

## **Proposed National Environmental Standard for assessing and managing contaminants in soil**

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ESR does not support the proposed standard for the reasons given below.

1. We are concerned about the policy objective focus on “making the land safe for human use”. Specifically, if the land has been deemed through assessment to be safe, i.e., contaminant concentrations are below the guideline values, even considerably below, what measures will remain in place to ensure that future landowners know that the land may still have high concentrations of contaminants? (I, for one, would be most unhappy if I discovered that my plot of land was contaminated to anywhere near the extent deemed safe under this NES). Protection of human health does not equate to safe for human use – most New Zealand residential landowners would expect to be able to grow grass, if not vegetables on their plot of land (see below). ESR would like to see more than fleeting acknowledgement that the land is not fit for any use that involves plant production or animal husbandry.
2. Of perhaps even more concern, will be the tendency for regulators, seeing such high guideline values, to dismiss as trivial concentrations of trace elements (especially boron and copper) that could have disastrous environmental consequences. For example, ESR research demonstrates that, in some soils, copper at less than  $700 \text{ mg kg}^{-1}$  soil prevents the germination and growth of plants, and it is well recognised that there is a very narrow concentration window between deficiency and phytotoxicity for boron in soil at least two orders-of-magnitude below the lowest value in Table 7. What safeguards will be in place to ensure that regulators are aware of the difference between potential human health risk and environmental impact? When referring to the focus on addressing human health, to say “This focus does not detract from the important and ongoing role of regional councils to assess ecological impacts on a site-by-site basis in accordance with their functions under the RMA” (Section 2.3), gives little comfort if regulators do not know that the soil ecology is much more sensitive to contaminants than are people. We would like to see reference to documents such as the “Guidelines for the safe use of biosolids on land in New Zealand” (or equivalent), and inclusion of the contaminant table from this, so that anyone using this NES will immediately understand the difference between protection of human health and protection of the environment.
3. I note in Table 7 the first two land use categories allow for home grown produce. Further to my above comment, this is misleading, since at anything approaching the guideline for boron and copper, no produce could be taken from the land – nothing will grow. It is effectively promising something that is not attainable, which is misleading and should be omitted as a possibility.
4. Overall, we are surprised that MfE appears to be abrogating its responsibilities for environmental protection over that of protection of human health. This NES should be renamed “National Health Standard for Assessing and Managing Contaminants in Soil. A national environmental standard involving soil should be primarily concerned with environmental protection.

In summary, just because a toxicological assessment deems that human health would not be compromised by extraordinarily high soil concentrations of boron, chromium, copper, and for some scenarios, cadmium, lead and mercury, should this never be a justification for asserting that such contaminated land is fit for human use. We accept that the thresholds for soil contamination in the scenarios considered in Table 7 can be considerably higher than for agricultural land, but they should be nowhere near as high as presented in this table.