Improvement of Districts With Close-Set Wooden Houses

In the event of a large-scale earthquake, districts with close-set wooden houses are expected to suffer major damage including from the outbreak of fires, due to inadequate roads, parks, and other urban infrastructure and the large number of old wooden structures.

In light of earthquakes such as the 2011 Great East Japan Earthquake and the impending threat of a major earthquake directly striking the capital region, the TMG has been implementing measures to improve such areas in collaboration with municipalities, in order to protect the lives of residents and the urban functions of Tokyo.

In the Basic Policy for the Urban Development Plan for Disaster Resistance revised in March 2020, application of the Fireproof Zone system and initiatives for the development of Designated Routes for Improvement, which had been implemented as prioritized and focused measures over a 10-year period in development districts where damage is expected to be particularly severe in the event of a major earthquake, were extended by five years up to the end of FY 2025. Through this extension, the TMG is strongly promoting the enhancement of fire resistance.

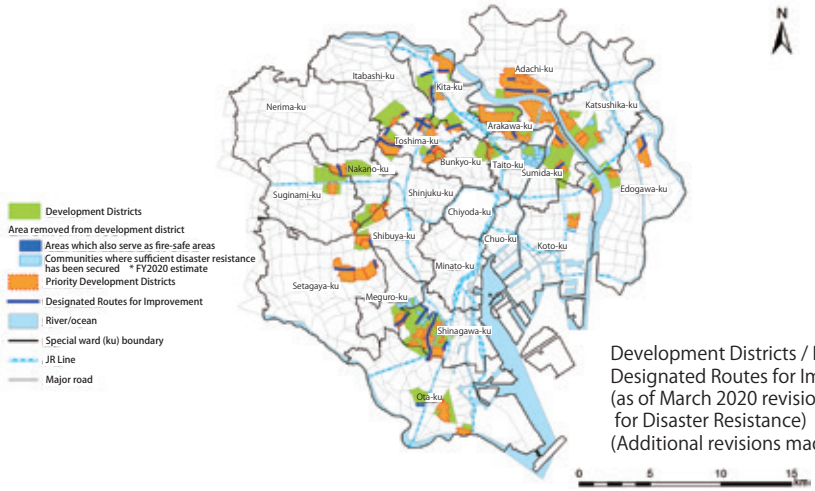
Urban Development Plan for Disaster Resistance

Drawing on lessons learned from the Great Hanshin-Awaji Earthquake, in 1996, the TMG formulated the Urban Development Plan for Disaster Resistance, which establishes policies such as creating firebreak belts and raising the level of fire resistance in districts with closely-packed wooden houses, in accordance with the Tokyo Metropolitan Earthquake Preparedness Ordinance. Under this plan, the TMG is working to improve the level of disaster resistance in built-up areas.

The plan designates areas that are likely to suffer particularly severe damage in the event of an earthquake as "Development Districts." This includes areas at high community earthquake risk and with an especially high concentration of old wooden structures. The TMG is working to implement an effective combination of projects, regulations, and guidance based on the characteristics of each area. It also designates "Priority Development Districts" in which various projects contributing to the creation of a disaster-resistant city are intensively carried out. Through the use of the Fireproof Zone system, the TMG is providing special support to these priority districts, including subsidies for the rebuilding and removal of older buildings and tax reductions or exemptions (fixed asset tax, etc.), to strongly promote more fire resistance.

Also in these districts, development of roads, parks, and other basic infrastructure, as well as reconstruction of old wooden houses into fire/quake-resistant homes or shared residences are underway based on the project to improve areas with close-set wooden houses, the program to develop disaster-resistant blocks, and other policies that regulate or encourage such developments.

Under the current Urban Development Plan for Disaster Resistance, approx. 6,500 ha (28 districts) are designated as Development Districts and approx. 3,350 ha (52 districts) as Priority Development Districts.



Development Districts / Priority Development Districts / Designated Routes for Improvement
(as of March 2020 revision to the Urban Development Plan for Disaster Resistance)
(Additional revisions made in March 2021)

In March 2025, the Basic Policy for the Urban Development Plan for Disaster Resistance was revised. Along with reducing the development area to approx. 6,000 ha (28 areas), the Fireproof Zone system and development of Designated Routes for Improvement were extended to the end of FY 2030 for ongoing efforts to improve the disaster resilience of Development Districts and Priority Development Districts.

In addition, among areas including those with close-set wooden houses that are not included in the Development Districts, some 1,000 ha (33 districts) that require local measures were designated as Disaster Resistant Environment Improvement Districts. While newly launching support including for the development of local roads and parks to enhance disaster response, the rebuilding of aged buildings will be promoted, and through such efforts, initiatives to improve the fire-resistance of Tokyo as a whole will be accelerated.

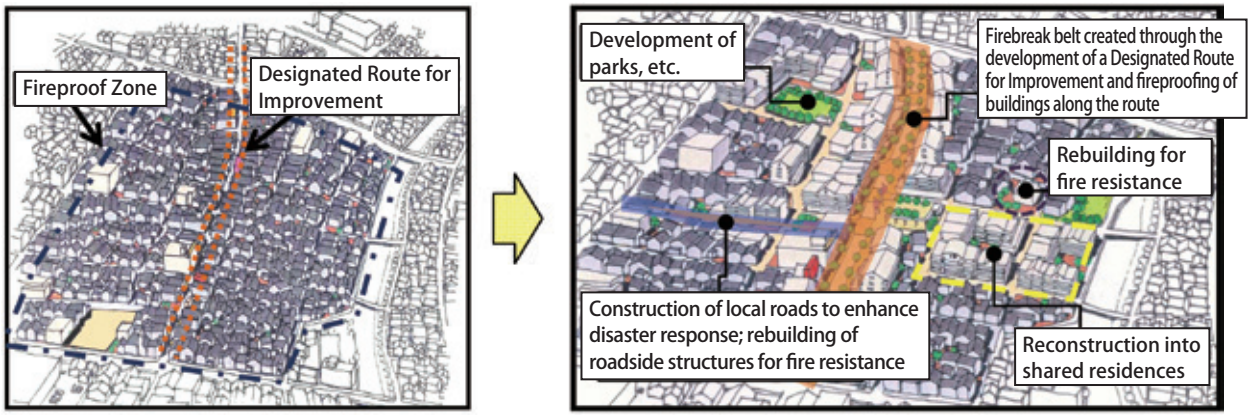


Image of Project to Improve Close-Set Wooden Housing Areas

Fireproof Zones and Designated Routes for Improvement

To further accelerate improvements in areas with close-set wooden houses, the Bureau is advancing prioritized and focused fireproof zone initiatives and the development of designated routes for improvement in built-up areas to act as firebreaks, evacuation routes, and roads to facilitate the passage of emergency vehicles in an integrated manner.

（1）Acceleration of Efforts to Make Built-Up Areas Fire Resistant in Cooperation With the Special Wards

In March 2013, the TMG launched the program for Special Development Zones to Advance Fire Resistance (Fireproof Zones), in which it extends special support for areas that are particularly in need of improvement based on requests made from special wards. Along with promoting the removal and reconstruction of old buildings through subsidies and tax reductions or exemptions (fixed asset tax, etc.), the TMG is also supporting initiatives implemented by special wards by dispatching experts, sharing expertise, and other efforts to promote the fireproofing of built-up areas.

（2）Construction of Major City-Planned Roads to Stop the Spread of Fire

In 2012, the Bureau selected roads constructed by the TMG based on city planning that will be highly effective in enhancing disaster resistance by blocking the spread of fire and serving as space for evacuation and rescue operations as Designated Routes for Improvement, and is advancing their development (28 sections of road totaling approx. 25 kilometers in length). The TMG will continue to proceed with development of Designated Routes for Improvement while extending special support measures to property rights holders to assist them in rebuilding their lives.

Improvement of Development Districts Through Construction of Local Roads to Enhance Disaster Response

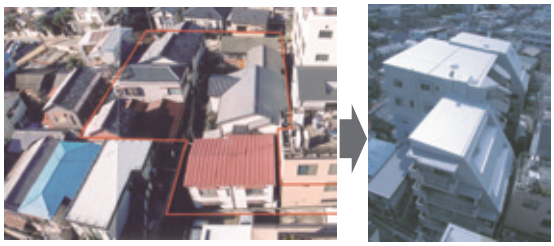
To accelerate fireproofing across entire development districts, in the Urban Development Plan for Disaster Resistance the TMG designates streets that facilitate the passage of emergency vehicles, smooth firefighting and rescue activities, and evacuation as local roads to enhance disaster response, and along with implementing projects to widen these roads, promotes the removal and reconstruction of old wooden buildings.

Also, the TMG supports initiatives taken by special wards to remove utility poles so they do not topple over and block such roads following an earthquake.

Initiatives Taken in Areas Other Than Development Districts

In addition to advancing initiatives to contribute to the improvement of districts with close-set wooden houses, the TMG will also work to maintain and improve disaster resilience as needed in areas with agricultural land where housing is expected to be built in the future, mainly in the Tama area and western special ward area, to create safe and good housing environments.

Image of a local road to enhance disaster response



Example of a project to replace old wooden houses with shared residential buildings in close-set wooden housing districts

Designation of New Fire Resistance Regulation Zones

To step up the fireproofing of buildings in areas such as districts with close-set wooden houses that pose a high risk when a disaster occurs, zones in which the fire resistance performance of buildings must be enhanced are designated according to regulations stipulated in the Tokyo Metropolitan Building Safety Ordinance.

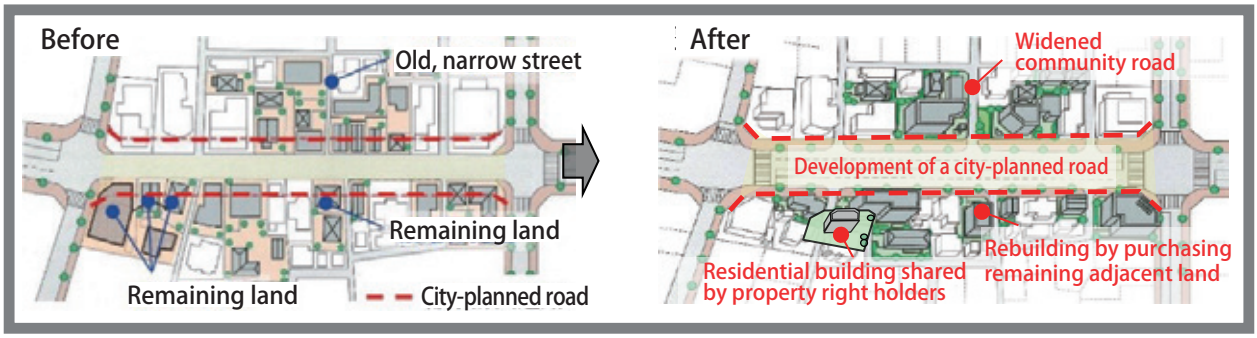
The regulations state that, as a rule, all buildings must meet or exceed the quasi-fireproof standard, and, of these buildings, those with a total floor space exceeding 500 sq. meters must meet the fireproof standard.

As of the end of December 2024, a total of around 7,425 hectares of land in nineteen special wards and one city (Shinjuku, Bunkyo, Taito, Sumida, Koto, Shinagawa, Meguro, Ota, Setagaya, Shibuya, Nakano, Suginami, Toshima, Kita, Arakawa, Itabashi, Nerima, Adachi, Edogawa wards, and Mitaka City) have been designated. Expansion of designated areas is underway to further enhance safety in built-up areas.

Integrated Development of City-Planned Roads and Roadside Communities

City-planned roads can block the spread of fire and serve as space for evacuation and rescue operations. Along with the construction of such roads in areas designated as priority development districts under the Urban Development Plan for Disaster Resistance and other areas, the TMG also promotes the development of roadside communities through the redevelopment of existing buildings into shared complexes and effective land use, to further enhance the level of disaster resistance in those areas. The Bureau has acquired approval for the following city planning projects and is currently advancing their development.

District	Route	Approved	Designated Route for Improvemen
Toshima-ku Higashi Ikebukuro district	Auxiliary Route 81	FY 2005	
Sumida-ku Kanegafuchi district (PhaseⅠ)	Auxiliary Route 120	FY 2005	
Kita-ku Jujo district (PhaseⅠ)	Auxiliary Route 83	FY 2009	
Meguro-ku Meguro Hon-cho district	Auxiliary Route 46	FY 2009	○
Sumida-ku Kanegafuchi district (PhaseⅡ)	Auxiliary Route 120	FY 2013	○
Meguro-ku Haramachi-Senzoku district	Auxiliary Route 46	FY 2014	○
Shinagawa-ku Togoshi-koen Station district	Auxiliary Route 29	FY 2014	○
Kita-ku Shimo district	Auxiliary Route 86	FY 2014	○
Itabashi-ku Central district	Auxiliary Route 26	FY 2014	○
Kita-ku Jujo district (PhaseⅡ)	Auxiliary Route 120	FY 2014	



Community development association

Example of a shared residential building
(Meguro Hon-cho district, Meguro-ku, Auxiliary Route 46)

Community Earthquake Risk Assessment Study

In accordance with the provisions of Article 12 of the Tokyo Metropolitan Earthquake Preparedness Ordinance, community risk levels are scientifically assessed and made public about once every five years with the following objectives:

(1) To deepen the understanding of Tokyo residents with respect to earthquakes and heighten awareness of disaster preparedness.

(2) To help select districts where measures aimed at reducing the impact of earthquakes will be implemented.

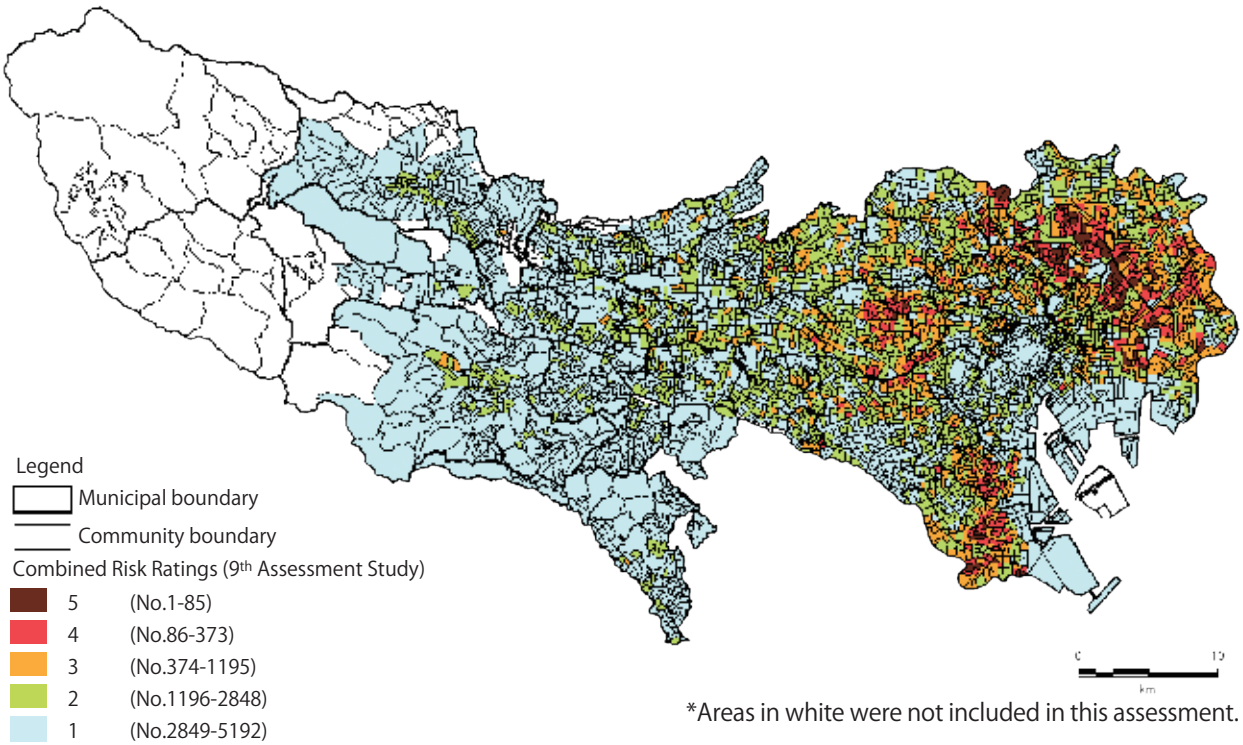
In the ninth survey, for which the results were announced in 2022 by the TMG, 5,192 communities in urbanized districts were examined. Each community's risk of building collapse, risk of fire outbreak and spread, and combined risk (a combination of building collapse risk and fire risk multiplied by the emergency response difficulty coefficient) were measured by community, with communities rated on a scale of five (high risk) to one (low risk) in each category, according to their vulnerability to hazards.

Designation of Evacuation Areas, Fire-safe Areas, and Evacuation Routes

In Tokyo's special-ward area, in order to protect the lives of residents from major urban fires caused by earthquakes, based on the Tokyo Metropolitan Earthquake Preparedness Ordinance the TMG has designated locations to be used as temporary evacuation areas until a large-scale fire that is spreading can be extinguished, and strives to familiarize residents with these locations. The TMG also designates areas where there is no danger of large-scale fire spread and no need to evacuate, as fire-safe areas.

In evacuating to a designated evacuation area, the route used by a resident is, in principle, up to the individual. However, in areas where residents must travel long distances to reach the evacuation area, or those in which the risk of the spread of fire is high, the TMG has designated roadways for safe evacuation as evacuation routes , based on the ordinance.

In order to reflect changes in the city and fluctuations in the population, the designation of evacuation areas, fire-safe areas, and evacuation routes are reviewed about once every five years. In the ninth revision (July 2022), 221 locations were designated as evacuation areas, 40 locations designated as fire-safe areas, and approximately 49 kilometers of roadways designated as evacuation routes.



*Areas in white were not included in this assessment.

9th Community Earthquake Risk Assessment (Combined Risk Ratings)

Promoting the Seismic Resistance of Buildings

Amid the pressing urgency to prepare for a major earthquake directly hitting the capital region, in March 2007 the TMG formulated the TMG Plan to Promote Seismic Retrofitting (latest revision: March 2023) with the aim of making Tokyo a disaster-resistant city and protecting the lives and property of its residents. With the cooperation of municipalities and others, the TMG is working to promote seismic resistance under the plan, which sets forth the goals to be achieved with respect to the seismic retrofitting of buildings, as well as a basic policy on seismic retrofitting and the direction for policy implementation.

Specific efforts include subsidies for enhancing seismic resistance; establishing a comprehensive consultation system that consults not only on the earthquake resistance of houses, but also enhancement of their eco-friendliness and comfort; sharing information via channels such as an earthquake resistance portal site; and registering and introducing firms that conduct seismic evaluations on wood-frame houses.

Notably, with respect to Designated Disaster Response Routes, which serve as lifelines for evacuation, emergency services, and rescue operations in times of disaster, the Ordinance to Advance the Earthquake Resistance of Buildings Along Disaster Response Routes took effect in April 2011 and made it mandatory for owners of buildings located alongside specified routes* to carry out seismic inspections. Results of seismic inspections are made public, instilling awareness among building owners and serving as information for Tokyo residents.

In line with this, the TMG is supporting efforts to retrofit properties, including by expanding subsidy systems and dispatching specialists to provide assistance with creating plans for seismic retrofitting.

In March 2020, the TMG Plan to Promote Seismic Retrofitting was revised, establishing targets for the seismic retrofitting of buildings along specified routes through the use of new indicators that evaluate the overall passability of Designated Disaster Response Routes following an earthquake.

Furthermore, under revisions made to the plan in March 2023, the TMG launched support for enhancing the seismic resistance of wood-frame houses built in compliance with the New Seismic Code (introduced June 1, 1981), and is also upgrading various measures to advance seismic retrofitting, including the promotion of seismic inspections for buildings located along general roads.

*Buildings meeting certain conditions located along Designated Disaster Response Routes (Disaster Response Routes where seismic retrofitting of buildings along the road is particularly needed)

Tokyo earthquake-resistant portal site


Disaster Response Route to be utilized for the transport of relief, etc., when a disaster strikes

Using Urban Development as an Opportunity to Promote the Creation of a Disaster Resilient City

Large-scale urban development projects that apply various urban development schemes must play a leading role in making Tokyo a more disaster resilient city. In addition to ensuring that buildings can function independently following a disaster, such as flooding or a major earthquake, including one that directly strikes the capital, projects must also make efforts to improve the safety of the city.

To achieve this, the TMG encourages the creation of warehouses to store emergency supplies and temporary shelters for people stranded when a disaster occurs, the removal of utility poles along roads within and outside development districts, as well as initiatives that contribute to the elimination of districts with close-set wooden houses and urban development on elevated land as a flood control measure, and is promoting the use of urban development as an opportunity to create a disaster-resilient city.

Using City Planning as an Opportunity to Promote the Removal of Utility Poles

In recent years, utility poles toppled by natural disasters such as typhoons have resulted in blocked roads and major long-term power outages, making the removal of utility poles even more important with respect to disaster resistance.

To that end, the TMG is strengthening measures in accordance with the Plan to Promote Removal of Utility Poles revised in June 2021 and the TOKYO Resilience Project formulated in December 2022. In addition to projects for close-set wooden housing districts, land readjustment, and private residential land development, support is proactively provided for projects including those concerning private roads in areas with close-set wooden houses. Alongside such efforts, a comprehensive range of opportunities from large-scale developments to housing land development, including making it generally mandatory to remove utility poles in urban development projects subsidized by the TMG, are used to promote the removal of utility poles, with the aim to make no utility poles in urban development the de facto standard.

Promoting Measures for Urban Restoration and Recovery

Initiatives Coinciding with the Centennial of the Great Kanto Earthquake

In 2023, as part of the TOKYO Resilience Project, the TMG used the opportunity presented by the centennial of the Great Kanto Earthquake to roll out a movement in cooperation with the national government, municipalities, and others, to actively encourage the people and businesses of Tokyo to take disaster preparedness measures, including measures for "self-support."

As an initiative to promote understanding of urban development for disaster resilience, the TMG will continue to use content related to the Great Kanto Earthquake, including a digital archive on the recovery and a video on urban reconstruction, through which people can learn about the steps taken by Tokyo over the century since the earthquake.

Moreover, with regard to the small reconstruction parks, which were created by Tokyo City to serve purposes such as centers of the local community and as local disaster management bases in areas razed by fires after the earthquake, the TMG will continue encouraging the relevant special wards to utilize a newly created subsidy system for the costs to redevelop and revitalize these parks as modern-day parks and enhance their local disaster management features.

Digital archive

Small reconstruction park at the time of post-quake reconstruction (Koto Municipal MotoKaga Park)

Source: Collection of the Great Kanto Earthquake Memorial Museum

Initiatives Taken Before a Disaster to Guide Urban Recovery Efforts

To facilitate the realization of prompt and systematic urban recovery when a disaster such as a major earthquake directly striking the capital region occurs, prior to a potential disaster, it is necessary to take initiatives, including studying what urban recovery should entail, the steps to be taken, and systems for implementing actions, as well as sharing this information with the citizens of Tokyo, government employees, and others. As its vision for urban recovery following a disaster, the Tokyo Metropolitan Government formulated Principles, Targets, and Basic Policy for Urban Recovery in June 2019. The TMG is also making use of both the "Recovery Process" and "Recovery Policy" editions of the TMG Earthquake Recovery Manual, which outlines the recovery process and systems for implementation.

By holding events such as urban recovery symposiums for residents, drills for elementary school children using small reconstruction parks, and exhibitions based on this basic policy, earthquake recovery manual and other resources, the Bureau is working to raise awareness among the people of Tokyo. Moreover, for employees of the TMG, municipalities, and others, it is also conducting tabletop exercises and training sessions for formulating community disaster recovery plans and others, as well as drills that simulate surveying damage to dwellings through the use aerial photos and other data to grasp the post-disaster situation.

Post-Disaster Risk Assessment in Residential Areas

Post-disaster risk assessment in residential areas is a system designed to reduce and prevent secondary disasters in the event of major, widespread damage in these areas caused by disasters such as an earthquake or torrential rains, through the prompt and accurate assessment of the damage and the distribution of information to residents. Based on objective nationwide standards, visible damage is given a numerical score. The results of the assessment are then indicated through three different color-coded stickers, which also list information such as points of caution and where to contact for more information. Along with working with the municipalities to train risk assessors, the TMG has also developed a system for cooperation with other prefectures.

Post-Disaster Emergency Building Risk Assessment

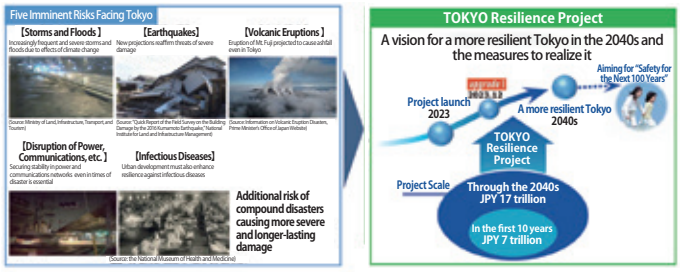
Post-disaster emergency building risk assessment is a system in which buildings that have sustained damage in a major earthquake are inspected by an assessor and classified into three ranks: "Dangerous," "Use Caution," and "Inspection Completed," with the aim to prevent the occurrence of secondary disasters from building collapse and falling debris due to large aftershocks and other causes. Color-coded stickers corresponding to each of the three categories are affixed to buildings to alert residents and passersby of the inspection results.

In preparation for large-scale assessment activities, the TMG has been registering architects from the private sector as volunteer assessors. From FY 2024, the scope of this system was broadened to include construction management engineers. In addition, along with a system for conducting assessments in cooperation with the municipalities of Tokyo, a collaborative framework enabling reciprocal support between Tokyo and other prefectures is also in place.

TOKYO Resilience Project

In preparing to overcome imminent threats facing Tokyo, including climate change and earthquakes, in December 2022 the TMG released the TOKYO Resilience Project: Aiming for Safety for the Next 100 Years, making clear the vision for Tokyo in the 2040s and the path to realizing it. Through the implementation of hard infrastructure measures, as well as soft infrastructure measures that take societal changes into account, the TMG seeks to realize a city that can protect the lives of its residents to the greatest extent possible, keep damage to a minimum, and restore urban functions quickly.

In order to set forth a more concrete roadmap for realizing a resilient, sustainable city, the TMG updated the project in December 2023, newly establishing medium-term goals and strengthening both hard and soft measures. The TMG will continue to take the lead and work closely with a diverse range of stakeholders, including Tokyo residents, communities, and businesses, to steadily advance the project.



Perspectives of the Tokyo Resilience Project

Studying Measures for the Creation of Tokyo, a Highly Disaster-Resilient Capital (promotion of urban development for higher ground)

Tokyo's low-lying "zero-meter" zones have a high concentration of population and assets, and it is estimated that if major flooding occurs, a wide area will be inundated for a long period of time. To address this issue, on January, 2020, the Liaison Council for the Creation of Tokyo, a Highly Disaster Resilient Capital was established by the government of Japan and the TMG. Broad discussions were held, centering on measures to address flooding in the low-lying eastern area of Tokyo, and in December 2020, the council compiled a vision for making Tokyo highly disaster resistant, which includes measures to secure evacuation spaces from redevelopment projects and formation of higher ground through the integrated implementation of land readjustment and high-spec levee development projects. To firm up measures for urban development that creates higher ground, a working group including the relevant municipalities was established under the liaison council in March 2021. While also in coordination with evacuation plans, the group is advancing studies in model districts and other locations.

In addition, under the TOKYO Resilience Project Upgrade I (December 2023), in order to advance urban development for higher ground, the TMG is conducting studies on usage of parks and other public facilities to secure higher ground for the short and medium term, and for the medium and long term, will also advance the building of high-spec levees along the Arakawa , Edogawa, and Tama rivers where preparations for increasingly severe flooding are needed, in order to secure high ground that can also serve as bases for rescue and relief activities.

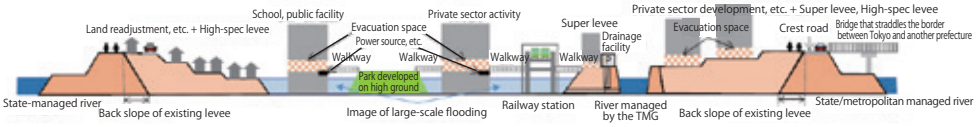


Image of large-scale flooding
Source: "Vision for a Highly Disaster-Resistant Capital: Tokyo," Summary version (Released: December 2020)

Promotion of Comprehensive Flood Control Measures

To address the risk of urban flooding resulting from further urbanization, the TMG has been promoting comprehensive flood control measures through the Basic Policy for Measures Against Heavy Rainfall, formulated in August 2007 and revised in June 2014 .

More recently, it has been projected that there will be increased rainfall, stronger typhoons and other impacts due to climate change. In light of these threats, the TMG once again revised the Basic Policy for Measures Against Heavy Rainfall in December 2023. The Basic Policy lays out the metropolitan government's fundamental approach to comprehensive flood control measures, combining "self-support," "mutual support," and "public support" efforts to respond to flooding caused by heavy rainfall.

Climate change is expected to lead to a 1.1-fold increase in rainfall. To address this threat, the TMG will raise its target rainfall thresholds for flooding and strengthen basic measures against heavy rainfall. Furthermore, as a pre-emptive measure against rainfall levels that exceed target thresholds, the TMG will further advance flood-resistant urban development, including leveraging the functions of the natural environment to help solve societal issues through the introduction of green infrastructure, which contributes to stormwater runoff control. In FY 2024, as a pilot project, rain gardens were created in metropolitan parks, and a study commission of experts was launched to verify their effects.

In addition, to prepare for an increased risk of flood damage due to climate change, the TMG is participating in meetings on flood control for Class A river systems, as part of the river basin flood control project launched in 2020. Initiatives related to Class B river systems are also being advanced, such as a river basin flood control project for rivers in the Jonan district and three other rivers, which was launched by the TMG in collaboration with relevant municipalities in September 2021.

Rainwater Storage and Infiltration Project Logo

Basic measures against heavy rainfall
Source: "Basic Policy for Measures Against Heavy Rainfall," Revised version (Released: December 2023)