## A community-based open governance approach to waterweed recycling in the Lake Biwa catchment

\*Yasuhisa Kondo<sup>1</sup>, Noboru Okuda<sup>1</sup>, Satoshi Asano<sup>2</sup>, Kanako Ishikawa<sup>2</sup>, Kei Kano<sup>3</sup>, Kaoru Kamatani<sup>9,1</sup>, Terukazu Kumazawa<sup>1</sup>, Kenichi Sato<sup>4</sup>, Sayoko Shimoyama<sup>5</sup>, Eiichi Fujisawa<sup>6,7</sup>, Kyohei Matsushita<sup>3</sup>, Ken'ichi Wakita<sup>8</sup>

1. Research Institute for Humanity and Nature, 2. Lake Biwa Environmental Research Institute, 3. Shiga University, 4. Kyoto Sangyo University, 5. LinkData, 6. Ohmi DI, 7. Code for Shiga/Biwako, 8. Ryukoku University, 9. Ritsumeikan University

Seasonal overgrowth of waterweeds occurs in the southern part of Lake Biwa. Overgrown waterweeds prove to be obstacles for cruising, and those that drift to the shores often cause bad odors in the coastal area. The Shiga Prefectural Office pays approximately 600 million Japanese yen per year to remove overgrown waterweeds and make compost, although the magnitudes of both extracting and composting are limited.

A series of interviews revealed a gap in understanding of the issues, suggesting that research experts and prefectural officers tend to regard the overgrowth as an ecological problem, while bad odor and rubbish are social problems for local municipalities and coastal residents. Moreover, a majority of residents living farther away from the coastline appeared uninterested in this problem, although they are also incurring costs as tax payers.

In our working hypothesis, we propose that this asymmetry between actors in understanding the waterweed problem can be resolved by an open governance approach, through civic participatory policy-making action by using open data. Such actions have increasingly been promoted in municipalities in the study area. We encourage self-motivated civic groups, despite their less interest in the waterweed issue, to participate in a series of *ideathons* in which they can suggest and develop ideas for the waterweed recycling business and policy. This intervention (called *zurashi* in the Japanese language; see Miyauchi ed. 2013) is expected to enhance public awareness about waterweed recycling, and result in an autonomous and sustainable development of a community. In this presentation, we discuss this new open and adaptive approach in environmental governance.

Keywords: Lake Biwa, Waterweed compost, Regional resource, Adaptive environmental governance, Community empowerment