



The GEF/UNDP/ASEAN Project on Reducing Pollution and Preserving Environmental Flows in the East Asian Seas through the Implementation of Integrated River Basin Management (IRBM) in the ASEAN Countries

Reviving the Vibrance of **Ciliwung River**

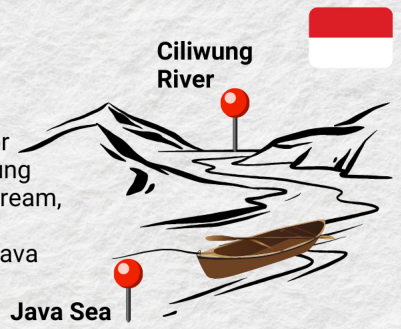


From the hills and mountains of Bogor Regency, the Ciliwung River flows downstream, stretching 118.25 kilometers to the Java Sea. It crosses the region of Bogor Regency, cities of Bogor, Depok, and Jakarta, and eventually drains into Java Sea through Jakarta Bay in Indonesia. With a total area of 421.47 square kilometers, the Ciliwung River Basin plays a key role in supporting the livelihood, agricultural activities, trade and transportation, and even local tourism in the three major cities of Bogor, Depok, and Jakarta. The Ciliwung Dam in the upstream Bogor, which was built in 1911, provides irrigation to 333 hectares of rice lands. Known also for its fertile lands for world class tea plantations, Bogor Regency has greatly benefited from the nutrients and water services of the river basin.


At a Glance

Ciliwung River Basin


With a total area of **421.47 square kilometers**, Ciliwung River basin encompasses two provinces – Jakarta and West Java, and **crosses the region of Bogor Regency, and the cities of Bogor, Depok and Jakarta.**




From the hills and mountains of Bogor Regency, the Ciliwung River flows downstream, stretching **118.25 kilometers** to the Java Sea




The river basin supports over **3,852,000 people.**




Around 19 species of freshwater fishes*



Around 35 species of birds*



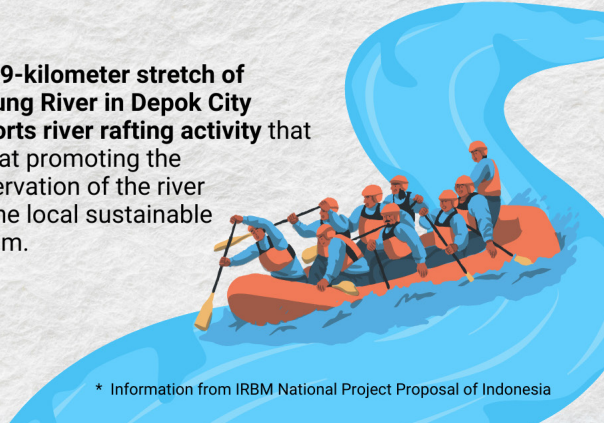
6 species of amphibians and frogs*



Percentage of households with access to centralized water supply*

Depok City: 9%
Bogor City: 56%

The 19-kilometer stretch of Ciliwung River in Depok City supports river rafting activity that aims at promoting the conservation of the river and the local sustainable tourism.



* Information from IRBM National Project Proposal of Indonesia



The Ciliwung Dam is located in the upstream part of the river in Bogor Regency. It was constructed by the Dutch in 1911 and has since helped rice and cassava farmers in the lowland irrigate their farms.

Over the years, the condition of the river deteriorated due to land developments and unsustainable human practices including improper waste disposal both from domestic and industrial sectors. Every day, approximately 7,000 tons of solid waste is being generated in the areas of the Ciliwung River Basin and the Jakarta Coastal Region. The available waste processing centers in the area have reached their full capacity, and this leaves the solid waste collection and disposal a huge challenge for the government.



Old clothes, plastic bags, and even house furniture can be seen trapped along the riverbanks of Ciliwung in Depok City.



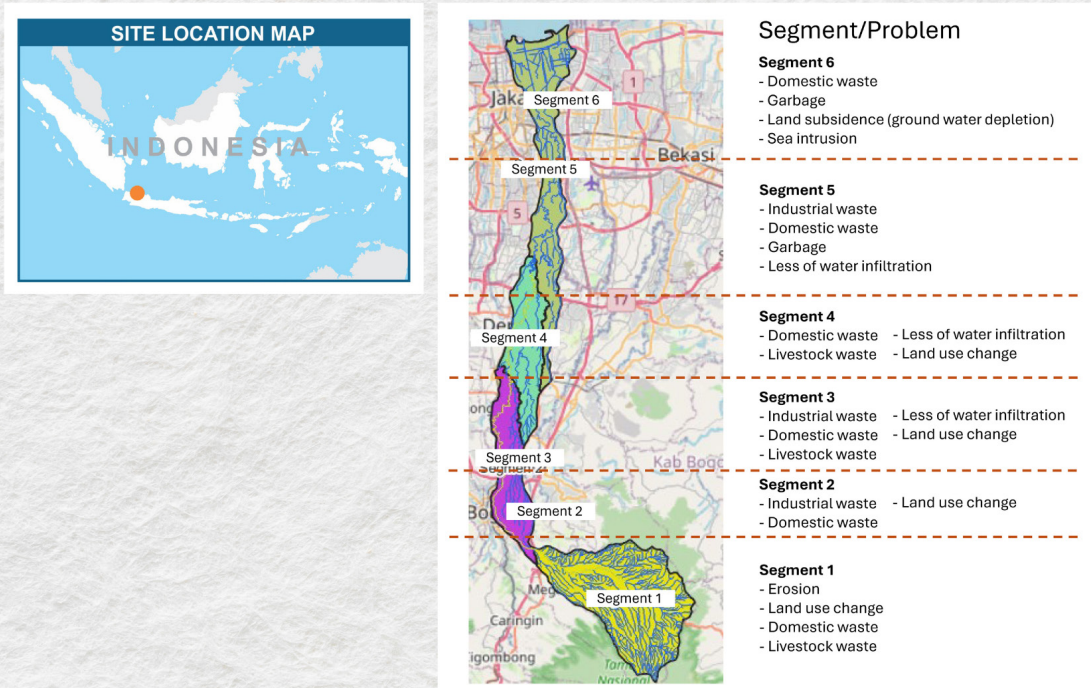
Depok City is one of the three major cities where the Ciliwung River traverses. The development in the city has significantly impacted the state of the river basin.

According to Dr. Abdul Rahman, Head of the Environment Agency of Depok City, the 19-kilometer stretch of Ciliwung River within the jurisdiction of Depok City provides several ecosystem services to the community including fishing and recreation. However, he also reaffirmed that improper waste disposal is among the major issues in Ciliwung River.

"There are about 2.1 million people living in Depok City and we generate 100.3 tons of waste per day. We have relevant programs to address the solid waste management problem like installing a biodigester that can make composts out of biodegradable waste. But there are other sources of pollution like the small-scale businesses and the wastes coming from the upstream area," said Dr. Rahman.

Ciliwung River Basin

SEGMENTATION AND PROBLEMS IN CILIWUNG RIVER



Identified as hotspot locations in the upstream area of the river basin, consultations and field visits were done in Depok and Bogor cities to discuss the state of the river and actions to address the same. Based on existing documents, the implementation of the master plans for solid waste and sewage management in the two cities were limited due to insufficient resources to ensure a more integrated community engagement and in establishing a centralized investment facility. A similar issue is also prevalent downstream, i.e., illegal dumping of domestic waste and untreated wastewater from small-scale industries.

As industries and growing populations continue to put pressure on water usage, land subsidence also becomes an issue in the Ciliwung River Basin. Further, the change in landscape along the riverbanks has brought adverse impacts not only on the water quality but also to the biodiversity as mangrove forest cover also decreased by the years. Amid this, a group of community volunteers are passionately driving the efforts to revive Ciliwung River.



A small tofu factory is located along the Ciliwung River in Depok City, whose construction of a filter pond and wastewater treatment area has yet to be finished. According to the owner, the wastewater coming from its tofu operations is not harmful to the environment since most of the materials used are plant-based.

Across the three major cities including Bogor, Depok, and Jakarta, the *Sahabat Sungai* Indonesia mobilized river rangers to regularly collect wastes and lead community river clean-ups in 37 communities in Ciliwung River Basin. In Depok City, a group of river rangers is composed of 15 volunteers, where 30 per cent are women. Their age varies from 15 to 45 years old. Aside from regular clean-ups, they conduct community awareness activities to sensitize the importance of preserving the integrity of the river. River rangers do not receive salary or any incentives aside from the transportation allowance when they need to travel and attend meetings.



Aside from river clean-ups and education drives, the river rangers are also guiding tourists who are doing river rafting in Ciliwung River.



The river rafting activity offers a fun and relaxing way to connect with nature. It takes 45 minutes to complete the route along the 19-kilometer stretch of Ciliwung River in Depok City.

The river rangers also co-manage the river rafting activity in Ciliwung River that aims at promoting the conservation of the river and the local sustainable tourism in Depok City. Tourists can enjoy river adventure in an inflatable raft for 45 minutes. Along the route, tourists can enjoy bird watching and some wildlife sightings.



Bakri, a volunteer river ranger and rafting guide, was briefing the IRBM Project team during the field visit in Depok City.



A Telltale of a River Ranger

"I love the river because I was born here. I want to take care of it even in small ways."

These were the words from Bakri, a river ranger volunteer in Depok City. He is 43 years old, married, has three children, and who owns a small store along the riverbank. Bakri is a freelance worker – sometimes, an online seller of toothpaste, perfume, and other personal effects. Their home is located in the borders of Depok and Bogor cities.

Bakri's recollection has gone as far back as the early 1990s, when the river started to become polluted. In 2006, volunteers were mobilized to do clean-ups until in 2017, their group was formally established. He recalled when the dam in Bogor Regency that was part of the Ciliwung River was opened, they were flooded in Depok. But it was not the flood that shocked him. It was the waste that came from upstream. A once clean-up day would recover 150 to 200 kilograms, mostly plastic bags.

He has been doing this volunteer work for over 15 years. When asked if he gets tired, *"Yes but my dream is for Ciliwung (river) to become a tourist destination."*



While there are different groups of river rangers covering different segments of the Ciliwung River in Bogor, Depok, and Jakarta, there is no existing body that coordinates them or their efforts at the river basin level.

The interagency coordinating mechanism for the development and management of river basins in Indonesia is being led by the Directorate General for Water Resources, Ministry of Public Works. It covers the environmental and resource management issues in the river basin and coastal areas in the region. While there is an existing mechanism in place, the Integrated River Basin Management (IRBM) Project aims to contribute in strengthening the governance capacity and ensure a sustainable, innovative, and a more inclusive management of the Ciliwung River Basin. This also includes more engagement from the communities especially women and the minority groups.

The IRBM Project is also conducting a baseline study to assess the different factors that affect the biophysical aspects of the river basin ranging from climate-induced to anthropogenic threats.

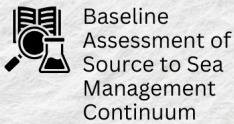
The IRBM Project envisions implementing complementary programs that protect water quality through integrated wastewater and solid waste management to arrest the further degradation of water quality and biodiversity loss along the corridors of Ciliwung River.

Integrated River Basin Management Project



Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) implements the IRBM Project, with support from the United Nations Development Programme and the Global Environment Facility, and in collaboration with the ASEAN.

Project Components



Baseline Assessment of Source to Sea Management Continuum



Improved Governance and Management in Ciliwung River Basin



Knowledge Management and Capacity Development



Monitoring and Evaluation

Priority Issues in Ciliwung River Basin



Solid Wastes

Uncontrolled dumping of solid waste and inadequate collection, processing, and disposal facilities



Domestic and Industrial Wastewater

Discharge of untreated or inadequately treated domestic and industrial wastewater



Deterioration of Water Quality

Coordination Mechanism

Regional Steering Committee

National Level:
Directorate of Water Quality Protection and Management under the Deputy of Environmental Pollution and Degradation Control, Ministry of Environment / Environmental Protection Agency, Republic of Indonesia

River Basin Level:
Project Steering Committee for the Integrated Management of Ciliwung River Basin and Jakarta Bay coastal area

Pilot Project Level:
Depok City Environment Agency



Depok City has several biocomposting facilities that allow the decomposition of biodegradable wastes into compost.



Depok City's Waste Bank

Ruma Harum is a community-managed waste bank in the middle of Depok City that started in 2013. They consolidate recyclables – from plastics to metals to papers – and sell them to their partner recycling companies.

Locals visit the waste bank to deposit their recyclable wastes and receive an equivalent money depending on the volume and buying price in the market. They also collect in residential areas to increase their waste recovery. In a week, they can recover an average of three tons of plastic wastes.

With the IRBM Project's vision and an outstanding community volunteerism in Depok City to revive the health of the river, Bakri's hope of passing on a cleaned Ciliwung River to the next generation is not an impossibility.






About the Integrated River Basin Management (IRBM) Project

Supported by the [Global Environment Facility](#), the Integrated River Basin Management (IRBM) Project aims to set-up functional management mechanisms in priority river basins of six ASEAN countries to reduce pollution and sustain freshwater environmental flows as well as adapt to climate change vulnerabilities. The Project is being implemented by the [United Nations Development Programme](#), and executed by [Partnerships in Environmental Management for the Seas of Seas Asia](#), in collaboration with [ASEAN](#).

 (+63) 2 892 9292

 info@pemsea.org

 PEMSEA Building, DENR Compound,
Visayas Avenue, Quezon City 1165,
Philippines

 PEMSEA  pemsea  pemsea.rf

 www.pemsea.org

Learn more about
the IRBM Project

