

## **THE ROLE OF COMMUNITY-BASED ORGANIZATIONS FOR URBAN RIVER RESTORATION PROJECTS IN ZENPUKUJI RIVER, TOKYO, JAPAN**

KYOHEI TAKIZAWA

*Kyushu University, Mitaka, Japan, twky00@gmail.com*

SATOQUO SEINO

*Kyushu University, Fukuoka, Japan, seino@civil.kyushu-u.ac.jp*

TAKEHIRO WATANABE

*Sophia University, Suginami, Japan, takwatanabe@gmail.com*

### **ABSTRACT**

This paper documents the role that a civic organization, “Zenpuku Frog,” that has played in advocacy, planning, and implementation of the project “Our Dream Waterway”, a waterway landscape zone in Zenpukuji Park, Tokyo. In this urban river revitalization project, this civic organization contributed in the following manner: a) creating citizen science and learning opportunities; b) forming an open, multi-generational network; c) offering a watershed-wide vision; d) sharing a framework; e) communicating to diverse citizens; f) expanding arenas for discussion; g) building intergovernmental consensus; h) submitting a revision plan that bridged the preliminary plan and the finalized plan; i) designing a community-based platform; and j) promoting participatory construction. The paper also schematized the civic participation process as a cycle of envisioning, action, implementation, and management through the cooperation of community groups, citizens, and government.

Keywords: Civic organization, civic cooperation, consensus building, river revitalization, project management

### **1. RESEARCH GOALS AND BACKGROUND**

#### 1.1 Background

In 2006, Japan’s Ministry of Land, Infrastructure, Transport and Tourism (henceforth MLIT) announced “Nature-Oriented River Works” and guidelines for river conservation and construction. These policies called for the need to conserve the natural environment, maintain the aesthetic beauty of the river landscape, and form diverse partnerships (MLIT 2006a, 2006b). These policies were based on the understanding that stakeholder partnerships would result in better design because such cooperation would enable the identification of community needs and the profiling of the local ecosystem. Maintenance also benefits from community-based monitoring and contribute to achieving urban biodiversity goals.

#### 1.2 Research Goals

This research seeks to clarify the planning process of an urban river revitalization project, with a focus on a civic group that, as a stakeholder, engendered government-community partnership. This author, as member of this group, participated in the planning phase of a riverworks project called Minna no Yume Suiro jigyō (henceforth “Our Dream Waterway Project”). A waterway revitalization project in Zenpukuji Park and located in Tokyo’s Suginami Ward, this undertaking was initiated not by the government but by a proposal from the community. After the project was green lighted, community groups were involved in the preliminary planning, landscape design, and construction of the waterway, as well as the establishment of a post-construction participatory management structure.

In this process, Zenpukujigawa Wo Satogawa Ni Kaeru Kai (henceforth “Zenpuku Frog”) has been fostering relationships with the local community, facilitated the development of a watershed-wide community vision, and participated in the planning and designing of this waterway. This research seeks to identify the role that this civic group played in creating a vision for revitalizing this urban river and promoting the Our Dream Waterway Project for the past five years. To analyze this design management process, the paper chronicles the blueprints and documents used in the planning sessions to identify the issues raised by participants.

### **2. ZENPUKUJI RIVER, COMMUNITY, AND ZENPUKU FROG**

#### 2.1 Zenpukuji River and its Challenges

Zenpukuji River is a 10.5 km long river that flows in the Suginami Ward of Tokyo Metropolitan Area, with Zenpukuji Pond as its source. The watershed, while urban, has considerable park and green cover in the riparian zone. At the same time, the river is deepened and banked by concrete, thereby making it inaccessible to the public. But the river is prone to flooding, caused by rapid urbanization of the watershed and the reduction of surface porosity. Presently, in times of heavy water rain, the river has reached flooding water levels. In addition, because the area is served by combined sewage infrastructure, excess sewage and stormwater flow into the river, thus contributing to the deterioration of the river's water quality.

## 2.2 History of the Waterway in Zenpukuji Park

Zenpukuji Pond was only one-third of its current size and surrounded by wetlands and rice paddies. A downstream pond was constructed from 1935 to 1943 and the two ponds became part of a city park established by the Tokyo Metropolitan Government in 1961. The management of the former irrigation channel connecting the two ponds, however, was transferred to Suginami Ward. In the 1980s, this waterway was used by local residents who sought to introduce fireflies, but this project led to fencing it off to the general public in order to protect the firefly habitat.

## 2.3 Iogi Elementary School and a River-Centered Curriculum

Iogi Elementary School, located in the upper watershed, is unique in that Zenpukuji River flows through its campus. Since 2009, this school, with the help of NPO Suginami Kankyō Nettowāku's Sakaibara Tatsuya, began classes about rivers and a river clean-up initiative, started by the schoolchildren themselves. Once Iwabuchi Haruko, of the Iogimaru School Support Group, received permission from the ward government for school children to enter the river, clean up of the river itself became possible. The children discovered toilet paper stuck to the banks and the vegetation and learned that sewage inflow was to blame. Such discoveries led to the development of a multi-grade curriculum centered on learning about Zenpukuji River.

## 2.4 Zenpuku Frog

Zenpuku Frog began in 2011 by a call from Shimatani Yukihiro of Kyushu University and Kuwako Toshio of Tokyo Institute of Technology. Membership is diverse and includes local residents, school personnel, civic group members, experts, researchers, and designers, among others. This organization loosely connects existing groups in the watershed to improve Zenpukuji River by conducting fieldwork and workshop sessions and facilitating a shared vision of the river's future. Zenpuku Frog's involvement with Iogi Elementary School began in 2012 with its invitation of Nakamura Shinichi, a Zenpuku Frog member and hydrologist, to teach a class. In 2014, Nakamura (2018) held a class in which school children were asked to draw their "Dream Waterway." Later, children representatives submitted these drawings to Suginami Ward Mayor Tanaka Ryo. As a result, the ward announced the start of "Our Dream Waterway Project" as a collaborative effort between the schoolchildren, community, and ward government.

# 3. "Our Dream Waterway Project": Participatory Design Workshop and Zenpuku Frog

## 3.1 Zenpuku Frog's Activities before the Participatory Design Workshop

A series of workshops by Zenpuku Frog brought together community stakeholders, local residents, environmental groups, and the schoolchildren to hold discussions and share the principles that would later guide the project. These workshops were held in order to increase public interest and awareness concerning this project while also identify and share key concerns among the stakeholders. Two workshops in 2015, one at the waterway site and another involving participants entering the river, alerted the group of the need to create separate zones for ecological conservation and recreational use. A conservation group engaged in nursing native vegetation along the waterway's left bank, became part of this conservation.

## 3.2 The Participatory Design Workshop

Suginami Ward held the first of four sessions for "Our Dream Waterway Planning Workshop" in October of 2015. Zenpuku Frog held meetings to supplement and support the design workshops. In the first session, school children presented on their vision and the results of a questionnaire survey they conducted among local residents concerning the waterway. The second session, which included a field survey of the site, continued with gathering ideas from the participants. Subsequently, at a Zenpuku Frog meeting, it was noted that the proposed design would require the coordination of ward and metropolitan government, since the proposed design area would straddle across their respective jurisdictions – the waterway and the city park. The group also held a public lecture event to generate further interest.

In the third session, participants were asked to consider layout and cross-sectional plans. One suggestion was zoning the waterway into two sections, the upstream section for habitat protection and the downstream section for recreation. Also, the incline needed to allow for safe access to the waterway would require additional area

that would cut into the park area managed by the metropolitan government. The following were proposed at the subsequent Zenpuku Frog meeting: ecological strategies, including goals to protect native species and cull invasive species, the revival of native species by growing them from soil seedbanks that can be accessed during the construction work, and the formation of a community-based maintenance organization.

In the fourth session, the ward presented a layout plan, cross-sectional plan, and a model. The design included an observation deck for the upstream conservation zone, a terrace and a slope into the water in the midstream zone, and a grass area that inclined into the waterway in the downstream recreational zone. The participants praised the effort by the ward to arrange the use of the park area.

### 3.3 Evaluation of the Design Proposal and the Submission of an Alternative Proposal

Zenpuku Frog, upon receiving the plans, began the process of evaluating them. Key issues noted by Shimatani, a member, were: a) the waterway is too straight, b) the incline is too flat and uniform, c) the need to identify key native species and evaluate the habitat suitability of the designed topology for those species, and d) the doubtful benefits of a deck and a pathway. Nakamura incorporated these ideas into a revised plan, which incorporated a meandering waterway as well as wires to create pools, riffles and wetland areas. The Waterway Stewardship Group adopted this revised plan and submitted it to the ward government. The government also agreed that this group become a vehicle through which community concerns about the waterway construction and maintenance would be heard.

## 4. FROM A PREPARATORY GROUP TO COMMUNITY-BASED GOVERNANCE

### 4.1 Discussions Concerning Post-Construction Waterway Maintenance

In 2016, concurrent with the drafting of a more detailed landscape plan, the ward held a meeting to discuss the future structure for maintaining the waterway. The participants agreed to the following: a) a need for rules to ensure user safety, b) the ward will conduct, mowing, pruning, maintenance of river bed and water monitoring, all a few times a year, along with a weekly cleaning, c) a clarification of the roles of citizens and ward, d) an administrative group that would allow for multigenerational participation, and e) the need to communicate this project to the wider community.

### 4.2 A Preparatory Group to the Formation of “Osonoigawa Kappa no Kai”

In 2017, a “Dream Waterway Preparatory Meeting” was held with the purpose of creating a community group for waterway maintenance, with discussions concerning a) organizational structure such as group charter, agreement with ward, secretariat and chairperson, and duties, and b) activities such as participating in the construction, user rules, programs, and public communication. These meetings were held monthly, until the formation of the Osonoi Kappa no Kai, which was officially founded with the signing of the agreement with the ward government in September. Members of this new group collected the soil seedbank from the construction site and distributed to local schools. Schoolchildren took part in planting native plants during the construction phase in 2018, and in July the waterway’s opening ceremony was held, with the ward mayor, various stakeholders, and children, including Iogi graduates who have since become university students, attended.

## 5. DISCUSSION & CONCLUSION

### 5.1 The role of Zenpuku Frog in the process of design and implementation

The process can be divided into four phases: 1) awareness raising, 2) project initialization, 3) design planning, and 3) establishing maintenance structure. The following outlines Zenpuku Frog’s contributions.

#### 5.1.1 *Creating citizen science and learning opportunities*

Zenpuku Frog promoted the use of citizen science to educate and raise awareness about the river ecology, thus facilitating a plan grounded in local environmental realities and avoiding the pitfall of ideal-driven design.

#### 5.1.2 *Forming an open, multi-generational network*

The group’s monthly meetings and annual symposiums, along with an open membership structure, encouraged diverse groups to participate, thus ensuring a multi-generational and multi-interest discussion.

#### 5.1.3 *Offering a watershed-wide vision*

The group repeatedly discussed the vision of urban river revitalization and problems such as combined sewage and the loss of surface permeability. This wider discussion of a urban watershed allowed workshop participants to place the Our Dream Waterway project in a long-term watershed-wide vision.

#### 5.1.4 *Sharing a framework*

Before the citizen workshops, the group created opportunities to discuss with the community the wider significance of this project and its benefits to the surrounding park, neighborhood, and the watershed.

### 5.1.5 Communicating to diverse citizens

Once the project was greenlit, Zenpuku Frog conducted meetings, symposiums, classes at schools. These venues served as vehicles for disseminating expert knowledge that enabled the community to understand and make educated decisions about key aspects of the project, such as landscape design, urban ecology, hydrology, river engineering, and civic participation. This effort increased public understanding of this project.

### 5.1.6 Expanding arenas for discussion

The workshops as planned by the ward risked the possibility of participants lacking enough knowledge to make educated decisions or giving too much priority to powerful stakeholders who may raise louder voices than others. By providing further opportunities of discussion, the group was able to use its expertise in various fields to deepen understanding and further discussion.

### 5.1.7 Building intergovernmental consensus

The group, through the initiative of its members with government ties, facilitated the agreement by the Tokyo Metropolitan Government to allow the Sugunami Ward government to use the park area under Tokyo jurisdiction.

### 5.1.8 Submitting a revision plan that bridged the preliminary design and the finalized plan

By offering concrete design suggestions for the initial plan and building a consensus among the key community stakeholders who participated in the workshop, the group enabled the smooth bridging of the initial plan to the finalized plan while also transferring its status as a originating from community-based discussions.

### 5.1.9 Designing a community-based platform

The group assisted in outlining the details of the community-based governance body, such as the name, charter, program, organization structure, etc.

### 5.1.10 Promoting participatory construction

The group promoted, with the backing of workshop members, public participation in the construction. This resulted in the school children's involvement with soil seedbank and the subsequent planting.

## 5.2 The Cycle of Coordination between Citizen Group, Citizens, and Government

This citizen group, through its open network, was able to communicate its broader vision of river revitalization to a multi-generational public. Through citizen science and educational opportunities, it staged small but significant interventions to communicate this vision to the ward government. The ward, in turn, decided to greenlight this project and held a workshop that ensured a broader participation in the planning, construction, and maintenance of this waterway. The group, therefore, enabled the participation and awareness raising of the local community while also contributing to a viable maintenance structure.

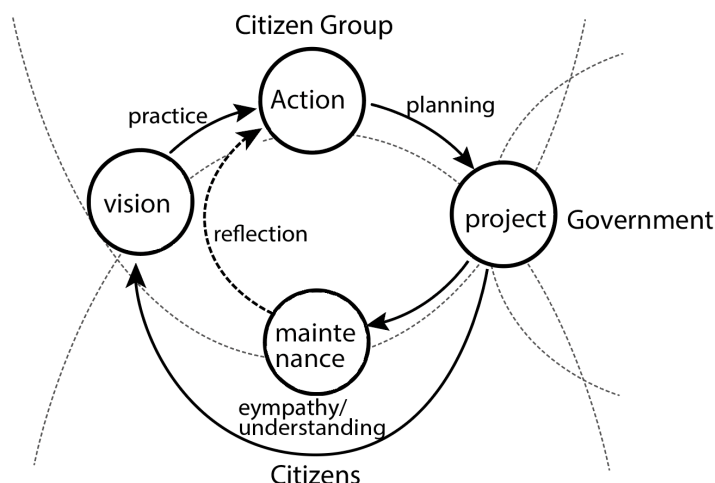


Figure 1. The Cycle of Coordination between Citizen Group, Citizens, and Government.

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