



Japan

Futakotamagawa: Integrating Flood Protection and Urban Renewal

CASE SNAPSHOT

 SECTOR	 COUNTRY	 TIMELINE	 COST	 RESULT
Urban Development & Flood Management	Japan	2004-2015 (main phases)	Futakotamagawa Rise: ¥102.4 billion (US\$875 million) for Phase 1 (8.1 ha of 11.2 ha) Futakotamagawa Park: ¥1.274 billion (US\$11.6 million)	<ul style="list-style-type: none">Regulatory expectations demanded improvements in service reliability and financial sustainability.Resilience through the project: Integration of flood protection and public-private cost-sharing created a model where urban livelihood, ecological values, and economic viability mutually reinforce each other.



CASE STUDY SUMMARY: FUTAKOTAMAGAWA: INTEGRATING FLOOD PROTECTION AND URBAN RENEWAL

THE OBJECTIVE

To transform a flood-prone riverside district of Tokyo's Setagaya Ward into a vibrant, mixed-use hub by embedding robust flood risk management into urban redevelopment, while ensuring financial sustainability of flood control and delivering high-quality public space that strengthens ecological and community resilience

THE CHALLENGE

The Futakotamagawa district sits directly on the Tama River floodplain on the outskirts of Tokyo, an area historically subject to repeated inundation. Past embankments offered partial protection, but they were insufficient against prolonged heavy rainfall or river swelling. At the same time, the underutilized area presented prime redevelopment potential, thanks to its location adjacent to key transport nodes and the Setagaya commercial corridor.

The challenge was threefold: to reduce flood risk, to revitalize and attract investment to the area, and to find a fair, sustainable way to finance and maintain these improvements, given high costs and the scarcity of urban land.



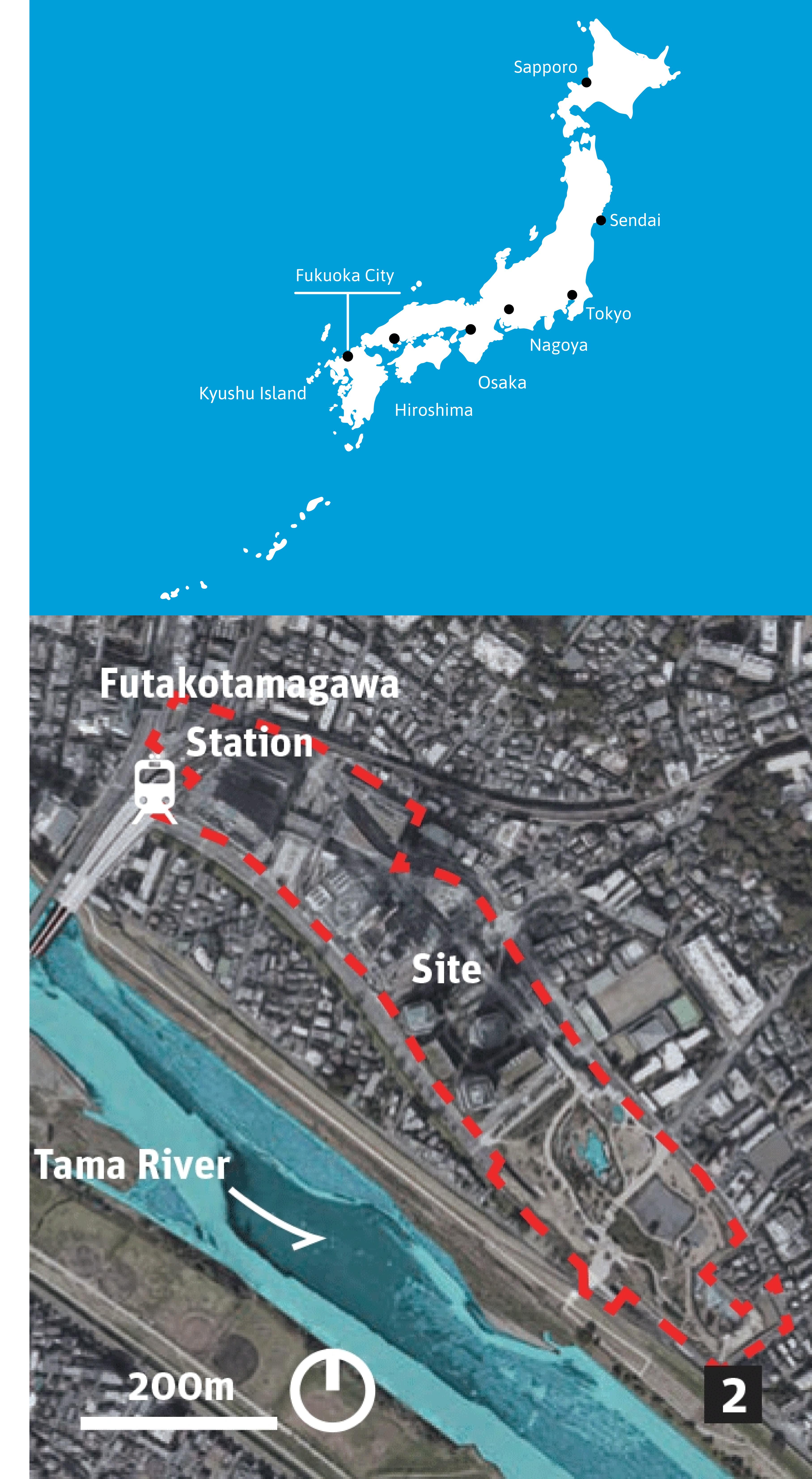
Drivers for Change:

- Persistent Flood Risk: Tama River's repeated flooding adversely affected thousands of residents.
- Strategic Urban Potential: The district's transport access and proximity to central Tokyo made it ripe for redevelopment.
- Policy Shift: National strategy emphasized integrated urban flood risk management — combining engineering, ecological and land use approaches.
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Outcome Needed:

- Enhanced Flood Protection: A stronger, technically reliable defense against Tama River flooding, integrated with urban development.
- Financial Sustainability: A model where private developers share in upfront and operational costs, easing public fiscal burden.
- Coordinated Redevelopment: Leveraging flood protection to enable transit-oriented, mixed-use urban growth.
- Creation of Public Open Space: Delivery of Futakotamagawa Park as both an amenity and a flood buffer, enhancing environmental quality.



THE SOLUTION

The Futakotamagawa East Urban Redevelopment Project and the construction of Futakotamagawa Park were carried out in parallel, in a deliberately integrated way.

- On the engineering side, Tokyo Metropolitan Government upgraded the river embankments and reshaped site levels to safeguard new developments.
- On the urban side, Phase 1 of Futakotamagawa Rise created 8.1 ha of multi-use buildings — housing, offices, and retail — whose designs and placement now aligned with flood safety standards.
- The park was designed not only as public green space but as a buffer between development and the river, reinforcing embankments and providing emergency water storage capacity.

What sets this project apart is its financial innovation. Tokyu Corporation and private developers financed much of the urban redevelopment — creating economic value — while public agencies financed the park and embankments. Developers also agreed to share in O&M costs of public facilities. This cost sharing secured long-term financial sustainability and freed public resources for maintaining resilient infrastructure.

The nature-based solution aspect is central: Futakotamagawa Park was landscaped to support ecological restoration and water buffering. The park visibly connects the community to the Tama River, creating a vibrant urban interface that celebrates, rather than hides, the river.



Approach To Resilience

Technical approach.



The backbone of the project's resilience lies in its engineering foundations. The Tama River embankments were reinforced to modern flood standards and carefully integrated with the grading of the redevelopment site. Buildings within Futakotamagawa Rise were elevated above historic flood levels and set back from the river, ensuring that critical functions would be protected even under extreme hydraulic loads. By reshaping ground levels and knitting them seamlessly into the embankment profile, Tokyo's engineers ensured that structural defenses would withstand once in a century storms without undermining the neighboring urban fabric.

Nature-based approach.



Equally important, resilience was not left solely to concrete and steel. Futakotamagawa Park was deliberately designed as a natural buffer between the river and the city. Its green corridors and open lawns act as a safe zone when river levels rise, absorbing excess water and allowing controlled overflow. The landscaping choices reintroduced vegetation that slows floodwaters and reduces erosion while bringing ecological vitality back to the riverfront. In everyday conditions the park offers residents a calm, green amenity; in extraordinary conditions it becomes a functional part of the city's defense system.

Approach To Environment

Beyond its defensive role, the park has become a celebrated component of region's environmental quality. It quite literally turned the city back toward the river, restoring what had become a severed relationship. Pathways and open plazas connect directly to the Tama embankments, giving people safe, daily access to the water's edge. By layering ecological restoration into its design, the project created new habitats for bird and plant life, while the green open space helps cool the dense urban district during hot summers. The environmental gains thus extend beyond the immediate river corridor and into the everyday lives of local residents.

THE ENABLERS

Several factors enabled Futakotamagawa's transformation into a model of resilience. Strong national legislation under the River Law and Tokyo's broader integrated flood management policy provided the regulatory backbone, ensuring that safety considerations were embedded in urban design. A shared vision between Setagaya Ward, the Tokyo Metropolitan Government and Tokyu Corporation allowed private and public interests to align on the same priorities: flood safety, better quality of urban life and long term economic value.

Most striking was the financial model. Instead of relying exclusively on municipal budgets for costly embankments and park maintenance, Tokyu Corporation, as the key private developer, shouldered a portion of these responsibilities. By agreeing to contribute to operations and maintenance of public amenities, developers relieved pressure on government budgets and guaranteed that the new facilities would remain functional over decades. This cost-sharing arrangement not only improved the project's financial viability but also created a template for sustainable risk managed urban growth.

THE RESULT

The outcomes of Futakotamagawa can be seen on two complementary levels: the resilience of the project itself, and the resilience generated through the project for the wider community.

On the first level, the redevelopment is physically safer than ever before. The reinforced embankments and elevated construction protect the district's new homes, offices and commercial spaces from the Tama River's floods. Parkland provides both an ecological cushion and additional storage in high water events, meaning the project's assets remain secure under stress.

On the second level, the project has delivered resilience for the people who live, work, and play there. By integrating public parkland, reliable flood works and financially sustainable O&M arrangements, Futakotamagawa ensures that future generations will continue to benefit from both protection and amenity. The park now draws thousands of daily users, strengthening community identity and health, while its ecological functions enhance biodiversity and microclimate regulation. Importantly, by showing that private developers can co finance and co maintain resilience measures, the project has created a pathway for replication — illustrating how Japanese cities can unlock new value from their waterfronts without compromising on safety.

QII PRINCIPLES IN ACTION

Principle 3: Environmental Sustainability

Creation of Futakotamagawa Park as multi-functional green space enhanced urban environmental quality while performing as a flood buffer. Landscaping and park design improved access to the Tama River, supported biodiversity, and strengthened the connection between the community and its natural environment. The integration of ecological and social functions into a flood management asset reflects sustainable, value-adding use of urban waterfront land.



Principle 4: Resilience

The project integrated high-standard river embankment upgrades, elevated building design, and coordinated park–embankment alignment to directly reduce flood risk to a dense urban district. Coordinated public–private works ensured functional protection while enabling safe, sustainable urban growth. The synergy between the redevelopment site design and embankment profile embodies risk-informed, long-term infrastructure planning that safeguards people, assets, and economic activity against river flooding.



Related References

Want to explore this case further? Access the detailed case study [here](#).

Related Materials

- QII Partnership, Guidelines and Knowledge Products on Climate-Resilient Infrastructure?