PSGR

Physicians & Scientists for Global Responsibility

Oral transcript: Inquiry on the Natural and Built Environments Bill: Parliamentary Paper.

September 6, 6pm

FACEBOOK LINK HERE 3:24:

Environment Select Committee members in attendance:

Eugenie Sage, Rachel Brooking, Anahila Kanongata'a-Suisuiki Tangi Ukitere, Angie Warren-Clark, Nicola Willis, Scott Simpson, Simon Court, Tamati Coffey

Physicians and Scientists for Global Responsibility New Zealand Charitable Trust (PSGR)

Jodie Bruning

Link to original PSGR submission HERE

Kia ora – Thank you for this opportunity - it's cocktail hour and I'm here to talk about chemical cocktails.

Pollution is the defining issue of the 21st Century yet pollution is a dirty word in Aotearoa.

We don't have a policy for it. We don't have an overarching – umbrella - strategy that outlines what pollution is and who the dominant drivers are. In comparison European and UNEP policy and white papers describe pollution as the crisis that it is and highlight the persistence and harm from increasing levels of manmade synthetic chemicals.

Without recognising pollution, the Natural and Built Environments Bill is destined to replicate the failures of the RMA. This is why PSGR want the Parliamentary Commissioner for the Environment to review pollution policy in the European Union and explore how European policy might more effectively protect ecosystem resources and human health – the national interest - before any further work is undertaken on this Bill.

But, you say, all this work has been done in New Zealand, we have National Environment standards – and environmental limits.

The current standards as limits look at water quality and nutrient levels – synthetic chemical parameters are outside the scope.

Take the Parliamentary Paper. The only emissions discussed - are greenhouse gas emissions. The paper discusses protection of the environment – within environmental biophysical limits – from within the National Planning Framework. They are 'framed as a minimum acceptable state of an aspect of the environment, or a maximum amount of harm that can be caused to that state'. Biophysical limits at this stage identify a degraded system – not the cause of the degradation.

National Environment Standards test for nitrogen and phosphorous. Yes! Critical. But - the other Freshwater National Environment Standards identify water quality, but they do not identify the drivers – vectors of pollution – persistent synthetic compounds that accumulate in the environment, and are dispersed from manufacturing industries, forestry, agriculture and through wastewater and biosolids releases.

When officials refer to water contamination - they refer to nutrients, sediments and pathogens. National Science Challenge scientists test for the National Environment Standards limits, not synthetic chemical pollution.

Members, the rhetoric – the narrative - is captured. It fails you. We all know how political this environment is. This Act needs to structure a safe place for long term systems-based science.

Members – without investment in environmental and human health science to conduct a high level assessment of manmade – anthropogenic - chemical pollution emissions which explore toxic synergies and evaluate bioaccumulation over time - there can be no feedback to the public, to industry nor to elected officials. We will never know which synthetic chemical pollutant inputs push ecosystems to collapse. Only that the ecosystem has collapsed.

Neither the RMA nor this proposed bill – makes a safe space for this public good science.

This environment is intensely political because it effects powerful industries. What makes it harder is that the health of your favourite swimming hole, the health of a foetus, toddler or tuna – is exceptionally variable. There is no single repeatable point when a soil, water, invertebrate or human biome becomes dysbiotic and starts to degrade beyond repair.

This science needs a safe place because it will always be ambiguous, uncertain & complex. Regulation of hazard often requires an amount of science that becomes a weight of evidence – and it requires the precautionary principle at a high level. This does not exist in Aotearoa in 2021. The fragmentation of science in Aotearoa, the relative isolation of the few scientists working in this area, ensures there can be no debate that can effectively act for the public interest when there is ambiguity, uncertainty & complexity – because no-one can counter industry power.

The ESR groundwater monitoring work is excellent. But no-one is looking at the real-life implications of the accumulating pesticides in groundwater – the impact of the toxic triazine group, in local drinking water supplies. for example. Do we value forestry more than local drinking water? Cawthron's work is great – perhaps $20 million over ten years, but it is short term and it is only one research project. Pesticide sales are at least $350 million *annually*, plus the chemicals emitted from ongoing releases from industry, wastewater and biosolids releases to land. This is science austerity.

Such work is rare, other National Science Challenges work pursues the more politically palatable National Environment Standards parameters.

We lack feedback loops, and data to identify the costs to ecosystem resources. The current ignorance cascades down through public institutions.

The NZEPA rely on a thousand different modelling scenarios without making one request for real life monitoring in the NZ environment. They ignore the toxicity of the formulation, the common mixtures and the bioaccumulation in water. Their science is Pākehā science - tīkarokaro science.

Regional councils have responsibility for discharges – but are driven by economic imperatives. The current national environment standards tell RCs nothing about what is driving the water degradation.

Without evidence the new water regulator - Taumata Arowai will struggle.. There is no biomonitoring, we're not looking at biomarkers, no ecotoxicological work is being done –Regulatory impotence is driven by systemic ignorance.

In our submission PSGR discuss the industry efforts to keep pollutant chemicals out of biosolids guidelines, the failure to have a policy on endocrine disruptors and NZEPA administrative quirkery around glyphosate - resulting in a failure of the responsible EPA committee to even convene to discuss whether $14 billion payouts by Bayer to cancer victims might be considered new information.

Systemic ignorance not only results in under-regulation – it fails to provide the impetus for truly dynamic technologies that are in demand globally.

Without recognising the threat to drinking water, we won't click that synthetic chemical pollution is a major, major threat to global drinking water – and that the country who leads technology in stripping hormone disrupting chemicals out of drinking water at scale, and accelerating degradation using green chemistry – is going to make a lot of money. Meaningful innovation to address the SDGs is unlikely without regulation.

I've heard scientists dismiss the European Union approach, preferring Aotearoa to follow a polluter pays principle. European approach of 'regulate and compensate' is very different to our operating environment in New Zealand – Europe has stringent water quality guidelines, applying both carrot and stick. Europe engages much more scientific research. We don't regulate here. Only nitrogen, after decades of squabbling.

And European banned substances accumulate in our environment. We don't have a line of sight between the toxicity of the substance, the presence in the environment and regulation. Cost benefit analysis keep forgetting the value of protection of ecosystem resources.

In Sweden the pesticides monitoring program in surface waters is performed in parallel with the program for environmental monitoring of nutrient losses from agriculture.

Post-registration monitoring of pesticides simply doesn't happen.

In this environment, the replacement RMA must fail. Because the drivers of pollution go unrecognised.

The PCE referred to the 'no shortage of high-level strategic statements supposed to inform research' but has released papers expressing dismay regarding our poor and fragmented state of environmental research.

Sir Geoffrey Palmer has often commented on the absence of resourcing to support monitoring, and the unintegrated nature of so-called stewardship.

But can I just be uncouth for a second, the absence of scientific resourcing means that no-one gets up to their nuts in guts. No-one is doing the tough work to recognise what has been referred to as uncomfortable knowledge – the politically unpalatable knowledge that can untangle wicked problems, and produce the political environment amendable to regulation.

There are big powerful industries that do not want this work done. Through lobbying, financing of industry sectors and political parties and persistent PR, powerful industries act to maintain doubt that the emissions of their chemicals cause harm. Without a safe basic science enterprise, there can be no protection of health and environment.

As intelligent curious but time poor MPs, it's inordinately difficult to recognise the nuances

I'm going to quickly reel off some of PSGRs suggestions:

(1) We recommend the PCE undertakes an in dept review of the European framework to transition to a pollution free planet. In addition to this, I personally recommend that the PCE explores how states have

individually leveraged European policy and used EU policy as an authoritative source to secure political consent to undertake changes at the state level.

(2) The precautionary principle must sit at a high level in the future Act, such as in the 5(2) to achieve the purpose of the Act. .. because of those key challenges I mentioned earlier - uncertainty, ambiguity and complexity – without the PP at a high level and a developed and nuanced understanding of hazard – every decision will default in favour of economic arguments, as currently occurs.

(3) Regarding the proposed legislation contained in the Parliamentary Paper,

- it is of critical importance that the word health locks in with wellbeing. Health and wellbeing.
- Protection must be situated at a high level in the Purpose of the future Act
- We consider novel entities and harmful novel entities can have a definition in Interpretation section. This enables legislation to capture risk from manmade-novel organisms (See Steffen et al 2015)

(4) We must name sector emittors blandly ignore them: Agriculture, industrial & manufacturing, urban stormwater, urban wastewater and biosolids and from public sector activities such as contracted roadside and train line spraying.

Transparency and accountability are integral to maintaining trust in policy and decision-making. Scientific security to engage in long term research - is especially required in politically controversial environments, such as when identifying pollutants that are harmful to health.

The science is really exciting. Biomarker screening. New omics technologies which can show the effects of environmental exposures on the metabolic profile of whichever organism you want to select. It can identify endocrine disruptors in wastewater. High resolution mass spectrometry can measure tens of thousands of chemical signatures in tissue. There is no excuse to not implement these technologies to protect human and environmental health in Aotearoa in 2021.

These papers were forwarded as Supplementary Submissions to PSGR's submission and this afternoon's oral presentation.

1. European Commission (2020): Environment Action Plan to 2030. Brussels, COM(2020) 652
2. EC (2020) Chemicals Strategy for Sustainability towards a toxic free environment
3. EC (2020) Drinking Water Directive 2020/2184: on the quality of water intended for human consumption
4. EC (2021): Pathway to a Healthy Planet for All EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil' SWD(2021) 140.
5. EC 2021 ECHA Communication: Request for support to the impact assessment on the planned revision of the REACH Regulation
6. PSGR & Soil & Health (2019) Aotearoa/New Zealand Policy Proposals on healthy waterways: Are they fit for purpose. ISBN 978-0-473-50130-3
7.Boye et al 2019 Long-term Data from the Swedish National Environmental Monitoring Program of Pesticides in Surface Waters
8. EEA (2019): Healthy environment, healthy lives: how the environment influences health and well-being in Europe
9. EEA (2019): Action needed to tackle mixture effects In addition please add the following from online sources:
10. UNEP 2019 Global Chemicals Outlook II: From Legacies to Innovative Solutions
https://www.unep.org/resources/report/global-chemicals-outlook-ii-legacies-innovative-solutions
11. Parliamentary Commissioner for the Environment. November 2019. Focusing Aotearoa New Zealand's environmental reporting system

12. Parliamentary Commissioner for the Environment. A review of the funding and prioritisation of environmental research in New Zealand