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Title: Interdisciplinary island metabolism: intersection of flows and socio-geography approaches to investigate vulnerability, waste colonialism and externalization in the cases of Comoros and New Caledonia.

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Abstract:

Islands are closely linked to globalized material flows, with specific constraints and vulnerabilities. Counter-intuitively, they are not examples of metabolic loops of consumption, production and waste. We argue that islands are key territories for better understanding the consequences of flow in terms of vulnerabilities, colonialism and externalization, precisely because of the way they are connected (rather than isolated) to globalized material flows.

This research is an interdisciplinary material and geographical analysis of waste realities in two French/formerly French island territories (Manglou et al., 2022; Bahers et al., 2022): the Comoros and New Caledonia. It draws on metabolic analysis and waste studies to address the different perspectives that these approaches open up for the study of island territories. An analysis of material flows (EW-MFA method with a spatialization of flows) allows us to sketch out metabolic profiles that show the contribution of the dominant mining and agricultural industries to waste production. This flow approach is combined with a social geography approach. The socio-political context of each island is used to explain contemporary resource and waste management policies and practices.

The comparison of current situations in terms of discourse and flow economics shows how these territories are characterized by the accumulation of waste, which characterizes a colonialism of waste (Lepawsky, 2015; Liboiron, 2018, 2021). This is not the export of waste from rich countries to poorer ones, but the export of resources extracted from poor countries to rich ones while keeping the extraction waste there. This is the case with nickel waste in Caledonia and oil waste from ylang ylang extraction in the Comoros. This externalization of resources and their circulation thus provokes island vulnerabilities.

In conclusion, there is a need for interdisciplinary research (Bahers et al., 2022) into island metabolism in order to understand the link between the circulation of flows and their socio-geographic consequences. This framework, which combines a territorial ecology and a political ecology of the islands, makes it possible to grasp the intersections between extractive economic sectors and sociometabolic vulnerabilities.

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