

to the committee,

The London Protocol was a response to the UK being the world's largest oceanic radioactive waste dumper. It is the reason Greenpeace was targeted by state sanctioned domestic terrorists/agent of the state. Their opposition to oceanic rad waste dumping made them a high profile target.¹ It is worth reviewing IAEA-TECDOC-1105 & IAEA-TECDOC-1776 regarding radioactive waste disposal at sea. In the early days of nuclear reactors, empires would just dump entire reactor cores into the ocean. Notably Australia has not declared inventory to the IAEA. Cabinet and Defense historians and archivists should be consulted as a part of this inquiry. Oral histories should be invited and considered for further discovery. Attempts should be made to determine if any oceanic rad waste has been dumped by Australia so that this can be officially declared and included in international inventories.

I like the French and German preferred concept of simply using a drilling rig to drill a 5km or so dry borehole then dropping vitrified waste down it. Send it to hell. The drilling technology is 50 years old. For political reasons their governments prefer a 'retrievable' option instead of making it very hard to easily retrieve nuclear waste. Australia should seek to acquire and develop deep well exploration technology. If not as a convenient excuse to dump rad waste then there are also potential geothermal power generation possibilities and a wealth of hydrogen gas —more than we could hope to generate through using renewables to split water— beneath the granite transition layer.

Deep sea oceanic disposal of low to intermediate level waste is a viable disposal option. In a hospital setting, "Most of the radioactive waste is liquid."² I propose building a new fleet of one-way naval transport vehicles. TransUranic and Radioisotope Diposal System vessels will be sent on a one way journey deep into the Pacific where they will scuttle, dropping to a deep sea bed for the benefit of future archeologists and phytoplankton. there is an environmental benefit and it could constitute a marine geoengineering activity, such as ocean fertilisation, for scientific research. No significant light penetrates the deep ocean. phytoplankton therefor can rely on the photoelectric effect from ionizing radiation to survive.

Deep sea disposal and deep well disposal are the only viable and sensible options for permanent rad waste. It is very difficult for scrappers and thieves³ to dig deep wells and dive kilometers deep into the ocean rendering them safe from a major cause of the unintentional dispersal of rad waste in populated centres. People will steal a slightly radioactive pencil as a souvenir from an old nuclear physics department.

1 Greenpeace.(1978) Action against Dumping of Nuclear Waste by GEM. Shoot GP0STO4G. 07/01/1978. <https://media.greenpeace.org/Detail/27MZIF2IMKS9>

2 Khan S, Syed A, Ahmad R, Rather TA, Ajaz M, Jan F. Radioactive waste management in a hospital. Int J Health Sci (Qassim). 2010 Jan;4(1):39-46. PMID: 21475524; PMCID: PMC3068798.

3 International Atomic Energy Commission, The Radiological Accident in Goiania (Vienna, Austria:IAEC, 1988), 13, 21.

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