Assessing health impacts in complex eco-epidemiological settings in the humid tropics : modular baseline health surveys

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The quantitative assessment of health impacts has been identified as a crucial feature for realising the full potential of health impact assessment (HIA). In settings where demographic and health data are notoriously scarce, but there is a broad range of ascertainable ecological, environmental, epidemiological and socioeconomic information, a diverse toolkit of data collection strategies becomes relevant for the mainly small-area impacts of interest. We present a modular, cross-sectional baseline health survey study design, which has been developed for HIA of industrial development projects in the humid tropics. The modular nature of our toolkit allows our methodology to be readily adapted to the prevailing eco-epidemiological characteristics of a given project setting. Central to our design is a broad set of key performance indicators, covering a multiplicity of health outcomes and determinants at different levels and scales. We present experience and key findings from our modular baseline health survey methodology employed in 14 selected sentinel sites within an iron ore mining project in the Republic of Guinea. We argue that our methodology is a generic example of rapid evidence assembly in difficult-to-reach localities, where improvement of the predictive validity of the assessment and establishment of a benchmark for longitudinal monitoring of project impacts and mitigation efforts is needed.
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