A PLACE FOR COMPARATIVE LAW IN ADDRESSING MARINE ENVIRONMENTAL DAMAGE

Sue Farran*

In the Solomon Islands case of Raeboy v Ever Grow Corporation Ltd*, which involved the sinking of a tug-boat with consequent loss of its cargo, fuel and oil, the Judge said "The environmental loss is more difficult to calculate in the absence of similar awards in adjacent jurisdictions…". In this paper, Professor Farran considers the gap that this suggests there is in the law of Pacific countries. This article considers the legal tools available to Pacific island countries.*

Dans l'arrêt Raeboy c Ever Grow Corporation Ltd*, (Îles Solomon), statuant sur les conséquences environnementales d'un naufrage au cours duquel un remorqueur avait perdu sa cargaison, son carburant et son huile, le magistrat en charge du dossier devait déclarer qu'en l'absence de référence jurisprudentielle antérieures, il lui était difficile d'évaluer les réparations d'un tel préjudice.*

Dans cet article, le professeur Farran souligne combien le droit interne des petits États insulaires du Pacifique, est en matière de réparation de dommages environnementaux, en profond décalage avec les normes du droit international.

Après avoir dressé une liste de ces normes, l'auteur à la lumière d'un exercice de transposition fictif, démontre que leur mise en oeuvre aurait pu être de nature à aider le magistrat pour rendre sa décision dans l'affaire Raeboy.

I INTRODUCTION

Many small states with maritime boundaries experience the problem of marine vessels colliding, being wrecked or causing pollution due to human or natural causes. The Solomon Islands case of *Raeboy v Ever Grow Corporation Ltd*,[1] provides an

* Professor of Laws, Northumbria University; Associate, Centre for Pacific Studies, St Andews University, Scotland.

1 [2018] SBHC 16; HCSI-CC 246 of 2016 (31 January 2018). This is an unreported case but available on Paclii.org. All cases cited here are available on the Paclii website.

example of such an incident. The facts are succinctly given in the case: "On or about 7th October, 2015 around 2:00am, the Defendant's Tug Boat MV Target 9 which at the relevant time was towing a Barge loaded with its logging machineries and equipment including round logs, fuel and oil wrecked on the reef off the Mijanga Point. The wreckage resulted in the Barge continuously hitting the reef and sunk within minutes with everything on board." It was accepted that environmental damage had been caused to the eco-systems, marine life, coral reefs and coastal area and economic loss due to the impact on diving-tourism and fishing. The question for the court was the assessment of those damages. From the perspective of this paper, the interesting point is the observation by Brown, J: "The environmental loss is more difficult to calculate in the absence of similar awards in adjacent jurisdictions, PNG or Vanuatu for instance …." This suggests that there may be a gap in domestic law across the region.

There are many international conventions relating to different aspects of pollution and prevention, and more generally to the sea and marine resources, but there would appear, from Brown J's comment, to be an absence of specific provision, which might be used in domestic circumstances. Although marine pollution is a daily occurrence, ship collisions, wrecks or major oil spills are less frequent. The *Raeboy* case suggests that this might be an area where a comparative approach could have been employed. This article considers the legal tools available to the island states of the Pacific and the extent to which these might have been useful to Justice Brown.

II CONTEXT

Media attention regarding the polluting effects of collisions at sea is usually reserved for large vessels carrying oil or other pollutants,[2] or oil rig disasters.[3] Given the expanse of the Pacific Ocean and smallness of many of its islands, the occasional collision or wreck might not feature very large in the global scheme of things. Yet the Pacific is home to one of the largest marine dumps of military vehicles and equipment.[4] There are also estimated to be over two hundred[5] shipwrecks in the

2 For example, the Torrey Canyon 1967 and the Exon Valdez 1989.

3 For example, the Deepwater Horizon oil rig which sank in the Gulf of Mexico in 2010.

4 It is estimated, for example, that in the seas off Million Dollar Point in Vanuatu, the American military dumped tons of equipment, rather than go to the expense of taking it home after the end of the Second World War. American aircraft were dumped off Kwajalein Atoll in Marshall Islands, and Truk (Chuuk) Lagoon in the Federated States of Micronesia is the site of wrecks of over 40 Japanese ships and 250 Japanese aircraft.

5 The combined number of wrecks in the region is hard to calculate. Michael Field writing in 2002 refers to a figure of "more than 1,000" but this includes those around Philippines and off the Australian coast. Michael Field, "World War 11 shipwrecks turning into Pacific environmental

Pacific Ocean.[6] Many were casualties of war in the Pacific, but some reflect a much earlier period of colonial encounter such as the SMS Eber, a German ship sent in 1887 to assist the German colonial enterprise in the Pacific. Damaged by a cyclone she sank at the edge of the harbour in Apia, Samoa with the loss of 73 crew.[7] Even earlier voyages are reflected in wrecks such as that of the Argo in the early 1800s[8] off the south east coast of Fiji, and the Pandora – the ship sent to search for the Bounty mutineers[9] – which was wrecked on the Great Barrier Reef of Australia in 1791.

As intimated in *Raeboy v Ever Grow Corporation Ltd*, today many of these wrecks provide tourism dive sites.[10] However, while early wrecks of ships built largely of wood broke up easily, later vessels constructed of iron and steel have taken longer to disintegrate and it is increasingly being recognised that as these vessels deteriorate the risk of pollution from fuels and sunken cargoes, and the consequential environmental damage, rises. Indeed the Council of Europe Parliamentary Assembly published a paper in 2012 that stated that: "Shipwrecks, ocean acidification and the dumping of waste into oceans are among the biggest sources of marine pollution."[11] It went on to state that "without maps charting these risks, no accurate assessment of the threat can be made. An inventory of potentially polluting wrecks was compiled by Environmental Research Consulting (ERC) in 2004. This International Marine Shipwreck Database has identified some 8,569 potentially polluting wrecks around the world …".[12] The threat of pollution from wrecks, either of recent origin, as in the case of *Raeboy*, or from historical sites, is therefore of global concern but has particular resonance for islanders. As Dame Meg Taylor has said:[13]

---

threat" 15 November 2002, ThingsAsian <http://thingsasian.com/story/world-war-ii-shipwrecks-turning-pacific-environmental-threat> accessed 21/09/2018.

6 Moreover, more continue to be found. See for example the recent discovery of the wreck of USS Juneau off Solomon Islands in March 2018.

7 The same cyclone sank three United States warships and one further German warship.

8 The exact date is disputed. One of the survivors is reputed to have instigated the Sandalwood trade between Fiji and China after spending two years on Vanua Levu.

9 Some of whom settled on Pitcairn in the Pitcairn Islands.

10 See for example the "Cooleridge" off Espiritu Santo, Vanuatu.

11 Parliamentary Assembly "The environmental impact of sunken shipwrecks" Resolution 1969 (2012) <http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=18077&lang=en> accessed 9/11/2018.

12 Above n 11.

13 Dame Meg Taylor "A Sea of Islands: How a Regional Group of Pacific States Is Working to Achieve SDG 14" UN Chronicle, Volume LIV Nos 1 & 2 2017, 1 May 2017.

> Ninety-eight per cent of the area occupied by Pacific Island countries and territories is ocean .... The Pacific Ocean is at the heart of our cultures and we depend on it for food, income, employment, transport and economic development … . The ocean unites and divides us. It connects and separates us, it sustains us and, at the same time, can be a threat to our very existence.

The initial impact of polluting incidents may be local, but a national or domestic response may not be the answer. Justice Brown's search across the region for a possible answer is indicative not only of the potential value of a comparative approach, but also of a regional approach. The latter is significant because of the increasing emphasis on regional initiatives, especially as regards the seas that "divide and unite" Pacific islands. What then are the legal tools available to address the harms arising from marine pollution?

III LEGISLATION AND CASES

A International Conventions

At a global level, there are a number of international treaties, conventions and declarations governing the seas and the marine environment and its resources. Included among these and relevant to this paper is the Declaration on the Human Environment (the Stockholm Declaration) and its related Action Plan which were adopted by the UN Conference on the Human Environment in 1972. Similarly Agenda 21, which arose from the Earth Summit in Rio de Janeiro in 1992, included in its programme of action the protection of the oceans including protection against pollution (Chapter 17). There are also general protection obligations imposed on states under the United Nations Convention on the Law of the Sea (UNCLOS) adopted in 1982.

There are also more specific international laws, such as the International Convention for the Prevention of Pollution of the Sea by Oil 1954.[14] The International Convention on the Prevention of Marine Pollution by the Dumping of Waste or Other Matter (the London Convention) 1972.[15]

<https://unchronicle.un.org/article/sea-islands-how-regional-group-pacific-states-working-achieve-sdg-14> accessed 10/12/2018.

14 Superseded by a further Protocol in 1983, and further amended in 1962, 1969 and 1971 and then subsumed under the International Convention for the Prevention of Pollution from Ships (MARPOL) 1973 (and its Protocol of 1978). Apart from the Marshall Islands and Palau, no Pacific island states appear to have ratified MARPOL.

15 It came into force in 1975. The London Convention has since been replaced by the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. The Marshall Islands ratified this in 2008, Tonga in 2003, Vanuatu in 1999. No other Pacific island states appear to have done so to date.

There is also an international legal framework for oil pollutions damage from tankers,[16] referred to as the CLC-IOPC Fund Regime, which includes the 1992 Civil Liability Convention (replacing a convention of the same name of 1969) and the 1992 Fund Convention and 2003 Supplementary Fund Protocol. A number of Pacific states are parties to the 1992 Civil Liability Convention and the 1992 Fund Convention: The Cook Islands, Fiji, Kiribati, the Marshall Islands, Niue, Palau, Papua New Guinea, Samoa, Tonga, Tuvalu and Vanuatu.[17] The 1992 Fund and the Supplementary Fund, combine to provide compensation in cases of oil pollution from oil spills from tankers. The cost of this system is shared between ship owners and oil receiving countries under a tiered system. Under the first tier, a ship owner is strictly liable under the 1992 Civil Liability Convention, although the extent of that liability may be financially limited by reference to the tonnage of the ship. Insurance underwrites that liability. The second tier is provided by oil receivers under the 1992 Fund Convention. A third tier of compensation is available under the Supplementary Fund. The scheme is advantageous to smaller states as contributions to the fund are only paid by entities receiving in excess of 150,000 tonnes of oil a year. However, any member state of the 1992 Fund can make a claim for compensation for pollution caused by oil transported by tanker. Costs may be claimed for damage to property, clean-up of the spill, economic loss caused to fishing and/or agriculture, economic loss caused to tourism and costs for reinstating the environment. The biggest challenge for small states is that any claim must be clearly quantified and costed. The International Oil Pollution Compensation Funds do, however, provide a claims manual, sector-specific guidelines and example claim forms.[18] Since 1978 there have been no major oil spills in the Pacific region.[19]

Further international provisions include the 2001 Bunker Oil Pollution Convention (which applies to sea-going vessels other than tankers) and the 1996 Hazardous and Noxious Substances Convention. A number of states, including Samoa and Tonga, have ratified the 1996 Convention, but it has not yet been brought into force. In 2010, an additional Protocol to this Convention was adopted to address

16 United Nations Conference on Trade and Development, "Liability and compensation for Ship-Source Oil Pollution: An Overview of the International Legal Framework for Oil Pollutions Damage from Tankers" Studies in Transport Law and Policy 2012, No 1, United Nations, New York and Geneva, 2012.

17 IOPC "Parties to the international liability and compensation conventions" <www.iopcfunds.org/about-us/membership/a-z-listing/#fund-4> accessed 10/12/2018.

18 International Oil Pollution Compensation Funds, "An Overview".

19 IOPC Funds "Incidents Map" <www.iopcfunds.org/incidents/incident-map/#67-31-May-1993> accessed 10/12/2018.

some of the concerns regarding the 1996 Convention but this has not yet come into force either.[20]

There is also an International Convention of the Removal of Wrecks (Nairobi Convention) 2007, which came into force on 14 April 2015.[21] The Convention provides for strict liability, compensation and compulsory insurance regimes. Although, states have been slow to give effect to the Convention,[22] some states which have done so have extended its scope from the EEZ to territorial seas. These include Antigua and Barbuda, Malta and the Marshall Islands.

B Regional initiatives

In 1972 the United Nations Environment Programme, which followed the Stockholm Declaration, adopted a regional seas perspective. A number of regional multi-lateral conventions, which encompass small states, include provisions directed at the prevention and control of pollution although the scope of these is often limited to seabed exploration and exploitation. Regional treaties include the Convention for the Protection of the Marine Environment and Coastal Area of the South East Pacific (the Lima Convention) 1981, the Convention for the Protection and Development of the Wider Caribbean Region (The Cartagena de Indias Convention) 1982, and the Convention for the Protection of Natural Resources and Environment of the South Pacific Region and related Protocols (the Nouméa Convention) 1986.[23] Most of

20 On the potential significance of this Convention see John Macdonald, "Implementation of the 1996 Hazardous and Noxious Substances Convention" (1987) 7 Dalhousie Journal of Legal Studies 241-266. In July 2018 Denmark became the fourth State to ratify this Protocol, the others being Canada, Norway and Turkey.

21 Jhonnie Kern, "Wreck Removal and the Nairobi Convention- A Movement toward a Unified Framework?" Frontiers in Marine Science, 25 February 2016 <www.frontiersin.org/articles/10.3389/fmars.2016.00011/full> accessed 9/11/2018.

22 As at 5 May 2016, States, which are parties to the convention, included a number of small island states such as Bahamas, the Cook Islands, Niue, Palau, St Kitts and Nevis, Tonga and Tuvalu as well as Malta, the Marshall Islands and Antigua and Barbuda. See The Swedish Club Wreck Removal Convention <www.swedishclub.com/loss-prevention/ship/wreck-removal-convention/> accessed 9/11/2018. There are now around 40 signatory states according to Joe Baker "The Nairobi convention: navigating obstacles to shipwreck removal" 8 February 2018 <www.ship-technology.com/features/nairobi-convention-navigating-obstacles-shipwreck-removal> accessed 12/11/2018.

23 This was adopted in 1986 and entered into force in 1990. Parties to the convention are American Samoa, Northern Mariana Islands, Australia, Cook Islands, Palau, Federated States of Micronesia, Papua New Guinea, Fiji, Pitcairn Islands, French Polynesia, Guam, Tokelau, Kiribati, Tonga, Marshall Islands, Tuvalu, Nauru, Vanuatu, New Caledonia, Wallis and Futuna, New Zealand, Western Samoa and Niue. The South Pacific Regional Environment Programme (SPREP) is the Secretariat for the convention and SPREP convenes the biennial conference of the parties. The convention is supported by two additional 1986 protocols: The Prevention of Pollution of the South

these regional conventions, and indeed the Law of the Sea Convention 1982,[24] refer to the obligations of party states and the importance of corresponding measures.

While the more general provisions of some of the above have been elaborated on in some areas of the world, that has not happened in the Pacific. Parties to the Nouméa Convention have focussed on the "protection, management and development of the marine and coastal environment".[25] There appears to have been little attention given to wrecks or pollution arising from collisions at sea, although pollution from ships is specifically covered by the Convention and it has been acknowledged that resource constraints are a significant challenge to pursuing targeted initiatives.[26] Two additional protocols that could be relevant were agreed on in 2006: the Protocol on Oil Pollution Preparedness, Response and Cooperation in the Pacific Region, and the Protocol on Hazardous and Noxious Substances Pollution, Preparedness, Response and Cooperation in the Pacific Region. Neither has yet been brought into force. SPREP has however produced various model laws, including a Pacific Model Marine Pollution Prevention Act drafted in 2000.[27] It is also clear that while there is international regulation of shipping,[28] pollution from fishing boats is less well regulated. In late 2017, the Western and Central Pacific Commission adopted a conservation measure, that came into effect on 1 January 2019.[29] This includes calling on all PICs to ratify all the annexes of MARPOL and the London Protocol, and to adopt further measures to regulate their fishing vessels and cooperate across the region. These measures are primarily directed at the dumping of fishing and related gear.

Pacific Region by Dumping, and Concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region.

24 See for example art 197.

25 Virginia Wiseman "Contracting parties to Noumea Convention Convene for Thirteenth Meeting" 21 September 2015 <http://sdg.iisd.org/news/contracting-parties-to-noumea-convention-convene-for-thirteenth-meeting/> accessed 12/11/2018.

26 Aruna Lolani "Convention exists to protect Pacific", 15 September 2017, Samoa Observer <www.samoaobserver.ws/en/15_09_2017/local/24345/Convention-exists-to-protect-Pacific.htm> accessed 12/11/2018.

27 See Peter Heathcote "Marine Pollution Prevention Legislation in the Pacific Region – The Next Five Years" (2003) 129 Maritime Studies 1.

28 For example, the International Maritime Organisation sets standards and rules of international shipping.

29 James Sloan "Marine Pollution in the Pacific Ocean – the International Legal Framework – how it works and its challenges for Pacific Island Countries" 16 September 2018, <www.sas.com.fj/ocean-law-bulletins/marine-pollution-in-the-pacific-ocean-the-international-legal-framework-how-it-works-and-its-challenges-for-pacific-island-countries> accessed 9/11/2018.

C National Legislation

In the Pacific a variety of national laws exists. The scope and purpose of these vary. The primary purpose of some is to give effect to international conventions.

1 Samoa

The Marine Pollution Prevention Act 2008 of Samoa is an example of this. It also focuses on marine pollution through discharge, waste from ship repairs and cleaning, and dumping at sea. It establishes the administrative machinery necessary to support the legislation and is based on the principle of "the polluter pays" and requires insurance and certification of vessels. The Act confers extensive powers on the Chief Executive Officer appointed under the Act[30] to deal with incidents such as that which occurred in *Raeboy v Ever Grow Corporation Ltd*.

2 Fiji

In Fiji, the Maritime Transport Decree 2013[31] makes specific provision for incidents where two or more ships are involved in collisions or other incidents. The Decree also covers wrecks and marine pollution prevention and management.[32] The law makes use of a sliding scale of units of account to determine the extent of liability of any owner or person in control of a vessel for damage.[33] These units of account are aligned with the size of the vessel.[34] The problem of attributing fault and apportioning liability remains where there is more than one ship involved. The Decree also sets out "Plans and Responses to Protect the Marine Environment from Marine Spills".[35] This is a forward-thinking piece of legislation that set out to establish a Marine Spills Advisory Committee, a National Marine Spills Response Strategy, a National Oil Pollution Pool and to fix oil pollution levies payable by owners and operators of ships carrying more than two tonnes of oil.[36]

---

30 Part IV ss 36-40. In Tonga, similarly there is a Marine Pollution Prevention Act 2002, which came into effect in 2005.

31 Amended by the Maritime Transport (Amendment) Act 2014.

32 See Part 10. Breach attracts a criminal sanction of imprisonment and fines. Criminal liability rests on either intention or recklessness – s 129 (3)(ii) and (iii).

33 Similar to the approach adopted under the CLC-IOPC Fund Regime.

34 See s 83.

35 Sections 159-203.

36 The Maritime Transport Decree 2013 – Marine (Pollution Levy) Regulations 2014, determines these levies.

3 Kiribati

The Maritime Act 2017 of Kiribati has as its purpose "To regulate shipping, to update and modernise law relating to shipping to give effect to certain international maritime conventions and for related purposes". The main purpose of the Act appears to be the registration of ships, the licensing of agents, and various aspects of safety; a Marine Board is established under the Act and it can advise the Minister to "remove or cause to be removed any wreck which is liable to cause pollution of the Kiribati maritime environment or is a navigational hazard" (s 6 vi) and to "declare prohibited areas around wrecks ..." (s 6 vii).[37] The Act also imposes a marine pollution fee on all vessels entering a Kiribati port, and makes it a criminal offence subject to a fine for failing to report a marine pollution incident. There are specific provisions covering ships carrying oil,[38] including requirements for ships, carrying not only oil but also other potential marine pollutants, of proof of sufficient insurance to cover any liabilities and evidence of compliance with the applicable international conventions. Breach of the marine pollution provisions is subject to criminal sanctions of imprisonment and/or fines. Strict liability is imposed on the owner of a vessel that pollutes the marine environment and this extends to not only costs incurred in the clean-up and restoring the maritime environment but also to any civil claims brought by individuals affected by the release of pollutants. Limited defences are available to the owner or owners of offending vessels under s 233(3). The Act provides for the appointment of a "National On-Scene Commander" to take control of responses to pollution events.[39]

4 Other countries

An alternative approach is to use existing environmental impact assessment mechanisms, which are found in a range of statutes.[40] For these to be effective, especially in assessing issues of compensation, there needs to be a "before" and "after" assessment. This type of data, especially when it comes to marine flora and fauna, may be missing or partial, particularly in countries where the resources and expertise to carry out such studies are limited. It is also recognised that any impact assessment has to be timely, in terms of establishing the initial framework for

37 Most Pacific islands have some form of wreck and salvage legislation although much of it is dated. In some cases, the law relating to wrecks and salvage falls under general Shipping Acts. See for example *Clark v Pikokivaka* [1993] Tonga LR 50 and the Shipping Act 1972 Tonga.

38 Sections 226-233.

39 Section 235.

40 For example, the Environmental Impact Assessment Act 2003 (Tonga); the Environment Protection Act 2008 (Tuvalu); the Environment Act 2000 (Papua New Guinea) and the Environmental Management and Conservation Act 2003 (Vanuatu).

assessment, who is to carry out the assessment and where and over what period. There also needs to be a degree of flexibility in any framework because of differences in type of pollution, extent, geographical area, and social-economic impact.[41]

Clearly, in small states the resources and expertise may be limited and marine pollution events may take place in a relative vacuum of scientific evidence. Much of the national legislation, besides seeking to give effect to broad international conventions, also imposes criminal sanctions for a range of non-compliance offences. Any civil claims may have to be pursued separately; it then becomes incumbent on the courts to attribute liability and assess damages.

D Case Law

While both international conventions and national legislation recognise damage caused to personal property and personal injury, claiming for environmental damage is more complex. In the Pacific region there appear to be very few cases where the courts have considered the issue of environmental damage caused by ships. This paper looks at cases from across the region to see if the skeleton of a regional jurisprudence can be found.

At the outset, a cause of action has to be recognised. In the Federated States of Micronesia case of *People of Rull ex rel Ruepong v MV Kyowa Violet*,[42] it was held that general maritime law and admiralty law recognise causes of action for recovering damages for oil contamination of wildlife and other natural resources in the marine environment. The test for liability is not dissimilar to that in the tort of negligence: 1. a duty of care to conform to a certain standard of conduct; 2. breach of that duty by falling below that standard; 3. a reasonably close causal connection between the breach and the injury and 4. actual loss or in injury. An action for environmental harm might also be brought under the tort of nuisance, although in the case of nuisance a claimant would have to show they have suffered harm over and above that of the general public.

In practice, entitlement to bring a claim does not seem to be limited to individuals. Where a number of people have interests and rights in marine resources, a collective or class action may be appropriate. However, determining who belongs to the class and who is entitled to represent its claims, can be problematic as demonstrated in the case of *People of Weloy ex rel Pong v MV CEC Ace*.[43] In that case action was brought

41 See Ivan Calvez and Loïc Kerambrun, "Post-spill environmental impact assessment: approaches and needs" for guidelines and approaches discussed at the Vertimar 2007 symposium <http://otvm.uvigo.es/vertimar2007/comunicaciones/Vertimar_IC-final.pdf> accessed 13/11/2018.

42 [2006] FMSC 53.

43 [2007] FMSC 28.

against the owners of the ship MV CEC Ace which crashed into a section of a harbour reef where the plaintiffs owned the rights to the marine resources. Where an oil spill or other contaminant impacts on the marine rights of a number of customary collectives then either these will all have to be joined to an action or, if their claims are distinct as regards the damage claimed, separate and distinct actions will need to be brought.[44] In some jurisdictions, there have been challenges to bringing a class or representative action. For example in Papua New Guinea in the case of *Leda v Stetting Bay Lumber Co* [2011] PGNC 194, the court set out a number of principles for a representative action regarding the pollution of a creek. These were that all the plaintiffs had to be named and identified in the writ of summons and each of them had to give written consent in due form. Clearly where an intergenerational claim is being made this is going to be difficult. The court moreover held that the class of plaintiffs must have a common interest and a common grievance, and that the relief sought will be beneficial to all of them.

If it can be established that environmental harm has occurred, it is necessary to prove what loss has been suffered. In *People of Rull ex rel Ruepong v MV Kyowa Violet*,[45] it was held that "the amount of damages need only be shown with as much certainty as the tort's nature and the case's circumstances permit", but "if it is uncertain and speculative whether damages have been incurred, then damages will be denied". In assessing damage in the *MV Kyowa Violet* case, experts were brought in to measure the area of reef damaged by the collision and the area of mangrove swamp affected by the oil spill. Consideration was also given to the impact on the natural yield of mangroves. Different assessment formulae were used for lightly oiled areas, moderately oiled areas and for heavily oiled areas and calculated per square metre. Similarly, with regard to the impact on fishing, damages were calculated on two categories: subsistence fishing for consumption, and commercial fishing. Calculation for compensation took into account not only the immediate impact in terms of having to buy food and the loss of catch to sell, but also the diminished fish catch once a government fishing ban was lifted. Claims for cultural damage and the loss of inter-generational skills, such as fishing and swimming, were not compensable, nor were claims for mental anguish. As regards the damage to the reef itself, the court awarded a fixed sum of $600 per square metre.

Assessing damages may not always be straightforward. For example, in the Papua New Guinea case of *Leda v Stettin Bay Lumber Company*,[46] the pollution

44 See for example *People of Weloy ex rel Pong v MV Micronesian Heritage* [2004] FMSC 49.

45 [2006] FMSC 53.

46 [2011] PGNC 194

complained of impacted on fishing, washing and cooking, but the creek also contained magical herbs and was used for the customary performance of magical rituals. The court avoided determining compensation for these latter on other grounds but might, as in *MV Kyowa Violet*, have refused to consider claims for cultural damage.

It should also be pointed out that an owner's liability may be limited either under national laws or under international conventions.[47] In *Leda v Stetting Bay Lumber Co*, it was held that an action would not be time barred where the pollution is a continuing one. A similar finding was made in the Solomon Islands case of *Lee v Earthmovers Solomons Ltd*[48] where the question was whether there was continuing oil pollution from two ships which sank and were abandoned in 2006. The court held that there was "environmental pollution and damage and this continues even after 2006 when the boats were abandoned".[49] Consequently, the claim fell within the exception of the Limitation Act.[50] Given that the full consequences of environmental harm may take some time to materialise, it is important that actions should not become time barred by arbitrary and inappropriate time limits.

IV CONCLUSION

There are many pollution threats to the seas and marine environments around islands, including pollution from land-based activities such as mining and sewage and industrial discharge, the deliberate dumping of waste, the transshipment of hazardous materials, and the accumulation of plastic in the oceans. There is also the threat of pollution from sea-going vessels either because of regular and iterative activities or as a one-off occurrence such as collisions at sea or the foundering of vessels. These risks may be immediate as in the case of an oil spill from a stricken tanker, or prospective as in the case of shipwrecks gradually breaking up or the longer-term effect of oil or other spills on marine ecosystems. Steps can of course be taken to reduce the likelihood of pollution from sea-going vessels through design, regulation and clear rules about the apportionment of liability, for example use of "the polluter pays" principle.[51]

---

47 See for example, *People of the Municipality of Eauripik v FV Teraka No 1*68 [2012] FMSC 26.

48 [2014] SBHC 82.

49 Para 28.

50 Cap 18, s 17.

51 Approved *in Fiji Fish Marketing Group Ltd v Pacific Cement Ltd* [2017] FJHC 252, relying on an Indian authority: *Indian Council for Environmental Legal Action v Union of India* AIR 1996, SC 14446. It is not clear to what extent this is actually a principle of Fijian law.

In an ideal world, all sea-going vessels would also be subject to strict and routine inspection of sea-worthiness, and there would be clear risk assessment strategies and risk liability regulations in place. There would similarly be the scientific and other expertise available, which was affordable and accessible to assess any current and future damage to the environment.[52] The reality however is that island states, especially with developing economies, are under pressure to increase shipping to improve trade,[53] and, in the context of unpredictable and often violent weather, ship-wrecks and collisions at sea will be a feature of islands' experience for some time to come.[54] While there is considerable literature regarding the design, risk assessment and damage liability of large vessels such as container ships and oil tankers, there is a dearth of information regarding the shipwreck and ship collision experiences of island states in respect of smaller vessels. It is also the case that many of the smaller vessels plying trade around islands are old, often in a poor state of repair, and their owners may not carry sufficient or any insurance to meet the "polluter pays" principle. In any case, where historic wrecks cause environmental damage, it may be impossible to locate past owners.

In the context of limited resources and shared risks, cooperative approaches to marine pollution are a logical option. Such an approach is also in line with regional initiatives. For example, at the 2018 Pacific Islands Forum meeting held in Nauru, Pacific island leaders stressed their commitment to collective action for "a strong blue Pacific region that is secure, peaceful, and prosperous, enabling its people to live free, healthy and productive lives".[55] The "Blue Pacific" agenda includes a focus on fisheries and ocean conservation and management. Integral to this must be measures which deal with marine pollution and wrecks.

---

52 A recent initiative has been collaboration between the International Maritime Organisation and Immarsat to improve ship to shore communications. See "Inmarsat and IMSO collaborate to enhance maritime safety in Vanuatu" 24 May 2017 <www.inmarsat.com/news/inmarsat-imso-collaborate-enhance-maritime-safety-vanuatu/> accessed 12/11/2018 accessed 12/11/2018.

53 See for example, The Programme of Action for the Sustainable Development of Small Island Developing States.

54 See for example the recent collision between a containership – Cecile Maersk – and a fishing vessel near the island of Reunion on 7 August 2018. World Maritime News, "Cecile Maersk Collides with Fishing Vessel" <https://worldmaritimenews.com/archives/258596/cecilie-maersk-collides-with-fishing-vessel/>; and similarly a collision causing a fuel spill near Corsica. Angela Charlton, "Fuel spill in Mediterranean after ships collide near French island Corsica", 7 October 2018 <http://wjla.com/news/nation-world/fuel-spill-in-mediterranean-after-ships-collide-near-french-island-corsica> accessed 12/11/2018.

55 Pacific Islands Forum Secretariat, "Forum Leaders Commit to collective Action for A Strong Blue Pacific", News communication 21/09/2018.

There are numerous international conventions and protocols, many of which have yet to take root in the Pacific region and there are, more pertinently, regional agreements which inform policy and shared objectives. Yet from a legal perspective there are gaps. It makes sense, therefore, to look around the region and indeed beyond it to other small island states[56] to share experiences and possible solutions.

56 Ideally to look to other island states with developing economies and a diverse range of sea-going craft.