

## Regulatory decision-making for the purpose of managing land contamination

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Land contamination is a common international concern that presents a threat of degradation to vital soil resources with environmental, economical and social consequences.

Contaminated land policy provides protective legislation that allows enforcing authorities to secure the remediation of residual land contamination posing unacceptable risk to human health and the wider environment. However, the implications can be counterintuitive to the principles of sustainability and for protecting the soil as a resource.

Policy (where it exists) for managing land contamination is typically facilitated either through the provision of statutory pollutant limits or by adopting a risk-based approach. Whilst both these approaches provide a comprehensive reinstatement framework for the restoration of land quality, the assumption of 'worst-case-scenario' within the decision making process is resulting in overly designed remediation and brings into question the sustainability of such schemes.

Politically derived pollutant limits, applied to determine 'unacceptable risk' are typically in the context of the countries policy for dealing with land contamination. The risk-based approach, such as that adopted in the UK provides opportunity for consideration of a more holistic overview of intervention requirements. However, the decision-making process is impeded with the absence of policy driven, scientifically defined assessment endpoints, which are needed to confidently define and unbiasedly justify the scale of intervention required. Consequently, the translation of the political language of policy and consequential legislation into a scientific decision-making framework is a difficult process and one where regulatory decision-makers are expected to implement health and environment protection policies synergistically with those for sustainability and soil resource protection.

This presentation examines some of the challenges to UK regulatory officers in implementing a risk-based approach whilst trying to achieve sustainable decision-making that is appropriately transparent,

technical and scientifically justifiable. Could advantageous 'win-win' sustainable approaches to dealing with land contamination be achieved by adopting a more holistic approach to the decision-making process, aided by improved dialogue between policy-makers and the scientific community?

The consideration of wider, inter-related issues in the decision-making (or problem-framing) could be used to identify common objectives for developing effective socio-economic-environmentally friendly intervention strategies. This approach is also more likely to attract much more positive political and public support.

There are a number of decision-making frameworks available but which would be most effective, or are there aspects that should contribute to the development of a 'new' model, and how would this model be implemented successfully by environmental regulatory officers to aid their decision-making.

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