Reviewer's report

Title: OF Disease Proportions Attributable To The Environment

Version: 1 Date: 1 November 2007

Reviewer: Annette Prüss-Ustün

Reviewer’s report:

General
Interesting/well written, timely and relevant commentary on an important public health subject.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
None

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

If I understand the authors correctly, then I guess that on page 2, paragraph 3, line 7, the total deaths attributable to the 4 risk factors (water, sanitation and hygiene; indoor air from solid fuel use; lead; outdoor air pollution - p.226, column 3 of World Health Report 2002) sum up to 4,382,000 (rather than the 3,517,000 stated in the manuscript - to check by the authors. If this is right, then the derived proportion estimated in the same paragraph (line 17) should be 6.3% rather than 5.1% (together with occupational carcinogens that makes 6.5%).

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Discretionary Revisions (which the author can choose to ignore)

1. It might be interesting to put the use of such population attributable fraction into a policy perspective. I.e. policy making is currently not always sufficiently informed by estimates in the area of environmental health, and despite their uncertainties, such estimates could well contribute increasingly to consideration of environmental risks to cancer.

2. Last paragraph of the "Conclusions": The paragraph may be softened a little. Its first sentence stating “the population attributable proportion says nothing of the actual preventability of a cause”. Although the authors are, strictly speaking, correct in their statement, the population attributable proportions point to potentially preventable disease burden, provided that feasible interventions existed or were identified. Even though effective/feasible interventions may not always exist today, they may be available in some time, in particular if research and effort focus on the area. Furthermore, in practice these proportions depend
to some extent on the methods by which they've been estimated (for example in reference [4], the working definition serving to develop the estimates has been "burden that could be avoided if risks were removed"; reference [3] for example considers the fractions attributable to the "reasonably modifiable" environment, rather than the total environment (p. 22-25), and evidence is partly based on intervention studies). So to some extent, the attributable fraction is driven by the type of counterfactual (alternative distribution of exposure), and whether or not this counterfactual can be reached in practice.

What next?: Accept after discretionary revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable