
[The tree plantation and paper industry pollutes water: Communities in Indonesia affected by APP](#)

People in Indonesia, particularly in the Banten province, on the island of Java, demand that the government enforce the law and restore river catchment areas (watersheds or river basins) after years of water contamination of the Ciujung river. The contamination is caused by Asia Pulp and Paper (APP), one of the main pulp and paper company active in Indonesia, releasing waste into the river. This particularly shows how problems such as deforestation, social conflicts, forest fires, corruption and water pollution are entrenched in the business chain of tree plantation and paper industry in Indonesia.

In 2014, Indonesia's deforestation rate reached 5.6 million hectares per year. This is triggered by the monopoly of forest concessions - around 57 million hectares - by four industrial sectors: natural resources extraction - especially logging and mining - as well as industrial tree plantations for pulp and palm oil. Monoculture tree plantations now cover 10.1 million hectares of land in Indonesia (1). Their main use is to supply raw materials for the pulp and paper industry in Indonesia.

The PT. Indah Kiat Pulp & Paper Tbk (IKPP) Serang mill, located in the Banten Province, is one of the largest paper mills owned by the plantations company Asia Pulp and Paper (APP), which is processing raw materials from tree plantations in Indonesia (2). Disposal of waste from this mill contributes most of the pollution of the Ciujung river, which flows for 142 km, passing three regencies: Pandeglang, Serang, and Lebak. The mill, established in 1991, produces brown paper/cardboard, carton/white and packaging paper. The annual production capacity is approximately 1.7 million metric tons of cardboard and 480,000 metric tons for conversion products and packaging boxes. Its final products reach countries on all continents in the world: Australia, Japan, Singapore, the Philippines, Austria, Brazil, Jordan, Spain, Taiwan, Thailand, Canada, Korea, Turkey, China, Malaysia, France, Hong Kong, UK, India, Myanmar, USA, Italy, Vietnam, and Indonesia (3).

APP operates in Indonesia and China and has a production capacity of more than 19 million tons per year. Its products are marketed in more than 120 countries across all six continents (4). The exclusive supplier of raw materials for APP mills in Indonesia is Sinar Mas Forestry, which owns tree plantation companies in Sumatera and Kalimantan. There are at least seven units of forestry companies that are directly controlled by Sinar Mas Forestry (5): PT. Arara Abadi (Riau), PT. Satria Agung Perkasa (Riau), PT. Riau Abadi Lestari (Riau), PT. Wirakarya Sakti (Jambi), PT. Finnantara Intiga (West Kalimantan), and PT Sumalindo Hutani Jaya (East Kalimantan).

Contaminating the water of the Ciujung river

Since 1992, the PT. IKPP Serang mill operates six paper production lines, plus another one that started operations in 2008. The waste generated is discharged into rivers and is responsible for most of the contamination of the Ciujung River (6). This was revealed in 2012 through the mandatory

environmental audit report, Management of Wastewater from Pulp and Paper PT. Indah Kiat Pulp & Paper Tbk (PT. IKPP) Serang. The mandatory environmental audit includes an analysis of the river water quality, the wastewater treatment plant as well as of the compliance with regulations and licensing. The information included:

- IKPP Serang has three Wastewater Treatment Plants (IPAL for its acronym in Bahasa): IPAL 1, IPAL 2 and IPAL 3. Those three plants produce waste, either as solid or liquid waste, that must be disposed in the Ciujung river. IPAL 1 has discharged as much as 5,000-6,000 m³ of liquid waste per day, and IPAL 2 22,000-24,000 m³ per day. But the performance of those plants is not optimal. According to the Chemical Oxygen Demand and Biochemical Oxygen Demand tests, the IPAL 2 plant exceeds waste concentrations by 26% in relation to the Threshold Limit Value. This threshold is specified in the quality standards of the MOE Decree of 1995 No. 51. The IPAL 3 on the other hand, exceeds the quality standards of the Biochemical Oxygen Demand test by as much as 145% and 143% for the Chemical Oxygen Demand value.
- The company's "efforts" have not been optimal. There are other requirements that have not been done like the provision of emergency ponds. In addition, there have been no efforts from the company to attempt recovering the water quality of the river.
- As the PT. IKPP Serang produces liquid waste, the ecosystems of the Ciujung river are severely affected due to the discharge of this waste, contributing to the river's pollution load of 83.92%.
- The laboratory used by PT. IKPP Serang to take the sampling has not been accredited or standardized.

Waste discharged from the pulp mill site into the Ciujung River at the village of Kragilan flows downstream, to the estuary in the Tengkurak village, district of Tirtayasa. During the dry season (July - October), when the water levels are very low, even null, the company continues to dump waste into the river. Therefore, the waste discharged sediments in the river because there is not enough water to drain the waste out of the river. The river contaminated with industrial waste flows through at least 17 villages in five districts.

Tens of thousands of people rely on the water from the Ciujung river. They use it for irrigation of 16,000 hectares of land, feeding 6,000 hectares of fishponds, and for bathing and washing. Communities in the downstream region are generally traditional fishermen and rely on the income from the catch of fish in this river. People in these areas are particularly vulnerable and are threatened when consuming water that can affect their health (7). In addition, water pollution has also decreased the number of fish and shrimps in the river.

Residents of the Serang Regency stated, "Today, the water of the river is not good anymore. The water is foaming, stinking, and looks black. It is increasingly difficult for the people to use the water for their daily needs. However, people still use it for bathing and washing because they depend on the water of the Ciujung river. Many people complain because the hives are allegedly due to using dirty river water. The livelihoods based on fishponds became even worse because of the polluted river water. The output from the ponds fell drastically. Why? Because the fish become scrubby or do not grow well. In the past, a four to five months milkfish (Bandeng) was generally weighing about one kilogram. Now, after four to five months the fish is still one ounce and reaches the catch-weight only after 10 months." (8)

A water quality assessment from 2015 done by the community of the Serang Regency and a team from the Ministry of Environment and Forestry showed that the water of Ciujung River is still polluted

due to the waste discharged by PT. IKPP Serang. This problem has been going on for decades, and the affected communities have been repeatedly reporting it to the government. Explicitly, the community of the Serang Regency has demanded to revoke the license as well as to enforce the law for an environmental recovery and holding the company responsible. Ironically, the pollution continues without stronger law enforcement to solve this problem.

Water is the source of life. The contamination of water in the business chain of the tree plantation and pulp & paper industry in Indonesia, or in other countries, must be resolved immediately. Thus, the state must not only enforce the law in the management and protection of forests, but also must ensure the protection of water resources as its responsibility for fulfilling the rights of the entire population to a good and healthy environment.

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(1) Environmental Outlook 2015, WALHI http://www.walhi.or.id/wp-content/uploads/2015/01/OutLook-2015_Final.pdf

(2) <http://www.asiapulppaper.com/about-app/mills>

(3) <http://www.ikserang.com/iks/index.php?p=sales>

(4) <http://www.asiapulppaper.com/about-app>

(5) http://sinarmasforestry.com/about_us.asp?menu=1

(6) Mandatory Environmental Audit Report, Management of Wastewater from Pulp and Paper PT. Indah Kiat Pulp & Paper Tbk (PT. IKPP) Serang, 2012. Based on the letter of Ministry of Environment No. B-6585/Dep.I/LH/07/2011.

(7) Infografis; IKPP Mengalirkan Limbah Beracun ke Sungai Ciujung Kabupaten Serang, Banten. WALHI, ICEL, Media Link. 2014.

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(8) <http://www.mongabay.co.id/2014/10/14/kala-sungai-ciujung-merana-warga-menderita/> October 14th, 2014