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Role of rumours and locals' perceptions on the level of environmental impacts of Lynas Advanced Material Plant, Kuantan, Malaysia (Article)

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Abstract

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A number of factors influence how people perceive environmental impacts of an industrial or a development project. This paper examines the role that rumours play in shaping public perceptions. It reports a study carried out in 2015 among residents living around a rare earth processing plant, the Lynas Advanced Material Plant (LAMP), in Kuantan, Malaysia. Primary data, derived from a semi-structured questionnaire-based survey of 570 respondents and interviews with experts, collated with secondary data from various sources, show that respondents generally perceived LAMP to be dangerous. However, such perception is only evident in the long-term. Estimation results reveal that those who received information from rumours perceived LAMP to be dangerous. Other variables, such as education, gender, race and socio-cultural factors, also play vital roles in influencing people's perceptions. The links between public perceptions, experts' views and data disclosure, once revealed, may inform best practice and help to better understand how the public gauge risk. © 2019 Elsevier Ltd

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[Environmental impact](#) [Lynas advanced material plant](#) [Perception](#) [Rare earth](#) [Rumours](#)

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We thank the late David William for his constructive comments in this paper. This work was supported by the International Mining Development Centre, Australia [C096]. Appendix Map 1 Studied Area – Kuantan. Map 1 Fig. 1 Distribution of General Perceptions on LAMP Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Fig. 1 Fig. 2 Distribution of Responses to Specific Perception Questions – Short- and Long-term. Fig. 2 Table 1 Calculation of Water Quality Index (WQI) Table 1 $WQI = 0.22 SI_{DO} + 0.19 SI_{BOD} + 0.16 SI_{COD} + 0.16 SI_{SS} + 0.15 SI_{AN} + 0.12 SI_{pH}$ (1) Sub-index for DO (in saturation) $SI_{DO} = 0$ for $DO < 8$ (2a) $= 100$ for $DO > 92$ (2b) $= -0.395 + 0.030DO$ 2 $-0.0002DO^3$ for $8 < DO < 92$ (2c) Sub-index for BOD $SI_{BOD} = 100.4 - 4.23BOD$ for $BOD < 5$ (3a) $= 108e - 0.055BOD$ for $BOD > 5$ (3b) Sub-index ... View all \checkmark

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