

Contribution of the Pacific Community to the first part of the United Nations' Secretary-General's report on "Oceans and Law of the Sea" pursuant to General Assembly draft resolution LOS/SGR/2016: covering "marine debris, plastics and microplastics"

15 January, 2016

The SPC plays a peripheral role in addressing the issue of marine debris, plastics and microplastics, as the Secretariat of the Pacific Regional Environment Programme (SPREP) is the Pacific agency with the mandate for this issue. In saying this, SPC has run collaborative projects with SPREP in the past, such as the "Think don't Throw" campaign in 2001/2002 to raise awareness in the Pacific at all levels on the discarding of rubbish, especially plastics, oils and fishing gear, from boats, and the negative impacts on marine resources and the marine environment.

In regard to the current request, three areas are highlighted: (i) challenges posed by marine debris, plastics and microplastics; (ii) actions and activities that have been undertaken by the organisation; and (iii) suggestions for further action to prevent and significantly reduce marine debris, plastics and microplastics. The SPC response will mainly focus on the issues or challenges with some discussion on possible approaches to address these, given the main responsibility in the Pacific region rests with SPREP.

Drifting fish aggregating devices (FADs): The purse seine fishery in the western and central Pacific Ocean (WCPO) deploys up to 80,000 drifting FADs per year to assist their fishing operations. The FADs themselves consist of a surface buoy system, usually plastic drums, with a range of "attractors" or "aggregators" hanging below the buoys, some to depths of 50 metres in the water column. The aggregators in many cases are old pieces of purse seine netting, made from synthetic materials. Most drifting FADs have a radio beacon attached so the drift of the FAD can be monitored and the FAD located. It is believed that most of the FADs are not retrieved at the end of the fishing season, but allowed to continue drifting as marine debris, and some wash up on the reefs of Pacific countries, with the aggregators tangling on the coral reefs. Regional agencies are looking into the issue, but it is unclear what will be done to address the increasing numbers of these drifting FADs that are now considered marine debris.

Discarded and/or lost fishing gear: This is an ongoing issue that has had many meetings in the past to try to address it, yet it remains an issue today. Concerns around "ghost fishing" and the entanglement of marine species, including endangered species such as turtles, continue, and it is almost impossible at present to locate the source of the lost or discarded fishing gear. FAO is convening a group of experts in April 2016 to look at the marking of fishing gear to address this issue, so that lost or discarded gear can be traced back to the source. This is a good initiative and one SPC staff person has been invited to participate in these consultations.

Deep-sea minerals extraction: Microplastic debris has become a pertinent marine topic and the deep sea has recently been indicated as a potential 'sink' for microplastic debris by Woodall *et al* (2014), who estimate that 4 billion plastic microfibrils per km² are present in Indian Ocean seamount sediments. The interaction of deep-sea mining on settled microplastics has not been studied, though it is not currently considered an operational challenge. While the effects of larger plastic fragments have been studied (entanglement and ingestion etc.), there are limited studies on



the biological effects of microplastics in deep-sea sediments. Once biological effects become known, the cumulative impacts of microplastics and deep-sea mining may become of interest.

Lost shipping containers: There appears to be an increasing number of reports of offshore vessels hitting unseen objects in the water, with the most likely explanation being lost shipping containers that have not sunk, but are suspended in the water column close to the ocean surface. The number of lost and potentially dangerous containers near the sea surface is unknown, and locating this is very difficult. This is an increasing problem what needs to be addressed.

Discarding of rubbish/plastics by any vessel: While there are MARPOL requirements for merchant shipping, smaller craft (commercial and pleasure) in many countries are not covered by this. SPC in the past has run a campaign to raise awareness of the issue of discarding rubbish, especially plastics in many different forms, when at sea. This is an ongoing issue as the number of small craft increases, which potentially may increase the discarding of rubbish when at sea, and more effort is needed to raise awareness of those who head to sea, to retain their waste or rubbish and bring this back to shore for disposal. To assist this process, rubbish facilities at boat ramps, marinas and main mooring or anchoring locations will allow easier disposal and possible encourage people to retain their rubbish when at sea and dispose of it onshore. SPC would be keen to work with SPREP and other partners in this area to raise awareness.

Land-based debris and plastic entering the marine environment: Much of the marine debris in the Pacific, especially plastics, is generated from land-based locations, such as rubbish dumps that are located close to the coast, or from picnic areas close to the coast or at beaches. Plastic bags are easily picked up by the wind at rubbish dumps and scattered widely, into rivers, bays and into the ocean. Poorly placed rubbish dumps located on the coast can have rubbish washed away by high or “king” tides, rough weather or extreme weather events, with plastic bottles, bags and diapers amongst the rubbish washed into the marine environment. For rubbish dumps, more planning is needed to locate these away from the coast, and possibly have fences around them to reduce the dispersal of plastic bags picked up by the wind. For people leaving their rubbish on beaches to be washed away, an awareness campaign may assist as well as having waste disposal facilities close by as suggested in the previous issue. Again SPC would be keen to work in partnership to address this issue.

The above covers what SPC sees as the big issues or challenges in regards to marine debris, plastics and microplastics, focusing on the man-made factor rather than natural marine debris, such as drifting logs and vegetation that is washed out to sea. SPC is more than willing to partner with SPREP and other agencies in an effort to reduce marine debris, plastics and microplastics to provide a healthy ocean environment for future generations of Pacific Islanders.