



DOI: [https://doi.org/10.14505/jemt.v11.1\(41\).03](https://doi.org/10.14505/jemt.v11.1(41).03)

A Review of the Impact of Consumerism, Recycling and Pollution: Evidence from Southeast Asia: 1999 to 2019

Tinashe CHUCHU

University of Pretoria, South Africa

tinashe.chuchu@up.ac.za

Eugine Tafadzwa MAZIRIRI

University of the Free State, South Africa

MaziririET@ufs.ac.za

Lebogang MOTOTO

University of Cape Town, South Africa

lebogang.mototo@uct.ac.za

Suggested Citation:

Chuchu, T., Maziriri, E.T., Mototo, L. (2020). A Review of the Impact of Consumerism, Recycling and Pollution: Evidence from Southeast Asia: 1999 to 2019. *Journal of Environmental Management and Tourism*, (Volume XI, Spring), 1(41): 23 - 28. DOI:[10.14505/jemt.v11.1\(41\).03](https://doi.org/10.14505/jemt.v11.1(41).03)

Article's History:

Received December 2019; Revised January 2020; Accepted February 2020.
2020. ASERS Publishing©. All rights reserved.

Abstract:

Consumerism has been linked to recycling and pollution over a substantial period leading to a surge of research interest of the past 20 years. Most of this interest has focused on South East Asian countries, namely India and Indonesia, considered as having one of the most polluted capitals in the world. This therefore prompts the present study which reviewed literature on the impact of consumerism, recycling and pollution from Southeast Asia during the 1999 to 2019. The study adopted a qualitative approach in which grey literature was utilised in conjunction with industry secondary data on consumerism, recycling and pollution from selected South East Asian countries. Literature was obtained from popular databases that included Science direct, Emerald and Ebsco host. Common themes were identified, and recurring trends were noted. Numerous findings were recorded, however it stood-out that the impact of pollution across South East Asia is a challenge that continuous regardless of the efforts from the global community. In conclusion, an overall assessment was provided and further research suggestions on consumerism, recycling and pollution were proposed.

Keywords: south East Asia; consumerism; pollution; recycling.

JEL Classification: R11; Q53; P36.

Introduction

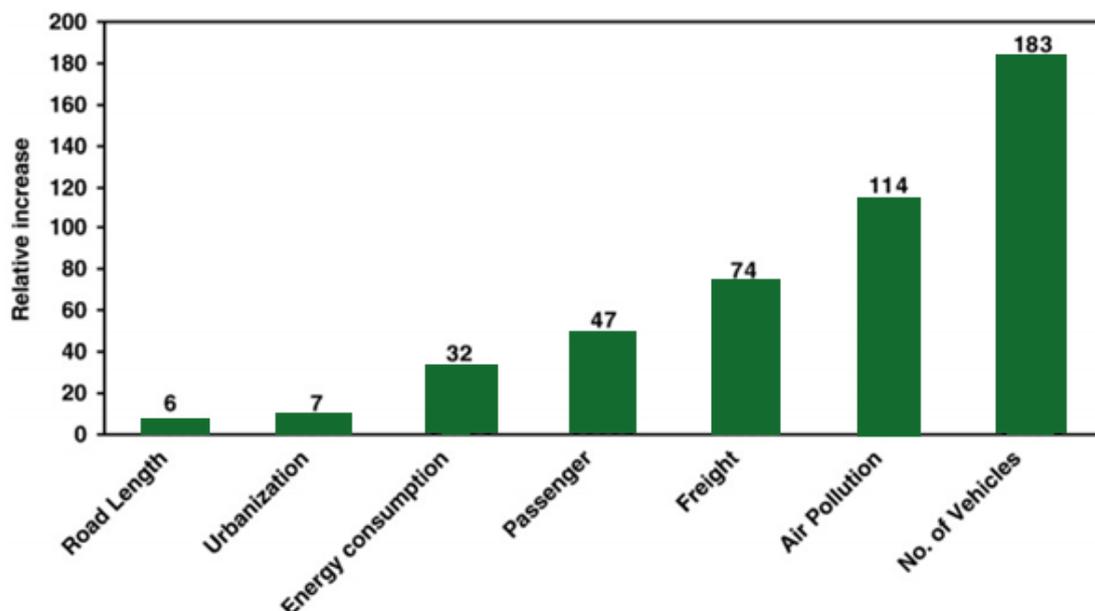
Consumerism and its impact have been a topic on interest over the decades and many researchers have investigated it (Valkenburg 2000, Han and Yoon 2015) and the ethics and dangers associated with consumerism have been explored (Doane 2001, Kramer 2006). Consumerism could generally be considered the precursor of much pollution. Air pollution in Asia is not a new phenomenon with a substantial amount of research centred on China (Pu *et al.* 2019, Peng *et al.* 2019). Jakarta, the capital of Indonesia is considered as having the most air populated city in South East Asia (The Jakarta Post 2019). In June of 2013 South East Asia was choking in a cloud of record-breaking smoke pollution. The smoke, toxic in nature was a result of fires that were intended to clear land for agriculture purposes in Sumatra (Worldwatch institute 2013). Furthermore, it was recorded that the South East Asian nation of Indonesia, exceeded almost three times the hazardous limit for air quality

(Worldwatch institute 2013). To clarify the magnitude of the problem caused by the land-clearing fires which create a transboundary haze are also the main contributor to Indonesia's overall GHG emissions (Worldwatch institute 2013). 2013 may have been the worst haze crisis in South East Asia's recorded history, but similar occurrences are common during 'haze season' every year since the 1980s (Worldwatch institute 2013). Over 50% of the plastic waste in the ocean comes from just a hand-full of Asian countries: China, Indonesia, the Philippines, Vietnam and Thailand (Ocean Conservancy & McKinsey Center for Business and Environment Report 2017).

1. Literature Review

Negative outcomes of consumerism could be countered by recycling activities. Numerous residents of developing country cities relying on recycling materials from waste for their livelihoods (Wilson, Velis and Cheeseman 2006). Some of the Millennium Development Goals on poverty alleviation explore waste strategies on improving recycling activities and most challenges are in solid waste management in developing countries (Wilson, Velis and Cheeseman 2006). It is estimated that the current ocean pollution trajectory would potential result in the world's oceans having more plastic than fish by 2050 (World Economic Forum 2016). This then highlights the challenge that is presented by consumerism and pollution not only to South East Asia but the world at large. One of Narendra Modi's (India's current prime minister) major challenges would be to tackle the high levels air pollution prevalent in northern India (The Economist 2019). The rapid rise of motor vehicle activity in India and other rapidly industrialising low-income nations has contributed to high levels of urban air pollution, among other problems that are socioeconomic, environmental, health, and welfare related (Badami 2005). The (WHO) investigated publicly available air quality data from 1,100 cities and noted Delhi as one the top 20 cities with the worst air pollution (WHO 2011). In India, congestion has long been acknowledged as an environmental problem (Guttikunda and Goel 2013). Society suffers immensely due to the worsening of congestion, air pollution and traffic accidents (Tiwari, 2002). While the growing congestion and air pollution affect all people across the different income groups, the middle- and lower-income groups suffer the most (Tiwari 2002). This so-called "middle income" group refers to people who are mainly dependent on public transport, bicycles and walking – the environment friendly modes – an ultimately experience unusually high cost of traffic accidents (Tiwari 2002). The impact of India's high pollution levels is felt across Delhi and they are a result of the fuel burning and natural (due to the meteorological setting) (Guttikunda and Gurjar 2012).

Figure 1. Description



Source: Adapted from Nesamani (2010)

Figure 1, above presents data on pollution in India taken from Nesamani (2010), presenting the various causes of emissions. The relative increase in road length by 6%, urbanisation by 7%, energy consumption by 32%, and passenger travel by 47% could be a factor in explaining how greenhouse gas (GHG) emissions has also risen in India. Additionally, the three top contributors to GHG emission were freight, air pollution and the

number of vehicles all accounting for 74%, 114% and 183% increases. Consumerism has widely been considered the precursor of much pollution on the environment across the globe. For example, the hospitality industry is noted for its large impact on the environment. The hospitality industry, the harmful effects of hotels on the environment has attracted the attention of most consumers (Chen and Tung 2014; Jones, Hillier and Comfort 2014, Han and Yoon 2015). In addition, Strong (1996) suggested that the most important challenge to ethical consumption include difficulties in acquiring information, products as well as the high costs purchasing ethically produced products.

Generally, Asia's large cities dominate lists of the most polluted (Molina and Molina 2004). In South East Asia, pollution has been discussed from various perspectives over the past few decades ranging from agriculture diffuse pollution in India (Agrawal 1999) to sulphur pollution in China (Guttikunda *et al.* 2003). Smoke that comes from land clearing fires in Indonesia has led to hazardous haze pollution in South East Asia annually (Worldwatch institute 2013). Record high levels of air pollution caused by haze were observed in June 2013 in three South East Asian nations, Singapore, Malaysia and Indonesia (Worldwatch institute 2013). Sulfur pollution was also considered significant in four megacities—Shanghai, and Chongqing in China; Seoul in South Korea; and Mumbai (formerly Bombay) in India (Guttikunda *et al.* 2003). As a result, if pollution levels were allowed to increase, over 30 million residents of these cities alone would be exposed to levels in excess of the World health Organisation's (WHO) guidelines (Guttikunda *et al.* 2003). Air pollution has become a major hazard in India and because it is now apparent that large parts of the Indian urban residents have been exposed to some of the highest pollutant levels in the world (Smith 2000). Air contamination is associated with traffic delays, noise and fumes which increases health risks to road users and residents (Guttikunda and Goel 2013). Air quality in developing countries like India has reached an alarmingly low level (Nesamani 2010). In addition, most cities across the globe have exceeded the National Ambient Air Quality (NAAQ) standards (Nesamani 2010). Transport's emissions have risen at the much greater rate than any other factor associated with GHG (Nesamani 2010). Twenty percent of poorly maintained vehicles produce about 60% of vehicular pollution in India (Pundir 2000, Nesamani 2010). Some of the antecedents of increased in vehicular emissions have been the following factors:

- the exponential growth in the number of motor vehicles
- poor public transport and inept management;
- haphazard urban development;
- Traffic congestion;
- Obsolete vehicular technology;
- Sub-standard fuel quality;
- Inadequate traffic enforcement;
- Increase in freight moved over roads (Badami 2005, Pucher *et al.* 2007, Nesamani 2010, The World Bank 2005).

Bank 2005).

Air pollution is one of the chief contributors to several respiratory problems, as it affects the whole population in general and infants are more susceptible (Siddique, Banerjee, Ray and Lahiri 2010). Exposure to automobile exhaust is linked to increased respiratory illnesses and may impair lung function in infants (Siddique, Banerjee, Ray and Lahiri 2010). Furthermore, urban air pollution is considered a serious concern throughout the world in both, developed and developing countries (Gulia, Nagendra, Khare and Khanna 2015). The poorest communities in South East Asia continue to be exposed to unacceptably high levels of atmospheric pollution and are constantly ignored (Lebel *et al.* 2007) in urban planning (Tiwari 2003, Carpenter, Daniere and Takahashi 2004, Shatkin 2004). The winters in megacity Delhi are harsh, smoggy, foggy, and highly polluted. (Guttikunda and Gurjar 2012). The pollution levels are approximately two to three times higher than those of the summer months, and the severity is acknowledged in both Delhi's health and transport department (Guttikunda and Gurjar 2012). As a result, there are regular delays at airport and numerous road accidents (Guttikunda and Gurjar 2012). Most of the major challenges that humanity is facing in the twenty-first century are related to water quantity and/or water quality issues (Schwarzenbach *et al.* 2010). Numerous problems are most likely to be exacerbated by climate change, resulting in raised water temperatures, melting of glaciers, and an intensification of the water cycle with potentially for more floods and droughts (Schwarzenbach *et al.* 2010). With respect to human health, the most direct and most serious challenge is the lack of proper sanitation and is associated with the lack of safe drinking water, which currently impacts more than a third of the global population (Schwarzenbach *et al.* 2010). Additional threats include exposure to pathogens or to chemical toxicants through the food chain such as those that result from irrigating plants with polluted water and of bioaccumulation of

hazardous chemicals by aquatic organisms like seafood and fish (Schwarzenbach *et al.* 2010). The use of pesticides in the Indian agriculture sector had positive effects on crops, however, they also brought about negative impacts like pollution to the local environment that diminished the lives of birds, wildlife, domestic animals, fish and livestock (Abhilash and Singh 2009).

2. Methodology

The present research followed an interpretive approach where secondary sources were utilised to obtain information that was critically reviewed for insights. Grey literature was used where necessary and in moderation. This was to support and re-enforce academic sources that might have not fully covered certain aspects on consumerism, recycling and pollution in the countries in question. Academic literature was obtained from popular databases that include science direct and Ebsco host. 20 studies, mainly on pollution in South East Asia, were examined, systematically presented and analysed. In addition, these studies, ranging over 20-year period from 1999 to 2019 were summarised to allow for insights and interpretation. Common themes were identified, and recurring trends were noted.

3. Findings of the Study

Numerous themes emerged from literature review. It could be said that air pollution and its effects has been a popular research theme from an Indian perspective as evident in (Carpenter *et al.* 2005, Guttikunda and Gurjar 2012, The World Bank 2015). Other popular themes that emerged were the pollutions impact of climate change (Schwarzenbach *et al.* 2010), pollution through agriculture (Abhilash and Singh 2009, Agrawal 1999). It was a popular trend that most studies reviewed in this research cited vehicle pollution as a major antecedent of the increase in GHG emissions globally. Another common associated with consumerism theme that continuously emerged throughout numerous studies (Uusitalo and Oksanen 2004), who investigated consumers' perspectives on ethical consumption while (Strong 1996) assessed factors that contribute to the continuous growth of ethical consumerism. A noticeable observation that could not be ignored was the impact of air pollution in India and the amount of literature around this topic (Guttikunda and Gurjar 2012, Lebel *et al.* 2007) in urban planning (Tiwari 2003, Carpenter, Daniere and Takahashi 2004, Shatkin 2004).

Conclusion

Possible suggestions would be to consider "Green consumerism". The term "Green consumerism" refers to the extent to which consumers display a preference toward environmentally friendly products (Clark, Haytko, Hermans and Simmers 2019, Matthes and Wonneberger 2014). This would probably be beneficial from a South East Asian context. Problems of pollution could be alleviated by improved innovative recycling methods. Overall, one could infer that pollution, not only in South East Asia is a challenge faced globally. However, this challenge is amplified to a much larger extent in developing countries. This is probably the case due to mostly weak or struggling economies in the emerging nations that still need to develop other sectors in those countries. The solution could involve cleaner energy sources such as solar use to a larger extent. Increased use of electrified motor vehicles could reduce the pollution crisis in India that has marred the nation with record breaking levels of pollution. However, this could also be an expensive option therefore non-motorised means of transportation such as bicycles could be considered more viable. The use of bicycles to reduce GHG has been successful in the western world, for example the Netherlands. In addition to non-motorised vehicles it could be proposed that the number of private vehicles on South East Asian countries be reduced or at least hire tariffs be placed on private vehicles used in the central business districts (CBD) of those cities in those countries. For example, London has been noted for high rates on private vehicles in its CBD, which has successfully led the reduction of GHG emission.

As for future research suggestions, it could be suggested that research on consumerism, pollution and recycling be done on a much wider scale rather than on just one region as of this case where only select South East Asian countries were reviewed. It is therefore imperative to conduct research on pollution from both the perspective of developed and developing countries. This would allow for comparison and provide insights on how emerging economies can tackle such problems. This research attempted to provide a much larger discussion that was not only restricted to the South East Asian region but also to other regions as the literature suggested that pollution is a global phenomenon. This has been the case for over 20 years and research has continuously explored it from differing perspectives. More research is therefore needed in order to gain a more informed comprehension of the causes and challenges associated with pollution in the twenty first century.

References

- [1] Abhilash, P. C., and Singh, N. 2009. Pesticide use and application: an Indian scenario. *Journal of hazardous materials*, 165(1-3): 1-12. DOI:<https://doi.org/10.1016/j.jhazmat.2008.10.061>
- [2] Agrawal, G. D. 1999. Diffuse agricultural water pollution in India. *Water science and technology*, 39(3): 33-47. DOI:[https://doi.org/10.1016/S0273-1223\(99\)00030-X](https://doi.org/10.1016/S0273-1223(99)00030-X)
- [3] Badami, M. G. 2005. Transport and urban air pollution in India. *Environmental Management*, 36(2): 195-204. DOI:<https://doi.org/10.1007/s00267-004-0106-x>
- [4] Carpenter, J. P., Danieri, A. G., and Takahashi, L. M. 2004. Social capital and trust in South-east Asian cities. *Urban studies*, 41(4): 853-874.
- [5] Chen, M.F., and Tung, P.J. 2014. Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels. *International journal of hospitality management*, 36: 221-230. DOI:<https://doi.org/10.1016/j.ijhm.2013.09.006>
- [6] Clark, R. A., Haytko, D. L., Hermans, C. M., and Simmers, C. S. 2019. Social Influence on Green Consumerism: Country and Gender Comparisons between China and the United States. *Journal of International Consumer Marketing*, 31(3): 177-190. DOI:<https://doi.org/10.1080/08961530.2018.1527740>
- [7] Doane, D. 2001. *Taking flight: The rapid growth of ethical consumerism*. London: New Economics Foundation, 1-16. Available at: https://b.3cdn.net/nefoundation/dcca99d756562385f9_xtm6i6233.pdf
- [8] Gulia, S., Nagendra, S. S., Khare, M. and Khanna, I. 2015. Urban air quality management-A review. *Atmospheric Pollution Research*, 6(2): 286-304. DOI:<https://doi.org/10.5094/APR.2015.033>
- [9] Guttikunda, S. K., and Goel, R. 2013. Health impacts of particulate pollution in a megacity—Delhi, India. *Environmental Development*, 6: 8-20. DOI:<https://doi.org/10.1016/j.envdev.2012.12.002>
- [10] Guttikunda, S. K., and Gurjar, B. R. 2012. Role of meteorology in seasonality of air pollution in megacity Delhi, India. *Environmental monitoring and assessment*, 184(5): 3199-3211. DOI:<https://doi.org/10.1007/s10661-011-2182-8>
- [11] Guttikunda, S. K., et al. 2003. The contribution of megacities to regional sulfur pollution in Asia. *Atmospheric Environment*, 37(1): 11-22. DOI:[https://doi.org/10.1016/S1352-2310\(02\)00821-X](https://doi.org/10.1016/S1352-2310(02)00821-X)
- [12] Han, H., and Yoon, H. J. 2015. Hotel customers' environmentally responsible behavioral intention: Impact of key constructs on decision in green consumerism. *International Journal of Hospitality Management*, 45: 22-33. DOI:<https://doi.org/10.1016/j.ijhm.2014.11.004>
- [13] Jones, P., Hillier, D., and Comfort, D. 2014 Sustainability in the global hotel industry. *International Journal of Contemporary Hospitality Management*, 26(1): 5-17. DOI:<https://doi.org/10.1108/IJCHM-10-2012-0180>
- [14] Kramer, J. B. 2006. Ethical analysis and recommended action in response to the dangers associated with youth consumerism. *Ethics & Behavior*, 16(4): 291-303. DOI:https://doi.org/10.1207/s15327019eb1604_2
- [15] Lebel, L., et al. 2007. Integrating carbon management into the development strategies of urbanizing regions in Asia. *Journal of Industrial Ecology*, 11(2): 61-81.
- [16] Lelieveld, J. O., et al. 2001. The Indian Ocean experiment: widespread air pollution from South and Southeast Asia. *Science*, 291(5506): 1031-1036. DOI:<https://doi.org/10.1126/science.1057103>
- [17] Matthes, J., and Wonneberger, A. 2014. The skeptical green consumer revisited: Testing the relationship between green consumerism and skepticism toward advertising. *Journal of advertising*, 43(2): 115-127. <https://doi.org/10.1080/00913367.2013.834804>
- [18] Molina, M. J., and Molina, L. T. 2004. Megacities and atmospheric pollution. *Journal of the Air & Waste Management Association*, 54(6): 644-680. DOI:<https://doi.org/10.1080/10473289.2004.10470936>
- [19] Nesamani, K. S. 2010. Estimation of automobile emissions and control strategies in India. *Science of the Total Environment*, 408(8): 1800-1811. DOI:<https://doi.org/10.1016/j.scitotenv.2010.01.026>

- [20] Ocean Conservancy and McKinsey Center for Business and Environment Report (2017). Stemming the Tide: Land-based strategies for a plastic-free ocean Available at: <https://oceanconservancy.org/wp-content/uploads/2017/04/full-report-stemming-the.pdf>
- [21] Peng, M., et al. 2019. Actual Air Pollution, Environmental Transparency, and the Perception of Air Pollution in China. *The Journal of Environment & Development*, 28(1): 78-105. DOI:<https://doi.org/10.1177/1070496518821713>
- [22] Pu, S., et al. 2019. Spatial distribution of the public's risk perception for air pollution: A nationwide study in China. *Science of the Total Environment*, 655: 454-462. DOI:<https://doi.org/10.1016/j.scitotenv.2018.11.232>
- [23] Pucher, J., et al. 2007. Urban transport trends and policies in China and India: impacts of rapid economic growth. *Transport reviews*, 27(4): 379-410. DOI:<https://doi.org/10.1080/01441640601089988>
- [24] Schwarzenbach, R. P., et al. 2010. Global water pollution and human health. *Annual Review of Environment and Resources*, 35: 109-136. DOI:<https://doi.org/10.1146/annurev-environ-100809-125342>
- [25] Shatkin, G. 2004. Planning to forget: Informal settlements as 'forgotten places' in globalising Metro Manila. *Urban studies*, 41(12): 2469-2484. DOI:<https://doi.org/10.1080/00420980412331297636>
- [26] Siddique, S., Banerjee, M., Ray, M. R., and Lahiri, T. 2010. Air pollution and its impact on lung function of children in Delhi, the capital city of India. *Water, Air, & Soil Pollution*, 212(1-4): 89-100. DOI:<https://doi.org/10.1007/s11270-010-0324-1>
- [27] Smith, K. R. 2000. National burden of disease in India from indoor air pollution. *Proceedings of the National Academy of Sciences*, 97(24): 13286-13293.
- [28] Strong, C. 1996. Features contributing to the growth of ethical consumerism—a preliminary investigation. *Marketing Intelligence & Planning*, 14(5): 5-13. DOI:<https://doi.org/10.1108/02634509610127518>
- [29] The Jakarta Post 2019. Jakarta has most polluted air in Southeast Asia: Study. Available at: <https://www.thejakartapost.com/news/2019/03/08/jakarta-has-most-polluted-air-in-southeast-asia-study.html>
- [30] The World Bank 2015. For a breath of fresh air — ten years of progress and challenges in urban air quality management in India (1993 – 2002). Environment and Social Development Unit, South Asia Region. India
- [31] Tiwari, G. 2003. Transport and land-use policies in Delhi. *Bulletin of the World Health Organization*, 81: 444-450.
- [32] Tiwari, G. 2002. Urban transport priorities: meeting the challenge of socio-economic diversity in cities, a case study of Delhi, India. *Cities*, 19(2): 95-103. DOI:[https://doi.org/10.1016/S0264-2751\(02\)00004-5](https://doi.org/10.1016/S0264-2751(02)00004-5)
- [33] Uusitalo, O., and Oksanen, R. 2004. Ethical consumerism: a view from Finland. *International journal of consumer studies*, 28(3): 214-221. DOI:<https://doi.org/10.1111/j.1470-6431.2003.00339.x>
- [34] Valkenburg, P. M. 2000. Media and youth consumerism. *Journal of adolescent health*, 27(2): 52-56. DOI:[https://doi.org/10.1016/S1054-139X\(00\)00132-4](https://doi.org/10.1016/S1054-139X(00)00132-4)
- [35] WHO, (2011). *Outdoor Air Pollution in the World Cities*. World Health Organization, Geneva, Switzerland.
- [36] Wilson, D. C., Velis, C., and Cheeseman, C. 2006. Role of informal sector recycling in waste management in developing countries. *Habitat international*, 30(4): 797-808. DOI:<https://doi.org/10.1016/j.habitatint.2005.09.005>
- [37] World Economic Forum 2016. The New Plastics Economy Rethinking the future of plastics. Available at: http://www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf
- [38] Worldwatch Institute 2019. The 'Burning' Problem of Air Pollution in South East Asia. Available at: <http://www.worldwatch.org/burning-problem-air-pollution-south-east-asia-print-friendly>