

Emerging Priorities Project Final Report released

Emerging Priorities Project Final Report has been produced by Clean Ocean Foundation with federal funding. The report, a community driven project, builds on the National Outfall Database (NOD) that researched pollution from Australia's 194 domestic outfalls from 2015 onwards, with the overall purpose being to provide decision makers and communities with reliable information related to the impact of outfall pollution on the marine environment.

Preliminary investigation

In the report, key issues requiring further investigation were studied, including pilot research into inland river treatment plants and industrial outfalls. These investigations were undertaken with the consideration of benchmarks in reporting of water recycling, standards for reporting of outfall discharge and a preliminary investigation into emerging contaminants of concern (e.g. plastic microfibre and forever chemicals such as PFAS) discharged from wastewater treatment plants.

Shocking lack of information

COF CEO John Gemmill says, "I think the public would be shocked at just how difficult it is to get an accurate picture of every pollutant we dump into our oceans and rivers from both domestic sewage and industrial pollution sources."

Community driven demand for more Transparency

"Driven by a community expectation for better environmental outcomes and a need for greater understanding by decision makers, the NOD and the Emerging Priorities Project has lifted the lid on some of the challenges we face related to outfalls and pollution in Australia.

More questions need to be answered

"This is the culmination of five years of hard work by Clean Ocean Foundation and its associates. We are proud of the high-quality collaborative research that has significantly advanced understanding of the traditionally obscure and complex area of wastewater discharges. Our research however raises more questions than it answers in relation to environmental protection. It is the first step on the road to better outcomes for the community and our rivers and coastlines through increased transparency."

Continued research in doubt

With the project funding ending this year, the National Outfall Database and its ground-breaking work face an uncertain future. "We are hopeful of receiving support for the project to continue and talks are continuing with the various stakeholders. It would be an absolute shame for the expertise and greater transparency created by the NOD to be lost, but at this stage there are no firm commitments so we will just have to wait and see."

Innovation and Freshwater thinking

As a result of research, Clean Ocean Foundation has also produced an independent study that has identified billions of dollars of net benefits from the adoption of a national approach to water recycling. This approach would also eliminate much of the ocean pollution being dumped into the ocean from domestic outfalls.ⁱ These findings are incorporated in their National Outfall Upgrade Strategy.ⁱⁱ

Some key findings:

Water recycling does not always lead to better environmental outcomes

Only thirty five percent of all water recycling activities conducted by water authorities surveyed result in any reduction of pollutant loads released to the environment. ⁱⁱⁱ

Most Water Treatment Authorities have no firm goals for water recycling

The project found that although fifty percent of water treatment authorities (WTAs) indicated their wishes to consider a circular economy approach to their operations, ninety percent were unable to set clear five- or ten-year goals for water recycling. ^{iv}

Location of Industrial Outfalls and their impact on ocean and catchments difficult to assess

The lack of accessibility and coherence in information related to industrial discharges across Australia is concerning. There is the NPI (National Pollution Inventory) and each state has some level of information provision, but data in relation to catchments and coastal pollution is difficult and time consuming to evaluate - that is, if it exists, in any meaningful way.

Less than 25% of Water Treatment Authorities test for Emerging Contaminants or microplastics

Numerous studies have suggested that WWTPs are the main source of polyfluoroalkyl substances (PFASs) and plastic microfibres in surface water and biosolid waste. The project found that less than 25% of WTA test for PFAS and microplastics in their effluent stream and this data is not easily accessed by the public.

Over 15 million tonnes of nutrients lost to coastal waters

Australia's 194 domestic outfalls discharged at least 15 million tonnes of nutrient into coastal waters around Australia in the 2019/2020 year. ^v

214 Inland River Outfalls in NSW with discharges

NSW inland riverine systems. 214 outfalls were operated by 94 separate authorities and the quality of water and other parameters specified for discharge varying considerably, with many discharges that would not meet the criteria for even low-quality water recycling. Over 100 have no faecal coliform discharge limits and in many instances the exact physical location of the discharge point is not available. ^{vi}

Unplanned potable use occurs for Sydney's water catchment

Building on the results of research, Clean Ocean Foundation also found that unplanned potable use (wastewater being recycled as drinking water) occurs in Sydney's water supply from 7 sewage treatment plants that discharge into Warragamba Dam's catchments. This is known anecdotally to also occur in several states. ^{vii}

Report is freely accessible and can be downloaded here:

<https://www.cleanocean.org/microplastic-emerging-pollutants-and-water-recycling.html>

ⁱ <https://www.cleanocean.org/2019-upgrading-australias-outfalls.html>

ⁱⁱ <https://www.cleanocean.org/nous-2030.html>

ⁱⁱⁱ p23 <https://www.cleanocean.org/microplastic-emerging-pollutants-and-water-recycling.html>

^{iv} p21 <https://www.cleanocean.org/microplastic-emerging-pollutants-and-water-recycling.html>

^v p9 <https://www.cleanocean.org/microplastic-emerging-pollutants-and-water-recycling.html>

^{vi} p32, 35 <https://www.cleanocean.org/microplastic-emerging-pollutants-and-water-recycling.html>

^{vii}

https://www.cleanocean.org/uploads/1/0/6/6/106603015/stps_and_warragamba_drinking_water_catchment.pdf