

Manuscript title: Municipal solid waste open dumping, implication for land degradation

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General comments

I have carefully read the manuscript and, in my opinion, it must be rejected at this stage. Some of the reasons for this recommendation are these:

1. The manuscript hardly falls within the scope of Solid Earth.
2. The English grammar and style need a deep revision.
3. The title does not fit the main text.
4. The introduction section is overlong, often chaotic and disordered. I encourage authors to structure this section in paragraphs following this sequence: [i] general overview, [ii] literature review, [iii] statement of the problem, research gaps and necessity of innovative methods and [iv] clearly enounced objectives. Some detailed comments on the introduction section are listed below.
5. Material and methods are poorly described.
6. Discussion is extremely poor. A graphical example: only 11 cited references concentrated in lines 13-17 (page 1108), 11 and 16-18 (page 1109), when the section is 40 lines long.
7. Conclusions do not show the main consequences of the research carried out.
8. Despite other important problems, references are not strictly written. There are lots of wrong authors and titles. Even some DOI numbers are absent (e.g., Al-Karaki, 2011) or wrong (e.g., Sumathi et al., 2008). Some detailed comments on references are listed at the end of this document.

Detailed comments

Page	Line	Comment
1098	2	"MSW" not defined in the abstract.
	5	Re-write: "In Iran, standards".
	6	Check: "attended, evaluation an open dumping". Perhaps you mean "attended, and evaluation of open dumping"?
	7	What restrictions and troubles?
	10-11	Re-write: "Mazandaran province, northern Iran, and the southern coast of"
	9-12	Not clear, check. The suitability [...] is the significance [...]?
	15-16	Re-write: "identified. Results indicate". This sentence is not clear, however.
	19-21	This statement is too general and imprecise. It is false for all developing countries. Perhaps, authors should delete it or describe the regional situation, but "developing countries" show many different situations.
	24	Avoid unnecessary capitals: "landfill".
	25-26	This statement needs revision and updated references. I have no doubt about the authors' exactitude, but the cited reference was published in 2006. In addition, Mahini and Gholamalifard (2006) are, in fact, citing Leao et al. (2004)

- (this should be the cited reference, in any case). So, the statement about waste management is supported by a reference published 16 years ago.
- 1099**
- 3** Not enough land? This is quite imprecise.
 - 8-11** Re-write this sentence. Here and in other parts, “literatures” is used instead of papers or works.
 - 11** Separate these paragraphs.
 - 12** Delete “process” or re-write: “processes”.
 - 15** Substitute “during” with “by” or “due to”. What do you mean with “high temperature”? Hot weather? Burning? What temperature are you talking about?
 - 16** What soil properties? How?
Separate “Mohavesh...” in a new paragraph.
 - 17-18** Delete “In this research they examine the effects of land use changes on degradation”.
 - 18-20** Re-structure this statement or delete.
 - 21** What is soil chemical structure?
“Causes soil degradation” is included in the previous statement.
Delete the second “and” in the sentence.
 - 22-23** Delete “Our research is an example for improper land use which causes forest degradation”.
 - 23-26** Awkward sentence, rewrite.
 - 23** Delete “in their research”.
 - 24** Re-write: “of soil physical and chemical properties”.
 - 28-...** This sentence is nonsense.
- 1100**
- 1** When N, pH and soil erosion increase soil richness decreases? I do not understand this. What Pallavicini et al. (2014) (NOT PALLAVICINY) wrote in the abstract of their paper is, literally: “soil development gradient was related to total nitrogen, pH and erosion severity”. A deeper reading of the cited paper should shed more light on this.
 - 3** On our solid earth? Revise.
 - 4** “MSW” not defined in the main text.
 - 4-10** Awkward sentences, rewrite.
 - 10** Add “risk” after “pollution”.
 - 11** Delete “in the world”.
 - 12** Delete “which is unsafe method”.
 - 15-16** This statement is included in previous lines.
 - 16-19** This statement needs to be supported by a citation.
 - 19** Morugán?
 - 25-29** This sentence is incorrectly written.
- 1101**
- 4** Re-write: “poor”.
 - 5** Insufficient laws?
 - 11** Re-write: “most”.
 - 10** Re-write: “southern”.
 - 12** Delete “in” after “changed”.

Here, I stopped detailed revision.

References

- Aliowsati et al., 2014 Check reference: <http://en.journals.sid.ir/ViewPaper.aspx?ID=366040>.
Masoud, M.S., Ghasemali, O., and Fatemeh, A. Evaluation of Karaj solid waste landfill with regional and local screening method. *Journal of Environmental Science and Technology*, 15, 85-96, 2014.
- Al-Karaki, 2011 Check title: "in a hydroponic".
Add DOI: 10.9755/ejfa.v23i1.5315.
- Anzi et al., 2004 Re-write: "landfills/dumps".
Add DOI: 10.1007/s10163-004-0117-y.
- Badve, 2001 Check capitals in the name, lastname and title.
- Ball, 2004 Check the title of the chapter: "Landfill site selection".
- Biro et al., 2013. Check author: Buchroithner.
- Courtney and Harrington, 2012 Check title: "*Holcus lanatus*".
- De Souza et al., 2013 Check title: "Arbuscular mycorrhizal fungi in revegetated mined dunes".
- Diaz et al. 1997 Check this reference. I have not found it in the journal (<http://www.sciencedirect.com/science/journal/0956053X/17/1>).
- Dimitriou et al., 2008 Check title: "Groundwater risk assessment at a heavily industrialised catchment and the associated impacts on a peri-urban wetland".
- Esawy et al., 2014 Check first author: "Mahmoud, E.".
- Ghanbari et al., 2012 Check title: "landfills".
- Guenon et al., 2013 Check authors: Guénon and Vennetier.
Check title: "Trends in recovery of Mediterranean soil chemical properties and microbial activities after infrequent and frequent wildfires".
- Hernandez et al., 1998 Check author: "Hernández".
Check title: "Some impacts of urban waste landfills on Mediterranean soils".

Here, I stopped revising references.