

Require the NZ EPA to use the Best Available Science. In Brief.



THE PROBLEM: The new Environmental Protection Authority (NZ EPA) CEO will take control mid-2026. They will inherit a hazardous-substances system that is, frequently, better at processing applications than at stewardship. A ‘fit for business’ - but not for *stewardship* operation.

But the NZ EPA is here to protect farmers, growers, the general public and the environment. It is not here to protect the chemical industry applicant and the chemical industry. But if the NZ EPA is to act to protect New Zealand, staff have to sound, up-to-date information to provide them with confidence in their decision-making. This currently does not appear to be the case.

The Hazardous Substances and New Organisms Act 1996 (HSNO) is protective and preventive, and explicitly requires precaution under scientific/technical uncertainty.

The evidence suggests that the NZ EPA’s new CEO is ‘walking into’ not one single failure but a mesh of scientifically-relevant blind spots: mixture reality, weak feedback loops from monitoring to controls, and decision pathways that treat uncertainty as a reason to withhold conclusions rather than a trigger to escalate scrutiny.

- There is no publicly documented decision pathway guiding staff on when to escalate from modified reassessment to full risk assessment, and no evidence of an internal framework that fills this gap.
- Modified risk assessments appear to be the default mechanism; comprehensive, NZ-specific risk assessments are rare and not systematically triggered by emerging science or exposure concerns.
- New Zealand lacks comprehensive pesticide use data. There is no reliable national reporting on quantities, geography, and co-application patterns.
- No contemporary understanding of chemical mixtures and ‘cocktail effects’, particularly synergistic and cumulative interactions across products, sectors, and landscapes.
- Class-based *assessments* of a single class of chemical with the same mode of action are undertaken, but the toxic risk of cumulative loading over time (the tau problem), from single chemical classes, including accumulation in groundwater, soils, and sediments is ignored.
- There may be no structured internal policy guiding the identification and regulation of endocrine disruptors, cited references suggest limited understanding and discretion.
- Staff are not routinely resourced or required to conduct systematic reviews of emerging literature to determine whether mechanistic, epidemiological, or environmental data warrant full reassessment. The *Methodology (2022)* suggests this form of inquiry is ‘discretionary’ rather than standard practice.
- Institutional support for decision-making under uncertainty appears limited. Precaution is required by statute, yet there is no clearly operationalised framework for acting where plausible evidence of risk exists.

Hazardous substances behave differently depending on formulation, geography, cumulative exposure history, and biological vulnerability, yet these contextual factors are not consistently integrated into assessment practice.

THE SOLUTION: A Reform agenda for the NZ EPA and the new CEO:

1. **Build a funded *stewardship intelligence* function:** Establish a permanently funded internal unit responsible for continuous horizon scanning, systematic evidence review, uncertainty characterisation, and maintenance of transparent evidence registers.
2. **Appoint a Senior Integrated Pest Management and Resistance Ecology Adviser at a principal scientist level** with deep expertise in IPM, weed/insect ecology, and resistance evolution.
3. **Hard-wire mixtures and cumulative exposure into routine practice:** Move beyond single-substance assessment as the default. Embed class-based grouping, mixture prioritisation, and cumulative loading analysis into standard operating procedure.
4. **Create an operational precaution framework under HSNO:** Publish a clear internal decision pathway specifying how precaution is to be applied when uncertainty is material.
5. **Build monitoring-to-regulation feedback loops:** Create formal pipelines linking groundwater, soil, surface-water, and residue monitoring to regulatory action. Where pesticides are detected persistently or cumulatively, this should automatically feed into exposure reassessment and control review. Monitoring data must become a decision trigger, not a passive archive.
6. **Require comprehensive pesticide use reporting and exposure-relevant data collection.** Responding directly to the documented scarcity of pesticide usage data in New Zealand, establish a national pesticide reporting and analysis system.
7. **Enable routine scoping of global scientific literature.** Provide staff with resources, training, and digital tools (including AI-assisted evidence synthesis) to systematically review peer-reviewed literature on persistence, bioaccumulation, mechanistic toxicity, endocrine effects, and long-term environmental fate.
8. **Modernise endocrine disruption governance.** Develop policy direction that extends beyond traditional EATS pathways and integrates developmental and neurodevelopmental vulnerability, non-monotonic dose science, and new approach methodologies (NAMs).
9. **Re-orient ‘reassessment’ toward New Zealand exposure reality:** ensure reassessments are not primarily constrained by the overseas position plus the industry claim, but are reconciled with NZ use patterns, local receiving environments, and (where absent) targeted monitoring/biomonitoring that makes risk characterisation real. Glyphosate is the obvious test case for this shift.