Sustainable Lake Management in Indonesia

Laksmi Dhewanthi
Senior Adviser
Minister of Environment and Forestry for Industry and International Trade

Indonesia is the largest archipelago in the world. It has five major islands and about 30 smaller groups of islands, with the total number of the islands being around 17,500. The land area is generally covered by tropical rainforests and many rivers flow through the country. Indonesia is estimated to have more than 840 major lakes and 735 small lakes spread which accommodate 500 cubic kilometers of water corresponding to 72% of the total Indonesian surface water.

In terms of lake management, we have selected 30 (15+15) lakes as our priority lakes. Lakes in Indonesia have numerous purposes related to human life, such as drinking water, agriculture, fisheries, industry, transportation, and energy. Eight of our 15 priority lakes have a total capacity of 2,160 megawatts of electricity, which is another use of the lakes that we need to maintain.

Lakes also serve as important elements to balance the ecosystem by providing services such as control of flood, drought mitigation, climate regulation, and habitat of biodiversity, as well as for ecotourism, education, and research. Indonesia has almost 1,193 freshwater species, which is the fourth-largest number in the world. As a result of increased population, intensified use of land and surface water, and other human pressures, our lakes are being threatened. More than 60% of the catchment area of our priority lakes is an agricultural area, which is susceptible to land erosion and water pollution. Three of our priority lakes are experiencing high rates of sedimentation, while three others are facing serious water pollution and eutrophication. We are concerned that this condition negatively influences our local and national socio-economic situation.

The government of Indonesia is taking several actions at the national and local levels to cope with the challenges we are facing. First, we formulate and design Integrated Lake Management Plan of each of the 15+15 priority lakes and integrate them into local and national development plans. Second, we implement integrated programs in areas such as spatial planning, development planning, forests and land rehabilitation, water quality management, biodiversity conservation, waste management, sustainable agriculture and fisheries, and transfer for better livelihood. One of the programs is focused on forests and land rehabilitation and civil engineering in the lake catchment area. And finally, we are actively involved in the global fora on lake management. Our involvements are mainly for sharing and gaining more knowledge, experiences, and lessons learned on lake management and best practices, as well as enhancing global concern and pursuing global action on lake conservation and rehabilitation. We also have bilateral cooperation with countries that have advanced knowledge and experiences on sustainable lake management.

Nature-based solutions of lake ecosystems can continue to provide life-supporting ecosystem services to humanity and to maintain environmental integrity. It is no doubt that collaboration among relevant stakeholders is essential for coping with the emerging challenges of lake management. We call for action to prioritize lake conservation and rehabilitation, and mainstreaming in local, national and international development programs and agenda. We call for action to enhance community engagement through awareness, education, and participation in lake protection, restoration, and wise use of lake ecosystems. We

call for action for enhancing research and innovation for sustainable lake management, and to develop an international network and collaboration of sustainable lake management as well as strengthening and energizing the efforts of UN Agreements and Inter-UN bodies. Sustainable Lake Management is something that we cannot avoid. Our support for lake conservation and rehabilitation is imperative for the future of our ecosystems, our people, and for the destiny of the next generation.