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A macro level of assessment of material circularity

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Curriculum Vitae

Glenn was born on January 7th, 1988 in San Jose, Costa Rica. He grew up in the town of San Rafael, Heredia, where his passion for science grew up along with his hikes through tropical rainforests and coffee plantations. He was awarded with a sport scholarship from Saint John High School, where he graduated in 2005. Then, he was awarded with a sport and stimulus scholarship from the University of Costa Rica, where he obtained a Bachelor of Chemistry in 2011. By that time, he also collaborated as student assistant in several courses such as general physics, organic chemistry, and physical chemistry. After that, Glenn worked for 3 years as a researcher and production supervisor in Energias Biodegradables de Costa Rica S.A., where his research focused on biofuels production. In 2013, he received an Australian Award Scholarship to pursue his master's studies at the University of Sydney, Australia. His graduation project was a collaboration between WWF-Australia and the Integrated Sustainability Analysis Centre from the University of Sydney, where he studied the impacts of international trades on biodiversity losses in Borneo. In 2016, he obtained a Master of Sustainability with distinction. Glenn moved back to Costa Rica, where he worked as a Research Associate at the School of Agricultural and Biosystems Engineering, at the University of Costa Rica. During this time, he developed bioenergy projects and courses for climate change mitigation and adaptation. At the end of 2016, he was selected as an Early-Stage Researcher in the Circuit Marie Curie Innovative Training Network to start his PhD in the Institute of Environmental Sciences (CML) at Leiden University. Since then, Glenn's research has been focused on understanding the potential implications of a circular economy on a global scale. His current works has been recognized by multiple organizations, for example, with a 2nd place prize of PRISMA-Award 2020 for ground-breaking research on sustainability assessment and policy, two nominations to the CML Stan Award as best PhD scientific article, and an article acknowledgement in Science for Environmental Policy of the European Commission's Environment Directorate.

Publications

Academic work:

- Aguilar-Hernandez GA, Rodrigues JFD, Tukker A (2020) *Macroeconomic, social and environmental impacts of a circular economy up to 2050: A meta-analysis of prospective studies*. Journal of Cleaner Production 278: 123421 <https://doi.org/10.1016/j.jclepro.2020.123421>
- Aguilar-Hernandez GA, Sigüenza-Sanchez CP, Donati F, Merciai S, Schmidt J, Rodrigues JFD, Tukker A (2019) *The circularity gap of nations: A multiregional analysis of waste generation, recovery, and stock depletion in 2011*. Resource Conservation & Recycling 151: 1–9. <https://doi.org/10.1016/j.resconrec.2019.104452>
- Aguilar-Hernandez GA, Sigüenza-Sanchez CP, Donati F, Rodrigues JFD, Tukker A (2018) *Assessing circularity interventions : a review of EEIOA-based studies*. Journal Economic Structures 7: 1–24. <https://doi.org/10.1186/s40008-018-0113-3>
- Aguilar-Hernandez GA (2017) *Comprendiendo la sustentabilidad desde un punto de vista exergético en sistemas adaptivos complejos*. Ingeniería 27. DOI 10.15517/JTE.V27I1.25524
- Aguilar-Hernandez GA, Deetman S, Rodrigues JFD, Tukker A (submitted) *Global distribution of material inflows to in-use stocks in 2011 and its implications for a circularity transition*. Journal of Industrial Ecology
- Donati F, Aguilar-Hernandez GA, Sigüenza-Sanchez CP, de Koning A, Rodrigues JFD, Tukker A (2019) *Modeling the Circular Economy in Environmentally Extended Input-Output Tables: methods, software and case study*. Resource Conservation & Recycling 152: 104508. <https://doi.org/10.1016/j.resconrec.2019.104508>
- Sigüenza-Sanchez CP, Aguilar-Hernandez GA, Steubing B, Tukker A (2020) *The Environmental and Material Implications of Circular Transitions: A Diffusion and Product Life Cycle-Based Method and Framework*. Journal of Industrial Ecology: 1–17. <https://doi.org/10.1111/jiec.13072>

Codes and data repositories:

- Aguilar-Hernandez GA (2020) *Supporting Information of “Global distribution of material inflows to capital formation and its implications for a circularity transition”*. DOI: 10.5281/zenodo.3894238
- Aguilar-Hernandez GA (2020) *Supplementary Material of “Macroeconomic, social and environmental impacts of a circular economy up to 2050: A meta-analysis of prospective studies”*. DOI: 10.5281/zenodo.3820181
- Aguilar-Hernandez GA (2019) *Supplementary Material of “The circularity gap of nations: A multiregional analysis of waste generation, recovery, and stock depletion in 2011”*. DOI: 10.5281/zenodo.3245310