

# A study on the water environment in Shingashi river basin

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## 1.First

Some rivers flowing through urban areas in Japan still have problems with water quality, and it is important to grasp the water environment of the river in the current urban area in order to promote the conservation of the water environment. Hosei University has continued to conduct research on the Shingashi river basin that flows through suburbs of Tokyo since the 1930s, and in recent years it has been conducting water quality surveys in cooperation with civil society groups. Here we will clarify the water environment of the current Shingashi river basin, based on the results of the water quality survey conducted four times from 2013 to 2016.

## 2.Region overview

The Shingashi river basin is located in 10 cities and 1 town in Saitama Prefecture, 6 cities and 1 town in 3 wards in Tokyo. The Shingashi river of mainstream is a first class river belonging to the Arakawa water system. The flow path extension is 34.6km, and the tide zone is about 16km from the confluence point with the Sumida river. In addition, the catchment area is 411km<sup>2</sup>.

## 3.Survey method

In the Survey on familiar water environments conducted in June every year, citizen groups provided water collected, and in the laboratory we measured pH, RpH, EC and analyzed TOC, Analysis of major dissolved components is carried out.

## 4.Results

As a result of the survey, various water quality is distributed in the Shingashi river basin, but in the upstream area of each river, the Calcium bicarbonate type water quality composition is shown, the downstream side tends to show the composition of sodium chloride type at the downstream side, this suggested the effect of domestic wastewater. It also detects nitrate ions, it is also anticipated that agricultural fertilization will affect rivers.

## 5.Conclusion

Because there was bias at the analyzed points, we could not grasp the water environment throughout the basin. In future, we aim to deepen collaboration with civil society groups and to grasp the water environment of the entire Shingashi river basin.

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