). Matsudo-shi has many smaller region units which also have their own history of place name, but they have no link to Matsudo-shi’s name, so they are not considered in this research. The research was conducted within 6 months, starting from April-September 2019.

![Figure 2. Orientation map of Matsudo-shi](image)

2.2. Methods and tools
Generally, this research was conducted with 3 types of methods: literature study, survey and observation, and questionnaires. Basically, there are a few steps that were needed to be completed in order to finish this research, that is preparation, data collection, analysis, and synthesis. Preparation is the beginning which consisted of early consultations with professor as the supervisor and initial literature study to find out more about the area. After collecting the needed data, the next step of data collection consisted of survey and observation done by visiting many places in Matsudo, especially the most famous ones such as 21st Century Park, Matsudo Shrine, and Tojo-tei House.

The survey and observation was done to check a few things regarding the condition of the existing landscape of the city, including parks, open spaces, vegetations, and the existence of toponym elements. Then, the questionnaires were in the form of close-ended and distributed to the community; the respondents were consisted of Japanese and foreigners with the criteria have the minimum of 1 year connection with Matsudo-shi (working/go to school/living/often visiting). There are 4 attributes of the questionnaire: knowledge about toponym, name origin possibilities, landscape element preferences, and public space potentials. After that, the collected data were analysed using a descriptive analysis. The simple descriptive analysis used a spreadsheet application as its medium. The results were then compared to one another to find out about the community’s perspective towards Matsudo-shi and its toponym.
3. Result and discussion

3.1. The toponym concept

The objects on earth are consisted of natural and man-made, such as relief forms, water body, forest, buildings, housings, and roads.[8] Human have the habit to give names to these objects in order to label, to identify, and to locate.[9] This habit is affected by the social and culture of the humans who lived near the objects or in the places. The name-giving is linked to human means in relating their works with the place they lived in and their perspective towards various of phenomenon that happened [10]. Further explained, the information attached to a name like pronunciation, writing, meanings, and the history are the entities which couldn’t be separated. As such, we could trace many information just by looking at the name of a place or object.

The name of a place is known with many terms, such as topographical name, geographical name, and toponym.[11] Toponym, is derived from Latin word “topos” which means place or surface and “onyma” which means name.[10] Basically, toponym is a science of understanding the name of a place and its totality in the region which is linked with its history, culture, and language [11]. It is a set of views of the community, consisted of political, social, and culture that shows language trend or the peculiarity of word forming.[12] That is why, every toponym name that used the local language must be preserved because it serves as the reminder of the long history of human migration on Earth.[10] Also, toponym has a very important role to trace the changes of local administrative system, which is useful for future inventory and tracking of place names.[13] Every toponym is noted inside the national gazetteer.

Toponym in Japan is mostly called place name, and it is a code that can be used by two or more people. It is considered as a fossil of an ancient language that has passed through a variety of complicated traditions such as changes and transliteration since its occurrence.[3] The toponym system in Japan is also based on many things; the name technically symbolize and reflect many aspects of a place, such as geography, environment, and cultural richness. There are 5 theories of toponym origins in Japan: terrain, Ainu language, disaster, traveller, direction, and 5) others (personage, occupation, foreign name, synthetic name, omitted names, another place’s name, and nature).[3] Other theories consisted of various aspects, specifically the way of writing (Kanji), including ethnic groups, nature, culture, foreign names, and Ryukyu language.[4] There are a few matter regarding place name in Japan: 1) the place name could be changed; 2) place names are written in Kanji and their usage varies widely; 3) there are reasons for the name of a place; 4) the place name has its original meaning and origin; 5) the boundary and character of place name could be discussed; and 6) the place name has a political history.[3]

3.2. Knowing Matsudo City

3.2.1. General information

Matsudo-shi is a part of the larger Higashi-Katsushika region in Chiba-ken, located only 15 km from Tokyo, that’s why it had been affected greatly by the capital [14]. Matsudo-shi has the total area of 61.38 km² with the population of 486,503 locals and 14,000 foreigners by January 2017. The borders of Matsudo-shi including west side (Edogawa river), south (Ichikawa-shi), and east to north (Nagareyama-shi until Shiroi-shi). The climate is hot, humid, and rainy during the summer but dry and sunny during winter [3]. Edogawa River flowed through Matsudo-shi, playing a role as a valuable waterside and green area in urban areas. The city is consisted of a diluvial layer plateau (the Kanto Loam Formation) and a lowland of the alluvial strata along the Edogawa River; it is a landform with continuous terraces and features many hills and stairs.

This city is located in the evergreen forest zone (Yabutsubaki class area) dotted with various vegetations, such as evergreen broad-leaved forests (oaks, birches) in the plateau area, deciduous broad-leaved forests (zelkova, enoki, mukunoki, mizuki, and mulberry) in the lowland and slopes, riverside forests (willows, alders), and man-made forests (sudajii, tabuni).
It is also said that there were many red pine forests in the name of Matsudo, but there are less now. The city has the motto “city of trees, flowers, and birds” with many famous vegetations like eucalyptus, sakura, ajisai (hydrangea), nogiku, and azalea, and birds like tsubame and shirasagi.[14] This place is a regional commercial center and a bedroom community for nearby Chiba and Tokyo.

The historical aspect of this city showed that there were plenty of major events that took place in Matsudo-shi. The area where this city is located has been around since the Paleolithic age, with the discovered artefacts such as the Koda Shell Mound from the Jomon period. In the Heian period, it was written inside sarashina nikki (the grader diary) that Matsudo has the name of Matsu sato (待つ里). During the Edo period, Matsudo and Kogane prospered as a post town for transportations, especially for water transportations. The area was also a pasture area ‘uma no sato’ (馬の里), under Shogunate control for their military horses. During this period as well the Mito Kaido road was built by the Shogunate. Meiji period was the time for the Mito Kaido road to become a national road and Matsudo is the traffic center for both land and water transportation. This was the period that the town and village system enacted (1887); Matsudo-cho, Akira-mura, Yabashira-mura, Takagi-mura, and Kogane-machi was born in the Matsudo-shi area. Matsudo-shi was created during the Showa period, merged from Matsudo-cho, Katsushika-gu, Takagi-mura, and Mabashi-mura. After that, this city kept on progressing. And in the Heisei period, many current famous places were first opened, including 21st Century Forest and Park, City Museum, and Tojogaoka History Park.[6] The area is also said to be the ‘camp village’ (待つ里) where Yamato Takeru descended to meet his followers.[15]

3.2.2. Matsudo-shi’s landscape elements
Looking at the characteristics of the city and its area developments, many things were regarded as important elements which composed the landscape of Matsudo-shi (see Figure 3). The first one is the natural (water and green) system, divided into 6 parts: scenic forest, Edogawa waterside, Yatsu terrain, open spaces, Sakagawa social space, and agricultural landscape. Then comes history and culture, consisted of 6 things: historical transport town, historical waterscape ‘yagiri no watashi’, Tozenji shrine ‘nogikuno haka’ novel, kogane maki ‘horse village’, traces of Jomon period ancestors, and Kawarazuka tombs and kogane kofun mounds. The commercial/business system is categorized as 9 items: railway stations, renovations of shopping streets, Chiba University Faculty of Horticulture landscape, famous pear and green onion, volunteering organizations, Yabashira cemetery landscape, the railway iron bridge, night views, and festivals. The last one, the townscape/view system has 8 items: Edogawa riverbed scenery, Tojo-tei views of Mt. Fuji and Mt. Chichibu, Yagiri in the ‘nogikumo haka’ novel, ‘Matsudo Building’ landmark, Tokiwadaira housing complex, 21st Forest and Park and museum, land readjustments in plateau, and the landscaping of private green spaces.

![Figure 3. Matsudo city landscape elements categories [14]](image-url)
3.3. Existing landscape conditions
From the survey and observation done in the research area, it could be said that it is true the aforementioned landscape elements really reflected the actual landscape conditions in Matsudo-shi. There are a few things that are more prominent than others: there are many open spaces in Matsudo-shi, both private and public, that is used almost every day by the community. Regarding the toponym, many of these open spaces incorporated the use of pine trees as the main vegetation, whether realizing it or not, highlighting the name ‘matsu’ in Matsudo-shi. The public open spaces including big parks such as 21st Century Forest and Park and small neighbourhood parks. A unique thing about this city is that Matsudo-shi uses manhole covers as a way to remember the history of matsu sato by putting a carving on it. Refer to Figure 4 for some pictures of the current conditions.

3.4. Community perspective analysis
3.4.1. Respondents characteristics
There were 30 respondents that participated in the questionnaires (see Figure 5), half Japanese and half foreigner. The majority are females of age under 30 years old with bachelor degree that lived in Matsudo. The respondents mostly have direct connections 1-5 years with Matsudo-shi, mainly going to school in here. In size, the number of respondents chosen were not large, but it could be said that it is sufficient as it is the starting point of this kind of research.[16] The final respondents were chosen from the people that were mainly associated with Chiba University (students and professors). This decision was made with the time, distance, and respondent willingness factors in mind. Language was the main obstacle that influenced the said factors, specifically the willingness. Because the lack of the researcher’s ability to speak Japanese, many of the community refused to answer because the questionnaire was made initially in English. The researcher had to alter the questionnaire to make the respondents understand it easier, then reconsider the chosen respondents.
3.4.2. Knowledge about toponym

The result (see Table 1) showed that more than half (57%) of the respondents doesn’t have the knowledge about toponym before. Majority admitted they know Japanese pine trees (87%) but argued that not so many can be found in Matsudo-shi (80%). They mostly also thought that landscape characteristics are very important for the city (90%), and almost everyone agreed Matsudo-shi’s characteristics doesn’t reflect its intended name (93%). That is why, mostly recognize that characteristics enhancement is needed in Matsudo-shi (80%) and wanted the characteristics to be restored based on its name (toponym, 73%).

| Questions                                           | Yes  | No  |
|-----------------------------------------------------|------|-----|
| Have knowledge about toponym?                       | 57%  | 43% |
| Know Japanese pine tree?                            | 87%  | 13% |
| Many Japanese pine tree can be found in Matsudo?    | 80%  | 20% |
| Landscape characteristic is important for the city? | 90%  | 10% |
| Matsudo city reflects the characteristics of its name? | 93%  | 7%  |
| Need landscape characteristic enhancement in Matsudo? | 80%  | 20% |
| Restore Matsudo’s landscape characteristic based on its name? | 73%  | 27% |

3.4.3. Name origin possibilities

Based on theories, there are 4 name origin possibilities for Matsudo-shi’s toponym. The answers (refer to Figure 6) revealed that majority (63%) of the respondents believed that the main origin possibility was pine tree. This could indicate that there is a link between the community’s perception and their daily experience; they saw pine trees every day in their daily lives that it etched strongly in their mind, influencing their opinion on the toponym origin possibility.
3.4.4 Landscape element preferences

Based on the results (see Figure 7), in response of their belief in pine tree as the main name origin possibilities, many of the respondents chose replanting toponym plants (31%) as the vital enhancement strategy. It’s followed by interpretation board (24%) as a way to put up more information about the area. The interesting thing about this is that there were respondents who chose not to restore the area, meaning no need to add any elements to enhance the characteristics. This include the people who answered ‘no enhancement is needed’ in the previous section.

3.4.5 Public space potentials

The respondents’ answers (refer to Figure 8) presented that they thought that street green space has the most potential (35%) to enhance Matsudo-shi’s landscape characteristics. This correlates directly to their opinion about pine tree origin and replanting strategy. Followed by social facility (24%), city park (22%), and neighbourhood park (16%), these could become the potential to put hard elements such as sculpture and street furniture, or even the manhole covers. The said places acted as a medium for social gathering, thus can be used to introduce Matsudo-shi’s history and culture by enhancing the city characteristics in here.
4. Conclusions
Matsudo-shi’s toponym were mainly believed by the respondents to be originated from pine tree (松). Looking at the existing conditions, it could be understood why they chose this, as it is something, they encounter every day in their lives. Thus, they associated pine tree as the city’s dominant landscape characteristic. To enhance the city’s characteristics, in correlation with the respondents’ choice, they agreed replanting as the main enhancement strategy and street green space is the best place to do it. The result of this research could be used as one of the basic information to make Matsudo-shi’s management plan. Although, further research about this matter is still needed in order to map the respondents’ opinions more accurately.

References
[1] folklore2017 2017 The place name is alive www.folklore2017.com
[2] Watanabe K 2016 Whose toponym? A note for deliberation on place names www.researchgate.net
[3] folklore2017 2017 Origin of place name www.folklore2017.com
[4] Mogsh I, Sunagawa Y 2017 日本の地名：日本の地名とその由来 www.guic.gunma-u.ac.jp
[5] Helleland B 2002 The social and cultural values of place names: submitted by Norway Eight United Nations Conference on the Standardization of Geographical Names
[6] Matsudo City Hall 2013 松戸市のプロフィール www.city.matsudo.chiba.jp
[7] Matsudo City Hall 2017 _mtimeJP www.city.matsudo.chiba.jp
[8] Golaski J 2002 2002 Characteristic features of toponym objects and their dynamics: submitted by Poland Eight United Nations Conference on the Standardization of Geographical Names
[9] Conedera M, Vassere S, Neff C, Meurer M, Krebs P 2007 Using toponym to reconstruct past land use: a case study of ‘brisáda’ (burn) in southern Switzerland Journal of Historical Geography 23 729-748
[10] Subowo E 2011 Kebijakan pembakuan nama rupabumi di Indonesia Toponimi dalam Perspektif Ilmu Budaya www.linguistik.fib.ui.ac.id
[11] Asadi 2015 Nama rupabumi, toponimi, aturan, dan kenyataan Jurnal Lingkar Widya Suara 2 4 18-35
[12] Urazmetova AV, Shamsutdinova JKH 2017 Principles of place names classification XLinguae Journal 10 4 26-33
[13] Munandar AA 2011 Makalah pembicara: toponimi dalam kajian arkeologi Toponimi dalam Perspektif Ilmu Budaya www.linguistik.fib.ui.ac.id
[14] Matsudo City Hall NA 松戸市の現状と課題 www.city.matsudo.chiba.jp
[15] Matsudo Shrine NA 奥社神社 日本武尊 www.matsudo-jinja.com
[16] Unite for Sight 2015 The importance of quality sample size www.uniteforsight.org