



HAL
open science

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. special session: Islands

Jean-Baptiste Bahers

► **To cite this version:**

Jean-Baptiste Bahers. 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. special session: Islands. 11th International Conference on Industrial Ecology (ISIE2023), University of Leiden, Jul 2023, Leiden, France. hal-04346656

HAL Id: hal-04346656

<https://hal.science/hal-04346656v1>

Submitted on 15 Dec 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

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.

special session: Islands

Author : Jean-Baptiste Bahers, Full researcher at CNRS & Université de Nantes, France

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.

Références

Manglou, M. & Rocher, L. & Bahers, J., (2022) "Waste colonialism and metabolic flows in island territories", *Journal of Political Ecology* 29(1), 1-19. doi: <https://doi.org/10.2458/jpe.2836>

Bahers, JB., Singh, S. & Durand, M. Analyzing Socio-Metabolic Vulnerability: Evidence from the Comoros Archipelago. *Anthr. Sci.* **1**, 164–178 (2022). <https://doi-org.inshs.bib.cnrs.fr/10.1007/s44177-022-00017-1>

Bahers, JB, Aristide Athanassiadis, Daniela Perrotti, Stephan Kampelmann. The place of space in urban metabolism research: Towards a spatial turn? A review and future agenda. *Landscape and Urban Planning*, 2022, 221 (1), pp.104376. [10.1016/j.landurbplan.2022.104376](https://doi.org/10.1016/j.landurbplan.2022.104376).

Lepawsky, J. (2015). The changing geography of global trade in electronic discards: Time to rethink the e-waste problem. *The Geographical Journal*, 181(2), 147-159.
[https://doi.org/https://doi.org/10.1111/geoj.12077](https://doi.org/10.1111/geoj.12077)

Liboiron, M. (2018). Waste colonialism, from <https://discardstudies.com/2018/11/01/waste-colonialism/>

Liboiron, M. (2021). *Pollution is colonialism*. Duke University Press