

Review Form 3

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_130900
Title of the Manuscript:	Typology, composition and characterization of solid urban waste in the industrial area of Bobo-Dioulasso (Burkina Faso)
Type of the Article	Original Research Article

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PART 1: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript is highly relevant for the scientific community, particularly for researchers and policymakers focusing on waste management, environmental sustainability, and public health. It provides empirical data on the typology and characterization of solid waste in an industrial zone, offering insights into the environmental risks associated with waste disposal and potential pathways for resource recovery. The study contributes to the growing body of literature on waste management in sub-Saharan Africa, where improper waste disposal remains a critical challenge.	Thanks for the comments
Is the title of the article suitable? (If not please suggest an alternative title)	Typology, composition and characterization of urban solid waste in the industrial area of Bobo-Dioulasso (Burkina Faso)	Typology, composition and characterization of urban solid waste in the industrial area of Bobo-Dioulasso (Burkina Faso)
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	<p>The abstract is generally well-structured, providing a clear summary of the study. However, it could be improved by:</p> <p>Clarifying Objectives: The aim of the study should explicitly highlight the significance of the research in addressing waste management issues.</p> <p>Results Refinement: The percentages provided should be more contextualized in terms of their environmental implications.</p> <p>Conclusion Enhancement: The abstract should conclude with a stronger statement on the potential applications of the findings in policy formulation or waste management strategies.</p>	<p>Aim : This study is to make a typology and characterize this urban solid waste in the industrial area of Bobo-Dioulasso (Burkina Faso)</p> <p>Methodology: Systematic sampling of thirteen landfills identified by on-site observation carried out taking into account the density and heterogeneity of the waste. The waste typology is made taking into account the categories, origins, composition and hazardous nature of the waste.</p> <p>Result: The characterization is carried out through the evaluation of the physico-chemical parameters and the contents of heavy metals contained in the waste. The results reveal several categories of waste, namely fine waste (26.58%), plastics (20.72%), glasses (13.86%) and textiles (11.38%) which account for 72.54% of waste. The other categories (putrescible, paper/cardboard, unclassified fuels, metals, unclassified incombustible and hazardous waste) account for 27.46%. The density of the waste is 6.34 kg/m². Household and industrial waste are present at 71.47% and 23.92% respectively on average. The D13 landfill contains 100% industrial waste. Agricultural waste (2.21%) and medical waste (0.43%) remain low compared to other types of waste. Organic waste predominates in the majority of landfills with an overall average of 60.93%. However, glassware (13.38%) and metal scrap (1.36%) are less present. Composable waste is 56.21%, semi-inert (18.73%) and inert (37.66). Non-hazardous waste predominates in landfills with an average of 71.63%, although potentially hazardous waste reaches high levels (50.70%). The measured parameters indicate waste with a low acid pH (6.50) and an organic matter of up to 68.84%, indicating a high degree of heterogeneity. In addition, some dumps have high concentrations of heavy metals, such as cadmium (24.60 mg/Kg), chromium (123.98 mg/Kg), copper (451.58 mg/Kg), mercury (68.93 mg/Kg), lead (158.57 mg/Kg) and zinc (62939.41 mg/Kg).</p> <p>Conclusion : results should serve as a basis for local authorities to take decisions to raise awareness and prevent health and environmental risks arising from the landfill.</p>
Is the manuscript scientifically, correct? Please write here.	<p>The introduction effectively presents the problem of inadequate waste management, but it would benefit from a more structured discussion on previous studies related to industrial waste characterization.</p> <p>The study's objectives should be explicitly linked to the knowledge gap in existing literature.</p>	This part has been revised and these aspects have been taken into account
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	Recent article should be engaged especially at the discussion of finding to substantiate the characterisation variation.	This part has been revised and these aspects have been taken into account

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Is the language/English quality of the article suitable for scholarly communications?	It's ok	
<u>Optional/General</u> comments	Overall, this manuscript provides valuable insights but would benefit from clearer articulation of its significance, methodological refinements, and a stronger discussion on policy implications.	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	