## The Conflict-Laden Multi-Functionality of the Kapuas River in Kalimantan, Indonesia

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The Kapuas River in West-Kalimantan, Indonesia's longest river, is a prime example illustrating the conflict-laden multi-functionality of water in South-East Asia. Diverse utilisations of the river and adjacent land areas by local residents as well as corporate and state-led environmental transformations affect the river in various ways and bear conflicts at different scales. Water as fluid medium connects the various actors and utilisations upstream and downstream. The river is used as a space for living, for personal hygiene and washing clothes, for fishing and aquaculture, as source of water for industrial, agricultural, and domestic purposes, for the discharge of partly toxic domestic and industrial waste water and rubbish, for gold and sand mining, and as a route of transport for people and goods. In the frame of a research project that aims at a spatial theoretical analysis of upstream-downstream and rural-urban interrelations with regard to water as a fluid resource, we undertook an exploratory research trip on the Kapuas River in March 2012 to gain a first overview of the various actors and utilisations positioned along the river, and of related transformations and conflicts. The material presented here provides visual illustrations of selected aspects of human-nature interactions and the conflict-laden multi-functionality of the river. The photographic journey begins in the upstream areas and ends in the coastal city of Pontianak. With its economic and political primacy the city affects human-nature relations upstream, which in turn affect the city via the flow of water.

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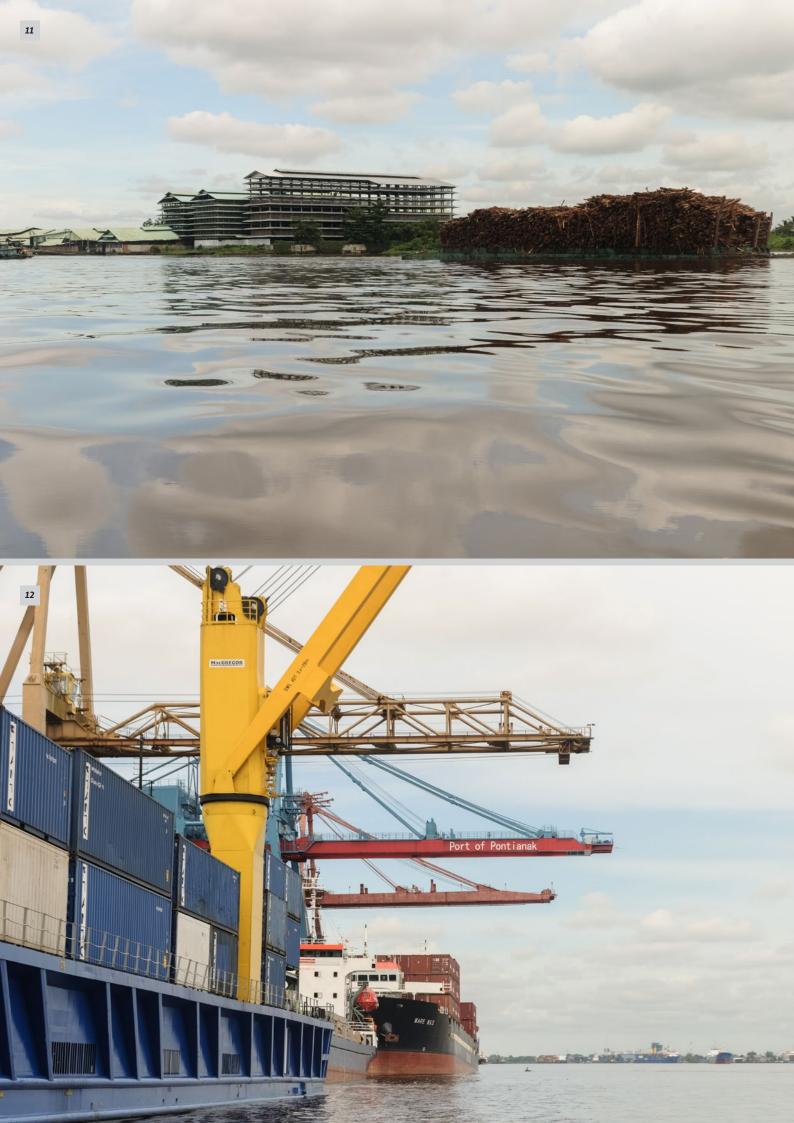
















- LIFE ON WATER Especially the villages of the Melayu people who advanced to the interior of West Kalimantan from the coastline along the waterways and mainly live from fishing and small-scale trading, are concentrated along the Kapuas river and lake network.
- FISHING AND NUTRITION The upper Kapuas Basin with the Danau Sentarum region contributes the main portion of freshwater fish caught in West-Kalimantan. The fishers both women and men use various fishing gears. The fishing gear shown in Picture 3 allows catching small sized fish in small amounts for everyday consumption.
- CONFLICTS OVER NATURE CONSERVATION Danau Sentarum, a unique ecosystem comprising interconnected seasonal lakes and swamp forests, is valued by the local population for its fish abundance. It also plays a crucial role in regulating the water flows of the Kapuas River. As in other national parks in the upper reaches of the Kapuas and its tributaries, conflicts have arisen between state-led conservation strategies and local residents' resource uses.
- POLITICISED WATER FLOWS Politicised land-river and upstream-downstream interactions are marked by widely unknown or disputed cause-effect relationships: Local residents blame the operations of a logging company, with which they are in conflict over land, for altered stream flows resulting in river bank erosion that begins to threaten their dwellings.
- HEALTH AND SANITATION Throughout the entire catchment area, residents use the river for their daily hygiene, for brushing teeth, and for doing their laundry. The floating wooden huts with their attached platforms along the shoreline serve as toilets and as washing and bathing spots. In some villages, river water had also been used for human consumption until recently but was then replaced by alternative water sources to reduce the incidence of water borne diseases, like cholera and typhoid.
- MINING AND POLLUTION Thousands of gold miners, both locals and people from other parts of West-Kalimantan, dig up sediments in many parts of the Kapuas River and its tributaries, thereby polluting the river with mercury and increasing riverine sediment transport. The mining operations are illegal, but law enforcement in some regions is said to be prevented through corruption and informal protection by governmental organisations.

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- POLITICISED RIVER BANKS One of the palm oil companies, which have received scorching international criticism for the disastrous environmental and social impacts of their rapidly expanding operations in Kalimantan, publicly highlights its compliance with the statutory buffer zone of 100 metres along the river by sparing a strip of the smallholder rubber forest from conversion into an oil palm plantation as contribution to wildlife protection. Photo 9 shows one of the five signs that the plantation company has put up on the river bank (left side of Photo 8). Plantation development along the Kapuas River poses the danger of water pollution. Not all plantations comply with legally defined buffer zones.
- TRANSPORT The Kapuas River is an important route of transport. Natural resources produced or extracted in the catchment area, such as timber, rubber, palm oil, and bauxite, are transported downstream, while cement from the island of Java and sembako (sembilan bahan pokok nine basic goods for daily consumption) are transported upstream. Bauxite, the mining of which is planned to be expanded on a big scale, is shipped directly to China. The photo shows an empty bauxite container ship going upstream.
- INDUSTRY In line with the river's function as a route of transport and using the river as water resource and for waste water disposal, some processing industries are concentrated along the downstream portions of the river. Particularly rubber and wood from the interior areas are shipped downstream and processed in factories situated at the river's shoreline around the coastal city of Pontianak. The photo shows a timber transporter passing by a rubber factory.
- COASTAL PRIMACY The Kapuas River connects the coastal city of Pontianak with the other Indonesian islands and destinations overseas on the one hand and with the interior areas of Kalimantan on the other hand. As an important transfer site of goods and with its economic and political primacy, the city is closely linked with transformations of human-nature relations upstream.
- THE RIVER AS URBAN SEWER AND WASTE DISPOSAL SITE Adding to the pollution load from upstream, urban waste water enters the Kapuas River directly via numerous channels that permeate the entire city of Pontianak. Both rural and urban residents use the river as a sewer and for rubbish disposal.
- CONNECTING FLOWS Also within Pontianak the (polluted) Kapuas River is used as space for living, for washing and personal hygiene, as toilet, and for fishing and aquaculture. Water as a fluid medium connects the various actors and utilisations upstream and downstream.