



Mini Review Paper

Effect of Composting process on stake holders in Lahore Compost Pvt. Ltd, year 2014

Ayesha Ameen^{1*}, Jalil Ahmad² and Shahid Raza¹

¹University of South Asia, Lahore, Pakistan

²Lahore Compost Pvt Ltd, Punjab, Pakistan
aishaamin74@gmail.com

Available online at: www.isca.in, www.isca.me

Received 21st May 2016, revised 3rd September 2016, accepted 6th September 2016

Abstract

During the present ESIA (Environmental and Social Impact Assessment), stakeholder consultations were carried out. The objectives of the consultations were three fold, to obtain an overview of the socio-economic, gender, and associated characteristics of the groups potentially affected by the existing LCL (Lahore compost private limited) facility and planned expansion to obtain views of the stakeholders, and to identify and examine the potential impacts of the facility on the affected groups and to make recommendations which will maximize the positive impact of the facility on women and men of the affected groups and which will specifically increase women's involvement in, and benefit from, the project. Stakeholders consultations are an ongoing process required for CDM (Construction design and management) monitoring and are done regularly. It was kept in mind while conducting this study that the objective of the consultations would be to clearly understand the community's concerns. The objective of this consultation is to obtain views of the stakeholders, and to identify and examine the potential impacts of the facility on the affected groups and to make recommendations which will maximize the positive impact of the facility on women and men of the affected groups and which will specifically increase women's involvement in, and benefit from, the project.

Keywords: CDM, LCL, ESIA, MSW, MB.

Introduction

Furthering of social welfare by stakeholders is a vital role performed by industry. Stakeholder theorists typically contrast a broadly defined “relational” approach to stakeholder management with a “transactional” approach based on the price mechanism—and argue that the former is more likely than the latter to contribute to social welfare¹. The stakeholder consultation is a community based process, rooted in the problems and needs of those who are faced by change due to the current plant or after its expansion². The Lahore Compost (Private) Limited (LCL), part of the Saif Group of Companies, is operating a composting plant utilizing organic component of the municipal solid waste collected and transported to the Mehmood Booti landfill site, Ring Road, Lahore. Currently LCL is operating at 1,000 tons per day (TPD) of municipal solid waste (MSW). It enhanced its operations from previous processing from the pilot stage of 300 TPD (Tons per day) of MSW.

The LCL plant site is located within the premises of the Mehmood Booti (MB) dumping site, where the 300 TPD composting plant has been operational since 2006. The infrastructure facilities at the site in terms of accessibility and electrical power supply are adequate. Lahore Compost remains

updated room the effect of operations of Lahore Compost Pvt. Ltd on its stake holders².

Methodology

The background information and the proposed project details were discussed with the government officials, CDGL authorities and NGOs like WWF. Furthermore, consultations were carried out in the village of Mehmood Booti, and surrounding communities, farmers and government offices to collect the relevant information. Notes and data was acquired after having detailed meetings and interviews with the various stake holders of Lahore Compost (Pvt) Ltd. (LCL) in regards to health, safety and environmental issues that could affect the external as well as internal stakeholders of LCL. External stakeholders consist of residents of neighboring localities, farmers, schools in the neighborhood, distributors, solid waste department, environment protection department, etc., whereas the internal stakeholders comprise of the employees of LCL.

A semi-structured questionnaire was formulated in order to collect essential socio-economic data from the community. The methodology adopted for collection of data was mainly through personal visits in the neighboring localities and farmers and interviews with various departments. Field visits were made to carryout socio-economic survey to get an extensive feedback

from all the stake holders in the neighborhood. Surveys were also conducted to find out various problems that the neighboring community might be experiencing associated with effluent and solid waste handling³.

For the collection of data and views regarding health, safety and environment of the stakeholders that may have been affected in any manner because of the operations of LCL, the following areas were visited: i. Neighboring locality of Mehmood Booti, ii. Farmers in the vicinity, iii. Owners of small industries around LCL, iv. School of the area, v. Distributor of Zameen Dost Compost, vi. Scavengers, vii. Government departments and officials, viii. Internal employees, ix. Scientists.

Results and Discussion

Environmental Impact of Lahore Compost on Farming Community: Lahore Compost conducted a survey of the nearby farming community and asked them survey questions to assess if the plant has somehow attracted pests or rodents that were harmful to the crop. No such effects were recorded. Majority of people gave positive response. The organic matter of the trial plot land is currently at the maximum due to the use of compost. Organic matter is important to maintain the fertility of soil, its N content and it can be increased by adding animal manures in soil. The impact of soil and plant species on the development of humus explains the importance of organic matter in soil⁴. The crop and plantation quality is excellent. Greenery level also increased with the usage of compost. Compost has a very strong effect on soil and the growth of plants and crops and results in the significant soil improvement⁵. Majority of people were satisfied that level of water puddles has also reduced. The solid waste is not properly covered in Lahore compost with clay layer to eliminate rain water penetration. This increases the leachate amount in sub surface water⁶. The farmers of areas surrounding Lahore, encouraged to introduce value added organic base products as they were of the opinion that usage of compost would be effective to improve the quality of the farm produce which would eventually be beneficial to the consumer. The

farmers also applauded the efforts of Lahore Compost to create awareness of the usage of organic products (Figure-1).

Environmental Impact of Lahore Compost on Industrial Community: On surveying the adjacent industries we found out that most of industries were not affected by Lahore Compost. The response of people was positive. There were no significant negative impacts on the local industry from composting facility and its expansion within the existing boundaries of LCL. However nearby residents were affected by the black smoke exhaled by these mills. Monitoring of black smoke is the widely used method to assess air quality⁷. The evidence effects of smoke on cardiovascular health and concluded that it may be desirable to spread a black smoke up to PM 2.5 standard. One issue faced by the industry was the narrow service road and heavy traffic by LWMC. But this had no direct connection with Lahore Compost. No major incidents were reported regarding fire and others (Figure-2).

Environmental Impact of Lahore Compost on Residential Community: Lahore Compost conducts a brief survey every year in the adjacent community to assess if we have affected the surrounding community on the given variables. The results show that more people think that we have not affected these issues. There is some direct positive economic effect on residential community due to the establishment of a composting plant in the area. One of the most likely impacts is the creation of several jobs. The percentage of jobs has increased from 60-66% during 2014. The problem is with reference to the landfill site that is a cause of major problems people face in the area. Post closure system refers to the leachate and gas management system. These Post closure systems will yield a minimum impact on the health of human⁸. These systems can be introduced to cope the landfills problems. Furthermore, the closest residence to the facility is over 500 meters away, which is likely a sufficient distance to eliminate any noise from the composting site reaching a residence⁹ (Figure-3).

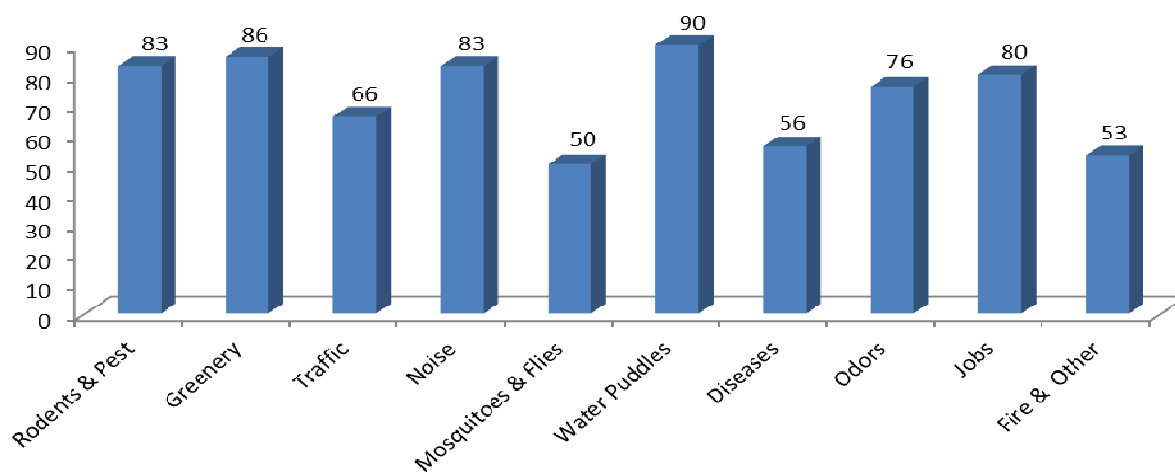


Figure-1
Environmental Impact of Lahore compost of farming community 2014

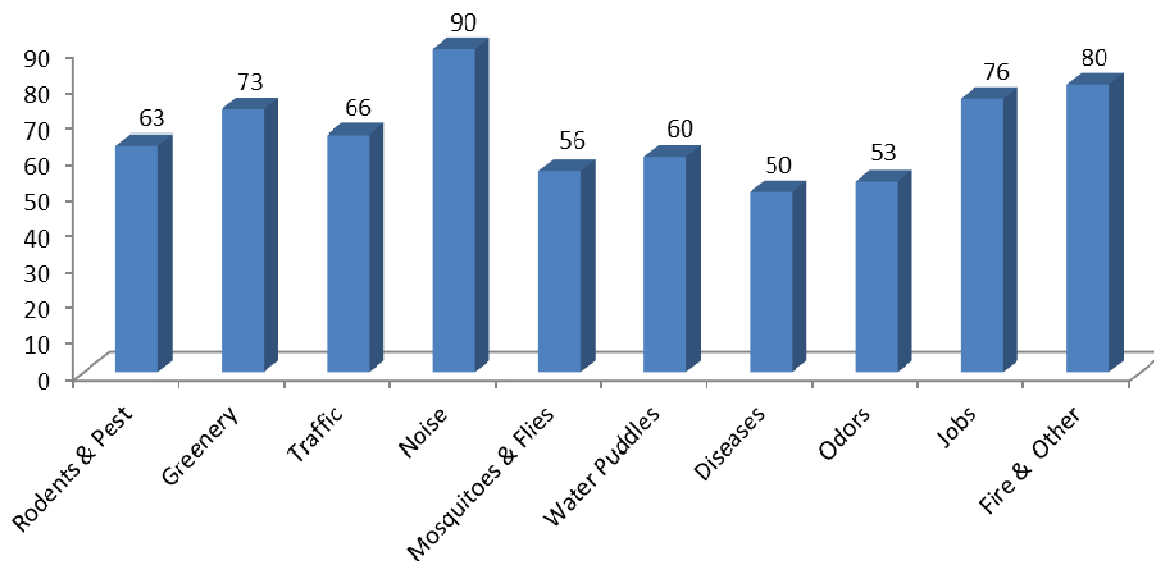


Figure-2
 Environmental Impact of Lahore compost of Industrial community 2014

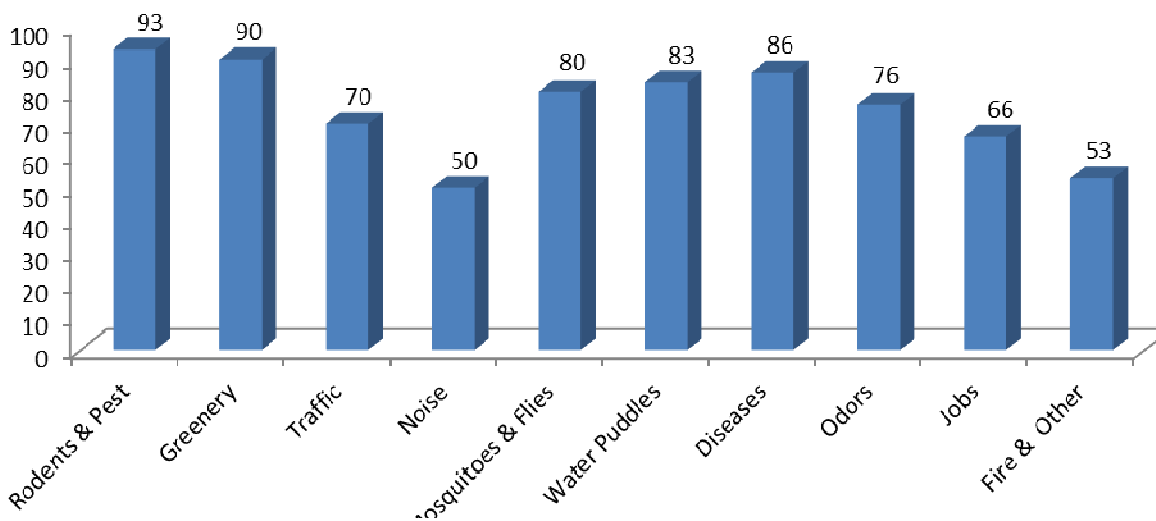


Figure-3
 Environmental Impact of Lahore compost on Residential community 2014

Conclusion

It was concluded from this study that the LCL plant does not affect the environment, Residential and other industries much. There are some issues related to black smoke and landfills that are affecting to some extent the residential and environment. These issues can be resolved by using proper post closure systems for landfill. Proper monitoring and research required to deal with the black smoke problems.

On the basis of this consultation it was concluded that Lahore Compost should place a complaint box near gate. An internal committee should be made for review meeting on the basis of complaints from stake holders.

References

1. PGEB Project (2012). Environmental and social impact assessment (ESIA). Promoting Girls Education In Balochistan Project, Secondary Education Department, Government of Balochistan, Balochistan.
2. Janssen N.A.H., Gerlofs-Nijland M. E., Lanki T., Salonen R. O., Cassee F., Hoek G. and Krzyzanowski M. (2012). Health effects of black carbon. 1-86, Copenhagen, Denmark: WHO Regional Office for Europe.
3. Haydar S., Haider H., Bari A.J. and Faragh A. (2012). Effect of Mehmood Booti dumping site in Lahore on ground water quality. *Pakistan Journal of Engineering and Applied Sciences*, 10, 51-56.

4. Ghosh S., Ow L.F. and Wilson B. (2015). Influence of biochar and compost on soil properties and tree growth in a tropical urban environment. *International Journal of Environmental Science and Technology*, 12(4), 1303-1310.
5. Lahore compost (2011). Environmental and social impact assessment of Lahore compost Pvt. Ltd. Lahore compost Pvt. Ltd, Pakistan.
6. Bridoux F. and Stoelhorst J.W. (2015). Stakeholder relationships and social welfare: A behavioral theory of contributions to joint value creation. *Academy of Management Review*, 41(2), 229-251
7. Baldock J.A. and Nelson P.N. (2000). Soil organic matter. *Handbook of Soil Science*, CRC Press, USA, B25-B84.
8. Assesment A.Q.I. (2013). Environmental and Social Impact Assessment (ESIA) for the Proposed Gamsberg Zinc Mine. Demos Dracoulides Amy Xu, CAPE TOWN, Report No GAM-AQI-R02.
9. Agamuthu P. (2006). Post-closure of landfill: issues and policy. *Waste Management and Research*, 24(6), 503-505.