

## Chapter 7

### Source reduction – product stewardship and legislative and regulatory frameworks

7.1 Many submitters argued that the marine plastic pollution should be addressed through greater product stewardship. As one submitter noted, 'the problem is not so much with the plastic itself, but with the custodianship of plastic in its production and use cycle'.<sup>1</sup> Submitters also commented on the need to focus on design and innovation particularly in relation to plastic packaging while others supported the immediate ban of single-use plastic bags and microbeads.

7.2 This chapter explores reducing the sources of marine plastic pollution through improvements in product stewardship, regulatory and legislative changes and enforcement activities.

#### Product stewardship

7.3 A number of submitters emphasised the importance of increased product stewardship and producer responsibility in reducing the sources of marine plastic pollution. Product stewardship is an approach to managing the impacts of products and materials. It acknowledges that those engaged in the production, sale, use and disposal of products and materials have a shared responsibility to ensure that these products and materials are managed in a way that reduces their impact on the environment, and human health and safety.<sup>2</sup>

7.4 The Commonwealth *Product Stewardship Act 2011* provides the framework for the effective management of a range of products and materials, including packaging. The Act allows for co-regulatory and voluntary product stewardship schemes such as the Australian Packaging Covenant (APC).<sup>3</sup>

#### *The Australian Packaging Covenant*

7.5 The APC aims to encourage the use of more sustainable packaging, increase recycling rates and reduce packaging litter. As noted in Chapter 4, the Australian Government, state and territory governments, and the packaging industry are currently negotiating new Covenant arrangements. The committee received evidence which canvassed the effectiveness of the APC to address pollution arising from packaging.

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1 Mr Stephen Mitchell, *Submission 71*, p. 3.

2 Department of the Environment, <http://www.environment.gov.au/protection/national-waste-policy/product-stewardship>, (accessed 10 March 2016).

3 This is further discussed in Chapter 4.

*Criticism of voluntary participation*

7.6 The voluntary nature of the APC was criticised by some submitters as being detrimental to achieving a reduction in plastic pollution associated with product packaging. Submitters argued that compliance with measures under the APC should be mandatory, and that enforcement and application of penalties would significantly improve the effectiveness of the scheme.

7.7 Ms Rachel Walmsley, Policy and Law Reform Director from EDOs of Australia commented that the voluntary approach lacks 'regulatory teeth'<sup>4</sup> while Mr Jeff Angel from the Total Environment Centre went further and described the APC as an 'utter failure'.<sup>5</sup>

7.8 Dr Sarah Waddell from the National Environmental Law Association (NELA) told the committee that:

The voluntary approach is often seen as a way of government stepping back from taking a regulatory approach...But I think that, because it started as a voluntary approach, it has allowed the government to drop the ball in backing it up with a regulatory approach.<sup>6</sup>

7.9 NELA also noted that under the APC, failure to adhere to certain obligations 'theoretically results in the organisation being referred to the relevant government for review and a possible fine'.<sup>7</sup> However, fines are not applied as:

...while the required mirror legislation has been enacted in each jurisdiction in Australia, the associated regulations under which signatories can be fined for non-compliance with their obligations have not yet been implemented.<sup>8</sup>

7.10 NELA went on to suggest that implementing regulations and enforcing them could significantly increase the effectiveness of the APC, 'as well as any expanded or complementary scheme intended to address plastic life cycles more generally'.<sup>9</sup>

7.11 In addition to implementing the regulations, Ms Terrie-Ann Johnson from Clean Up Australia argued that there is a need for follow up and review under the APC. Ms Johnson stated:

Not only does there need to be mandatory signatures; there needs to be mandatory follow-up and review, and reporting and recording of the outcomes. Unfortunately, what is happening is a lot of people are signing

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4 Ms Rachel Walmsley, EDOs of Australia, *Committee Hansard*, 18 February 2016, p. 69

5 Mr Jeff Angel, Total Environment Centre, *Committee Hansard*, 18 February 2016, p. 46.

6 Dr Sarah Waddell, National Environmental Law Association, *Committee Hansard*, 18 February 2016, p. 30.

7 National Environmental Law Association, *Submission 132*, p. 6.

8 National Environmental Law Association, *Submission 132*, p. 6.

9 National Environmental Law Association, *Submission 132*, p. 6.

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up, but it is not being monitored, it is not being reviewed. Therefore, the statistics that are coming out of the covenant are not necessarily representative of what is really happening.<sup>10</sup>

7.12 A failure as a consequence of the voluntary nature of the APC was highlighted by the Total Environment Centre which argued that very few of the APC's recycling achievements have occurred through voluntary programs. Rather:

...the majority of the Australian Packaging Covenant's recycling achievements have occurred through kerbside programs and market for the materials...Voluntary programs often lack the resources to develop effective recycling regimes, as evident by several lapsed voluntary incentive programs for drink containers.<sup>11</sup>

#### *Inadequate reporting under voluntary schemes*

7.13 The committee received evidence that APC reporting, particularly in relation to recycling rates in Australia may be incorrect. Under the APC, two reports on the production of waste and the level of recycling are produced a year, one of which focuses on plastic. Some reports indicate that the APC has had some success with a gradual increase in the total number of tonnes of plastic recycled from year to year.<sup>12</sup>

7.14 However, Mr Angel noted that an independent review found that the APC data on recycling was 'utterly wrong and overstated'. Mr Angel went on to point to the recently issued report on Australia's packaging recycling rate which claimed that there was a growth in recycling. He stated:

That may be true in terms of tonnes, but what they did not say in that press release was that they had consumption figures particularly wrong—by over 30 per cent. A recycling rate is the proportion of the amount of consumed plastic material versus the tonnage recycled. What they did not mention at all in that press release—and what I think is absolutely dishonourable as an agency, as a covenant, with government and industry people on it—was that the plastic recycling rate under their new assessments of consumption had dropped from 44 per cent to 28 per cent. That is not a new low recycling rate. It is the lowest recycling rate we have had for ages. That is one of the reasons why we are having such a serious plastic litter problem.<sup>13</sup>

7.15 The Boomerang Alliance was also critical of industry data and commented that assessments of plastic consumption rates are 'well below their true amounts', and that 'untested industry data that dramatically exaggerates the recovery and recycling

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10 Ms Terrie-Ann Johnson, Clean Up Australia, *Committee Hansard*, 18 February 2016, p. 33.

11 Total Environment Centre, *Submission 1*, p. 2.

12 National Environmental Law Association, *Submission 132*, p. 5.

13 Mr Jeff Angel, Total Environment Centre, *Committee Hansard*, 18 January 2016, p. 46.

performance in key products and materials' are published under existing stewardship programs such as the APC.<sup>14</sup>

7.16 The concerns with inaccurate data were outlined by the Boomerang Alliance and the Total Environment Centre. The Boomerang Alliance stated that this incorrect data has 'played a fundamental role in distorting cost benefit analysis undertaken to consider adopting a national container deposit scheme'.<sup>15</sup> Mr Angel added that:

...when you undervalue the environmental costs—whether it is litter management or other things—it becomes very difficult in the regulatory impact statement process and cost-benefit studies to justify intervention. So the cost-benefit studies and the RISs overstate the cost to business and understate the benefits. That is really the core of why we have not had effective action: the decision-making framework, the economic analysis framework and the capacity to actually get robust information about environmental costs have not been put in place inside government.<sup>16</sup>

7.17 In addition, the Boomerang Alliance argued that Commonwealth Regulation Impact Statement (RIS) reports for a range of products containing plastic (for example, plastic bags, tyres, mobile phones, packaging) have failed to consider contributions to marine plastic pollution from these items. It was added that cost benefit analyses conducted as part of the RIS process have also failed to consider the costs associated with marine plastic pollution.<sup>17</sup>

### ***Polluter pays principle***

7.18 The committee received evidence that the adoption of a 'polluter pays' principle would encourage innovation in packaging development, and an acknowledgment that plastic pollution mitigation has associated costs. For example, EDOs of Australia told the committee that manufacturers and producers should be encouraged to consider their business models and their reliance on plastic products. Mr Nari Sahukar, EDOs of Australia, stated:

But it also goes to thinking about manufacturers and producers really thinking about what is going into their products...If their business models rely on an ever-expanding amount of plastic being created, then that is not a very sustainable business model.<sup>18</sup>

7.19 Mr Brendan Donohoe, Surfrider Foundation Australia, similarly highlighted the reliance on plastic products in the business models of fast-food companies and suggested the taxation of plastic packaging, with the revenue then be used to subsidise

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14 Boomerang Alliance, *Submission 77*, p. 21.

15 Boomerang Alliance, *Submission 77*, p. 22.

16 Mr Jeff Angel, Total Environment Centre, *Committee Hansard*, 18 February 2016, p. 48.

17 Boomerang Alliance, *Submission 77*, p. 21.

18 Mr Nari Sahukar, EDOs of Australia, *Committee Hansard*, 18 February 2016, p. 68.

clean-up programs.<sup>19</sup> Mr Donohoe also suggested that consumers need to be willing to pay extra for non-plastic alternatives so that the impost does not fall on small businesses to move away from cheap plastic products.<sup>20</sup> Mr Ian Hutton similarly supported a change in business practices and told the committee that:

...there needs to be the removal of the word 'disposable' in consumer goods and packaging. Any packaging material is a resource and I think your idea of getting companies to be responsible is a big one and, wherever possible, government should be encouraging companies to be responsible with packaging.<sup>21</sup>

7.20 The committee discussed Germany's 1991 *Ordinance on the Avoidance of Packaging Waste* which made industry responsible for packaging (including packaging used in the transportation of goods) to the end of its life cycle—including the costs of collecting, sorting and recycling after consumer disposal. It required retailers to install bins where consumers could leave both primary and secondary packaging, and manufacturers were responsible for the collection and subsequent disposal. The Ordinance operated in conjunction with container deposit schemes.<sup>22</sup>

7.21 Professor Tony Underwood supported the notion that retailers should be held responsible for the disposal of plastic packaging. Professor Underwood suggested that if legislation was passed allowing consumers to leave plastic packaging at the point of retail, then retailers would refuse to stock products that have plastic packaging, and manufacturers would be forced to consider alternatives.<sup>23</sup>

7.22 The Victorian Marine Animals Defence Conservation Society also submitted that:

Plastic product manufacturers need to be made financially responsible for their end users' behaviour. This will force them to ensure that they employ the best practices and it will force them to have to accrue significant revenue as possible clean-up costs. Once you target their financial bottomline, they will start to take notice.<sup>24</sup>

7.23 Professor Stephen Smith told the committee that there is also a global movement towards understanding the economic value of better environmental management through a concept known as 'natural capital'. Professor Smith stated that

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19 Mr Brendan Donohoe, Surfrider Foundation, *Committee Hansard*, 18 February 2016, p. 61.

20 Mr Brendan Donohoe, Surfrider Foundation, *Committee Hansard*, 18 February 2016, p. 62.

21 Mr Ian Hutton, *Committee Hansard*, 18 February 2016, p. 12.

22 For more information see 'Germany, Garbage, and the Green Dot: Challenging the Throwaway Society', <http://www.informinc.org/pages/research/waste-prevention/fact-sheets/germany-garbage-and-the-green-dot-challenging-the-throwaway-society-executive-summary.html>

23 Professor Underwood, *Committee Hansard*, 18 February 2016, p. 15.

24 Victorian Marine Animals Defence Conservation Society, *Submission 174*, p. 3.

'educating companies that they are completely dependent on the functioning environment' has led to:

...changes in practices where people can see that having better environmental stewardship guarantees supply...Therefore, it is advantageous for companies to actually build that into their operating plans.<sup>25</sup>

7.24 The committee also received evidence that associating an economic value to plastic waste itself may lead to changes in practices by manufacturers and producers. Dr Jennifer Lavers pointed to the World Economic Forum's estimates that plastic packaging waste, worth \$80 billion to \$120 billion per year, is lost through landfill and pollution. Dr Lavers stated that this value needs to be brought to the forefront of discussions so that awareness can lead to a reduction in consumption and subsequently, production.<sup>26</sup> Professor Smith added that change is 'going to be driven by economy, and if we can find those economic incentives then I am sure we can actually get things happening'.<sup>27</sup>

7.25 The submission from TopInfo Consulting also suggested that a system of market-based financial incentives could promote a reduction in the amount of plastic entering the waste. It was suggested that manufacturers and distributors of plastic product should be expected to develop strategies to recover it after use, and that financial benefit such as tax incentives could be provided when they are successfully implemented.<sup>28</sup> TopInfo Consulting also suggested that plastic products be subjected to levies which can be partially offset through the contracting of recycling and collection services.<sup>29</sup>

### ***Design and innovation***

7.26 A number of witnesses noted that innovative packaging design can lead to substantial reductions in plastic entering the waste stream. However, witnesses also commented that manufacturers and producers may be reluctant to make changes to packaging due to concerns that products may be damaged in transit, or in the case of food packaging, hygiene requirements. Evidence was also received regarding the use and labelling of 'biodegradable' and 'degradable' plastic and whether these items provide a less harmful alternative to traditional plastics.

7.27 Clean Up Australia told the committee that 'producer responsibility' is critically important to making changes to product packaging that will reduce plastic

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25 Professor Stephen Smith, *Committee Hansard*, 18 February 2016, p. 20.

26 Dr Jennifer Lavers, *Committee Hansard*, 18 February 2016, p. 13.

27 Professor Stephen Smith, *Committee Hansard*, 18 February 2016, p. 12.

28 TopInfo Consulting, *Submission 10*, p. 7.

29 TopInfo Consulting, *Submission 10*, pp. 7–8.

pollution.<sup>30</sup> Mr West explained that currently, 'every bottle has five pieces—tamper seal, lid and label, as well as the bottle'.<sup>31</sup> If the bottle caps and the lids could be permanently attached to the bottle the number of pieces of rubbish would be reduced.<sup>32</sup>

7.28 Ms Johnson highlighted that changes to beverage container design which resulted in ring-pulls remaining attached to cans had already resulted in a significant reduction in the number of ring-pulls found during clean-ups.<sup>33</sup> Coca-Cola Amatil also pointed to changes in the design of its beverage containers noting that over the past decade many new technologies and initiatives have been implemented to reduce the environmental impact through the supply chain across the total package life cycle. These have included continual decreases in the weight of PET packages since 1997 which has delivered a 33 per cent reduction in small PET, a 37 per cent reduction in POWERADE PET and a 42 per cent reduction in 600 millilitre PET.<sup>34</sup>

7.29 Professor Smith also told the committee that alternatives to plastic packaging are available. For example, packing 'peanuts' made from starch rather than plastic. These packing peanuts are made from starch and can be dissolved in water or composted following use. However, in discussions with a leading packaging manufacturer, it was indicated that companies would not adopt starch based external packaging as items may become damaged in transit and companies would then be liable to litigation.<sup>35</sup> Other replacements noted by Professor Smith included compostable lids for hot beverage containers, and bamboo cutlery. He went on to suggest that there should be support through appropriate incentives to encourage further substitution.<sup>36</sup>

### *Biodegradable and degradable products*

7.30 In 2002, two consultancy reports, *Biodegradable Plastics—Developments and Environmental Impacts*, and *The Impact of Degradable Plastic Bags in Australia* recommended that Australian Standards be developed in relation to biodegradable plastics. In 2003, the Environment Protection and Heritage Council agreed to initiate the development of Australian Standards with Standards Australia.<sup>37</sup>

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30 Mr Ian Kiernan, Clean Up Australia, *Committee Hansard*, 18 February 2016, p. 34.

31 Mr Dave West, environmental economist advising Clean Up Australia, *Committee Hansard*, 18 February 2016, p. 34.

32 Ms Terrie-Ann Johnson, Clean Up Australia, *Committee Hansard*, 18 February 2016, p. 34.

33 Ms Terrie-Ann Johnson, Clean Up Australia, *Committee Hansard*, 18 February 2016, p. 34.

34 Ms Liz McNamara, Coca-Cola Amatil, *Committee Hansard*, 31 March 2016, p. 2.

35 Professor Stephen Smith, *Committee Hansard*, 18 February 2016, p. 21.

36 Professor Stephen Smith, *Submission 27*, p. 7.

37 Department of the Environment, *Threat abatement plan for the impacts of marine debris on vertebrate marine life Review 2009–2014*, p. 28.

7.31 In 2006, Australian Standard AS4736 for biodegradable plastics suitable for composting and other microbial treatment (in commercial systems) was released. In 2010, Australian Standard AS5810 for biodegradable plastics suitable for home composting was released. These standards are designed to provide confidence to consumers and retailers in relation to products described as biodegradable, and to provide support for state and territory governments to ban non-biodegradable single-use plastic bags.<sup>38</sup>

7.32 So-called 'biodegradable' and 'degradable' plastics are frequently offered as better alternatives to traditional plastic items. However, the committee received evidence that such products may, in fact, significantly contribute to levels of microplastic pollution in the marine environment. In addition, evidence highlighted that there is considerable public confusion regarding the difference between biodegradable, compostable, degradable and traditional plastic bags, and the ways in which these items should be disposed.

7.33 The terms 'degradable' and 'biodegradable' are sometimes used interchangeably to describe plastics which contain additives to accelerate the disintegration of the product. However, the term biodegradable may also refer to 'fully biodegradable' or 'compostable' plastics which are generally made from plant-materials and which will return to base organic components when disposed of through commercial composting facilities. For the purposes of this report, the term 'compostable' will be used to describe fully biodegradable plastics while 'biodegradable' will refer to products with accelerated degradation (that is, degradable products).

7.34 Dr Kathy Townsend told the committee that there is 'a high degree of consumer confusion regarding the difference between degradable, biodegradable and compostable bags'.<sup>39</sup> Dr Townsend explained that:

Unfortunately, degradable and biodegradable are interchangeable in the minds of the general public. They find that very confusing and often feel that they are doing the right thing, when in fact they are not.<sup>40</sup>

7.35 A number of witnesses stated that degradable plastic does not offer an alternative to traditional plastic as it simply disintegrates into increasingly smaller pieces until it becomes microplastic. Professor Underwood commented that 'it is not a solution to anything much, unless we are quite happy to shift it all into particle-sized plastics rather than plastic bag-sized plastics'.<sup>41</sup> Indeed, it was noted that the rapid

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38 Department of the Environment, *Threat abatement plan for the impacts of marine debris on vertebrate marine life Review 2009–2014*, p. 28.

39 Dr Kathy Townsend, *Committee Hansard*, 10 March 2016, p. 1.

40 Dr Kathy Townsend, *Committee Hansard*, 10 March 2016, p. 2. See also Ms Terrie-Ann Johnson, *Clean Up Australia, Committee Hansard*, 18 February 2016, p. 34.

41 Professor Underwood, *Committee Hansard*, 18 February 2016, p. 21. See also, Mr Ian Kiernan, *Clean Up Australia, Committee Hansard*, 18 February 2016, p. 34.

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disintegration of degradable plastic also makes it 'available to animals much faster than it would be otherwise'.<sup>42</sup>

7.36 Dr Mark Browne pointed to research which showed that there are no differences between biodegradable and traditional plastic bags:

We did research which looked at a biodegradable bag versus a normal plastic bag. We put them on a mudflat and looked at the changes in animals and plants that lived amongst them, and they both caused the same impact.<sup>43</sup>

7.37 A number of witnesses also expressed concern that degradable plastics do not encourage social change. Dr Lavers stated that degradable plastic 'encourages the status quo and it encourages people to continue to treat plastic, which is a non-renewable resource, like a disposable item.'<sup>44</sup> Similarly, Dr Townsend told the committee that:

...when people have a degradable or biodegradable bag they feel that it is fine to just throw it, because they have this perception that it is going to degrade and go away. It inspires littering behaviour more than it would otherwise, because they have in their mind that it is not going to cause any harm.<sup>45</sup>

7.38 A further matter was raised by Ms Johnson, who stated that Clean Up Australia is aware that a large retailer in Australia introduced compostable bags for a period of time, however 'they had customer backlash...because they were not strong enough'.<sup>46</sup>

7.39 There is also evidence that the correct disposal of degradable and compostable items is a source of community confusion. For example, Ms Johnson stated that:

We have seen examples of biodegradable containers, but nobody knows how to dispose of them. They are told that they can break down in compost, so people then think they can put them in their backyard compost, but they do not break down in that; they need to be broken down in commercial composting units, and there are not enough commercial composting units in the country to take them.<sup>47</sup>

7.40 Consumer confusion regarding the correct disposal mechanism for different types of bags can also lead to degradable plastic bags entering the recycling stream

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42 Dr Kathy Townsend, *Committee Hansard*, 10 March 2016, p. 2.

43 Dr Mark Browne, *Committee Hansard*, 18 February 2016, p. 21.

44 Dr Jennifer Lavers, *Committee Hansard*, 18 February 2016, p. 21.

45 Dr Kathy Townsend, *Committee Hansard*, 10 March 2016, p. 2.

46 Ms Terrie-Ann Johnson, Clean Up Australia, *Committee Hansard*, 18 February 2016, p. 39.

47 Ms Terrie-Ann Johnson, Clean Up Australia, *Committee Hansard*, 18 February 2016, p. 34.

with other products. If this occurs, the process is contaminated and none of the items can be recycled as they would otherwise.<sup>48</sup>

7.41 Dr Lavers cautioned that though fully biodegradable plastics offer an area of research investment where a lot of gain could be made to look for truly biodegradable, truly compostable plastic alternatives, 'as of right now they do not exist, and the ones that do sell themselves as that kind of product almost certainly come with their own set of problems'.<sup>49</sup>

7.42 Under Threat Abatement Plan Action 3.4, the then Department of Environment, Water, Heritage and the Arts was to:

...identify measures to promote the uptake and application of biodegradable and oxodegradable plastic in marine-based industries and environments where it is found to be effective.<sup>50</sup>

### **Regulatory and legislative changes**

7.43 The committee received a large number of submissions, and over 700 form letters, calling for the introduction of national legislation to prohibit the sale and manufacture of personal cosmetic products containing microbeads, and the use of lightweight single-use plastic bags. The committee also received evidence on the implementation and consideration of such bans both in Australia and internationally.

7.44 The Total Environment Centre submitted that the introduction of a container deposit scheme, and the banning of lightweight single-use plastic bags and products containing microbeads would result in a reduction of over 70 per cent in marine plastic pollution within a 3–5 year period.<sup>51</sup> Clean Up Australia similarly stated that such bans would have a 'drastic impact on the number of items entering the marine environment'.<sup>52</sup>

7.45 Mr Andrew McNee, Assistant Secretary, Department of the Environment, told the committee that over the past two years, that federal, state and territory Environment Ministers have been examining the issue of banning microbeads and single-use plastic bags. Mr McNee indicated that the Ministerial Roundtable has given its support for the work being undertaken by New South Wales and Commonwealth in relation to the 'voluntary industry arrangement to phase out microbeads'. Mr McNee

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48 Dr Kathy Townsend, *Committee Hansard*, 10 March 2016, p. 2. See also Ms Terrie-Ann Johnson, Clean Up Australia, *Committee Hansard*, 18 February 2016, p. 34.

49 Dr Jennifer Lavers, *Committee Hansard*, 18 February 2016, p. 21.

50 Department of the Environment, *Threat abatement plan for the impacts of marine debris on vertebrate marine life Review 2009–2014*, p 28.

51 Total Environment Centre, *Submission 1*, p. 11.

52 Clean Up Australia, *Submission 9*, p. 2.

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also told the committee that the Environment Ministers have also examined the issue of a 'national phase-down' of single-use plastic bags.<sup>53</sup>

### ***Ban on single-use plastic bags***

7.46 Australians use 3.92 billion lightweight plastic grocery bags a year, and it is estimated that approximately 80 million bags become litter every year.<sup>54</sup> As previously discussed, single-use plastic bags are often ingested by a range of marine fauna, with turtles being particularly susceptible to mistaking them for jellyfish or other prey species. They also breakdown to form microplastic in the marine environment.

7.47 Single-use plastic bans have been banned or levied in a number of jurisdictions both within Australia, and internationally. In some instances levies have been used as transitional measures to change consumer behaviour.<sup>55</sup> Mr Angel told the committee that 'over 100 states, countries and municipalities' have introduced bans and levies.<sup>56</sup> In Australia, the Northern Territory, South Australia, Tasmania and the Australian Capital Territory have all banned lightweight single-use plastic bags.

7.48 The banning of single-use plastic bags was seen as an effective and easy way of reducing the amount of plastic entering the marine environment as well as targeting a plastic which is often mistaken for food by marine animals. The committee also received evidence that such bans have widespread community support. Clean Up Australia stated in its submission that polling in May 2009 conducted by the non-government organisation Do Something found that 83 per cent of Australians supported a ban on non-biodegradable plastic bags.<sup>57</sup> Clean Up Australia also submitted that it is 'currently supporting bag banning petitions in NSW, Queensland and Victoria' and it noted that in each of these states, the petitions had been 'instigated by members of the community'.<sup>58</sup>

7.49 The Surfrider Foundation Australia provided evidence that consumers are actively seeking alternatives to plastic bags. Ms Rowan Hanley told the committee that:

Surfrider initiated a program like a borrow and bring back bags scheme. We are hoping to make Avalon...eventually single-use-plastics-free. That all began when a bunch of women got together and sewed bags made of recycled material. By June there will be seven boxes all around Avalon that

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53 Mr Andrew McNee, Department of the Environment, *Committee Hansard*, 26 February 2016, p. 17.

54 Clean Up Australia, *Submission 9*, p. 9.

55 Ms Rachel Walmsley, EDOs of Australia, *Committee Hansard*, 18 February 2016, p. 69.

56 Mr Jeff Angel, Total Environment Centre, *Committee Hansard*, 18 February 2016, p. 48.

57 Clean Up Australia, *Submission 9*, p. 10.

58 Clean Up Australia, *Submission 9*, p. 10.

will be filled with these recycled bags so that, if you forget to bring your own bag, instead of getting a plastic bag from Woolies, you can just borrow one of these and bring it back.<sup>59</sup>

7.50 Following the meeting of Environment Ministers on 29 February 2016, it was reported that New South Wales and Queensland would continue to explore options to ban light-weight single-use plastic bags, and explore a coordinated approach with Victoria.<sup>60</sup> However, it was argued by NELA that a coordinated national approach was required and recommended that the Australian Government should be instrumental in securing nationally applicable measures to promote the uptake and application of biodegradable and oxodegradable plastic wherever it is used including a ban on non-biodegradable, single-use plastic bags.<sup>61</sup>

### ***Ban on products containing microbeads***

7.51 The committee received a large number of submissions, and over 700 form letters calling for a national ban on the use of microbeads in cosmetic and personal care products. For example, the National Environmental Law Association recommended that the Australian Government legislate for the substitution and phasing-out of microbeads where manufactured locally, and the restriction on the import of products containing such content.<sup>62</sup> Similarly, the Total Environment Centre described microbeads as 'problematic' and called for a ban on microbeads in 'cosmetics, personal care products, laundry detergents and cleaning products and paint'.<sup>63</sup>

7.52 The Department of the Environment presented evidence of strong community-based support for manufacturers to phase-out microbeads. Mr Stephen Oxley, Department of the Environment, stated that:

...we are seeing an increasingly well-informed consumer movement bringing pressure to bear on both manufacturers and on the retail sector against the use of microplastics in personal care products. A number of significant manufacturers have indicated their intention to phase-out microplastics, or have already stopped using them, and a number of large retail chains have also indicated that their intention is to stop selling

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59 Ms Rowan Hanley, Surfrider Foundation Australia, *Committee Hansard*, 18 February 2016, p. 62.

60 James Robertson and Lucy Cormack, 'Large states delay action on bag ban at environmental roundtable', *The Sydney Morning Herald*, <http://www.smh.com.au/nsw/large-states-delay-action-on-bag-ban-at-environmental-roundtable-20160229-gn6mwk.html>, (accessed 4 March 2016).

61 National Environmental Law Association, *Submission 132*, p. 16.

62 National Environmental Law Association, *Submission 132*, p. 20.

63 Total Environment Centre, *Submission 1*, p. 8.

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products that use microplastics. There is a significant movement towards that outcome at the moment.<sup>64</sup>

7.53 Banning the use of microbeads in cosmetic and personal care items has been discussed around the world with government and industry initiatives in Europe, the US and Australia. In 2012, Unilever announced that all its products worldwide would be microplastic free by 2015 and subsequently, a number of other multinationals such as Oral B (Procter and Gamble Australia), L'Oreal and Johnson&Johnson made similar announcements.<sup>65</sup> In January 2016, Coles, Aldi and Woolworths announced their intention to phase-out the use of microbeads in store brand products by 2017.<sup>66</sup>

7.54 In March 2015, the Canadian House of Commons voted unanimously for the government to take immediate action to add microbeads used in personal care products to the List of Toxic Substances under the Canadian Environmental Protection Act 1999. In July 2015, Environment and Climate Change Canada conducted a scientific review and analysis of over 130 scientific papers, and consulted with experts on the impact of microbeads on the environment. As a result of this research, proposed regulations were developed, and consultation with stakeholders occurred during 2015 and early 2016.<sup>67</sup>

7.55 Similarly, the US House of Representatives passed the Microbead Free Waters Act of 2015 in early December 2015, which would commence the phase-out of microbeads in cosmetic and personal care items by 1 July 2017. The Bill will now go to the Senate for consideration.<sup>68</sup>

7.56 In Australia, there have also been proposals to ban microbeads. In 2014, the then New South Wales Environment Minister, the Hon Rob Stokes MP, called for a national ban on manufacturing and selling polyethylene microbeads in personal care

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64 Mr Stephen Oxley, Department of the Environment, *Committee Hansard*, 26 February 2016, p. 13.

65 For a list of industry announcements see: <http://www.beatthemicrobead.org/en/industry>.

66 Rachel Brown, 'Aldi joins Coles and Woolies in microbead ban', *The Sydney Morning Herald*, 14 January 2016, <http://www.smh.com.au/business/consumer-affairs/aldi-joins-coles-and-woolies-in-microbead-ban-20160113-gm5hwk.html>, (accessed 28 January 2016).

67 Environment and Climate Change Canada, 'Proposed Regulations for Microbeads in Personal Care Products Used to Exfoliate or Cleanse', <https://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=3A8EA7D7-1&offset=1> (accessed 30 March 2016)

68 Milman, O, 'US to ban soaps and other products containing microbeads', *The Guardian*, 9 December 2015, <http://www.theguardian.com/us-news/2015/dec/08/us-to-ban-soaps-other-products-containing-microbeads> (accessed 9 December 2015); and Milman, O, 'Congress to vote on bill to ban microbead hygiene products in US', *The Guardian*, 19 November 2015, <http://www.theguardian.com/us-news/2015/nov/18/congress-vote-ban-microbeads-beauty-soap-toiletries-plastic>, (accessed 9 December 2015), See also, Ms Ellen Geraghty, National Environmental Law Association, *Committee Hansard*, 18 February 2016, p. 29 and p. 31.

products. He also announced that the NSW Government would convene an industry working group with the aim of phasing out microbeads by 2016.<sup>69</sup>

7.57 More recently, plans to achieve a voluntary phase-out of products containing microbeads by no later than July 2018 was announced by federal, state and territory Environment Ministers in December 2015. On 29 February 2016, the Hon Greg Hunt MP, Minister for the Environment, also announced that the Australian Government will continue to support a voluntary phase out of microbeads, however if this does not achieve what is in effect a ban by 1 July 2017, then the Australian Government will implement a ban legislatively.<sup>70</sup>

7.58 Submitters generally welcomed the phase-out of microbeads with Householders' Options to Protect the Environment Inc. describing it as having a 'significant impact on the amount of plastic that enters the marine environment'.<sup>71</sup> However, not all submitters supported the phase-out approach. Ms Ellen Geraghty, NELA, noted that there is currently sufficient evidence that microbeads are having negative impacts on the environment, and more evidence of this may emerge in the future. This evidence, coupled with the difficulty, or even near impossibility, of mitigating the problem of microbeads, was considered by Ms Geraghty, as warranting a ban of microbeads.<sup>72</sup>

7.59 A further concern with a phase-out period rather than an immediate ban was raised by Ms Crick from the Surfrider Foundation Australia. Ms Crick stated that a phase-out period may allow companies to 'find loopholes through definitional jargon that will allow them to continue to use microbeads in their products under different scientific names'. Ms Crick added:

We should be leading the ban on microbeads. We should not be waiting for another year or 18 months for the three supermarkets to say that they will take them out of their exfoliating creams. What about laundry detergents and toothpaste?<sup>73</sup>

7.60 Clean Up Australia was more vocal in its criticism of the lack of an immediate ban—it described Australia's inaction on banning microbeads as 'a failure of public

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69 'NSW to push for national ban on micro-plastic pollutants', NSW Liberal Party, 28 August 2014, <https://members.nsw.liberal.org.au/news/state-news/nsw-push-national-ban-micro-plastic-pollutants>, (accessed 1 December 2015).

70 The Hon. Greg Hunt MP, 'Federal Government strengthens efforts to tackle plastic waste' 29 February 2016, <http://www.environment.gov.au/minister/hunt/2016/pubs/mr20160229a.pdf> (accessed 4 March 2016).

71 Householders' Options to Protect the Environment, *Submission 3*, p. 2.

72 Ms Ellen Geraghty, National Environmental Law Association, *Committee Hansard*, 18 February 2016, p. 31.

73 Ms Susie Crick, Surfrider Foundation Australia, *Committee Hansard*, 18 February 2016, p. 65.

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policy to meet its duties and obligations', and recommended that the Australian Government take immediate action to ban microbeads.<sup>74</sup>

7.61 The committee also received evidence in relation to two other issues of concern. Dr Browne cautioned that any replacement to microbeads currently used should be examined to ensure that it does not cause larger effects than microbeads.<sup>75</sup> Mr Angel, Total Environment Centre, pointed to the issue of imported products containing microbeads.<sup>76</sup>

7.62 The committee notes that banning microbeads in cosmetics could be implemented through an amendment to the Cosmetics Standard. The Standard is a legislative instrument made under the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cth) (ICNA Act). The ICNA Act regulates ingredients in cosmetic products as 'industrial chemicals' and its objects include to provide for 'national standards for cosmetics imported into, or manufactured in, Australia and the enforcement of those standards'.<sup>77</sup> The ICNA Act also provides that the Health Minister, may, by legislative instrument, determine standards for cosmetics imported into, or manufactured in, Australia, having regard to Australia's international obligations.<sup>78</sup>

7.63 Cosmetics are defined broadly in the ICNA Act and include a range of personal products, including those in which microbeads might be found such as facial-cleansers, shampoos, and toothpaste. However, other products containing microbeads, such as cleaning and laundry products, are not covered by the Cosmetics Standard. Many of these products are imported from overseas. Prohibition of their import may be possible through the listing of products containing microbeads under the Customs (Prohibited Imports) Regulations 1956. The importation of many goods into Australia is prohibited under the regulations. However, the listing would not prevent the manufacture of such products in Australia.

7.64 A further avenue for banning products containing microbeads may be through the consumer protection regime. The *Competition and Consumer Act 2010* provides for the Commonwealth Minister to impose bans on certain kinds of consumer goods on the basis that they will or may cause injury to any person.<sup>79</sup>

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74 Clean Up Australia, *Submission 9*, p. 11.

75 Dr Mark Browne, *Committee Hansard*, 18 February 2016, p. 9.

76 Mr Jeff Angel, Total Environment Centre, *Committee Hansard*, 18 February 2016, p. 49.

77 *Industrial Chemicals (Notification and Assessment) Act 1989*, paragraph(3)(b).

78 *Industrial Chemicals (Notification and Assessment) Act 1989*, s. 81

79 *Competition and Consumer Act 2010*, Schedule 2, s. 114.

### ***Listing as a hazardous substance***

7.65 During the course of the inquiry, the committee considered whether listing plastic as a hazardous substance would provide increased opportunities for the regulation of waste management, and plastic manufacturers and producers.

7.66 The National Environmental Law Association noted that 'classification of plastic as a hazardous substance is a potential avenue to explore particularly in relation to nurdles and microbeads'.<sup>80</sup> Dr Mark Browne and co-authors submitted that reclassifying plastic as a hazardous material would help mitigate plastic pollution while Tangaroa Blue stated that 'classifying plastic waste as hazardous needs to become part of the discussion in our approach to the issue in Australia'.<sup>81</sup>

7.67 Similarly, Mr Sahukar told the committee that such a measure:

...should certainly be considered, given the impacts are pretty clear and are growing. Whether that needs to happen at a national level in terms of national legislation, or whether it can happen through state pollution laws, is an open question. Both strategies should be looked at. I would have to refresh my memory on the composition of the hazardous chemical legislation, but I know there is a federal scheme under the NICNAS organisation, and then there is some state legislation in relation to hazardous chemicals and so on. Certainly those avenues should be explored.<sup>82</sup>

7.68 Mr Sahukar suggested that through COAG, environment ministers could require state and territory environment protection agencies to examine 'existing pollution laws and the tools under them'. This review could prove useful as plastics were not a focus at the time of drafting, and there should be a recognition that legislation needs to be adaptable.<sup>83</sup>

### ***Clean Water Act***

7.69 In exploring legislative options to mitigate the threat of marine plastic pollution, the committee sought evidence on whether the United States Clean Water Act 1972 (CWA) could provide a model for federal legislation in Australia.

7.70 The CWA established a structure for regulating discharges of pollutants into the waters of the United States, and regulated quality standards for surface waters. The provisions of the Act:

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80 National Environmental Law Association, answers to question on notice, 28 February 2016 (received 29 March 2016), p. 6.

81 Dr Mark Browne and co-authors Professor Tony Underwood, Professor Gee Chapman, Professor Emma Johnston, *Submission 21*, p. 4; Tangaroa Blue, *Submission 60*, p. 2.

82 Mr Nari Sahukar, EDOs of Australia, *Committee Hansard*, 18 February 2016, p. 68.

83 Mr Nari Sahukar, EDOs of Australia, *Committee Hansard*, 18 February 2016, p. 68.

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- gave the EPA authority to implement pollution control programs such as setting wastewater standards for industry;
  - maintained existing requirements to set water quality standards for all contaminants in surface waters;
  - made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions;
  - funded the construction of sewage treatment plants under the construction grants program; and
  - recognized the need for planning to address the critical problems posed by nonpoint source pollution.<sup>84</sup>

7.71 Implementation of national environment protection legislation in the US is the joint responsibility of federal organisations such as the US Environment Protection Agency (EPA), and state governments. The EPA is described by the National Environmental Law Association as a 'powerful enforcement body'.<sup>85</sup>

7.72 One of the advantages of the CWA is the regulation of plastic manufacturing, handling, and transportation facilities under the *National Pollutant Discharge Elimination System* which can be used to prevent the movement of nurdles from industrial practices, into the marine environment.<sup>86</sup> It does not however, regulate the consumer use of microbeads.<sup>87</sup>

7.73 The National Environmental Law Association noted that while a national Clean Water Act modelled on US legislation may provide some advantages, it would 'require a complete change to arrangements for environmental regulation'. It further noted that the US legislative arrangement has been described as 'overly complex and weakened by significant regulatory gaps so there is no strong legislative basis at the national level for targeting marine plastic pollution'.<sup>88</sup>

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84 National Environmental Law Association, Answer to question on notice, 18 February 2016, (received 29 March 2016), p. 8.

85 National Environmental Law Association, Answer to question on notice, 18 February 2016, (received 29 March 2016), p. 7.

86 National Environmental Law Association, Answer to question on notice, 18 February 2016, (received 29 March 2016), p. 8.

87 National Environmental Law Association, Answer to question on notice, 18 February 2016, (received 29 March 2016), p. 9.

88 National Environmental Law Association, Answer to question on notice, 18 February 2016, (received 29 March 2016), p. 7.

### *Use of existing regulation*

7.74 While some submitters supported the introduction of legislation targeted at marine plastic pollution, other submitters argued that greater use of existing legislative measures would assist in decreasing plastic pollution.

7.75 One area of concern was the lack of enforcement by state and territory governments of their environmental powers. The Total Environment Centre noted that it is already an offence in every Australian jurisdiction to dispose of waste in the stormwater system. However, poor enforcement action has resulted in nurdles and plastic pellets used in the manufacturing sector entering the stormwater system. The Total Environment Centre commented:

The only reason this problem exists is due to a poor effort to enforce regulations and inform the industry that it is expected to ensure nurdles do not migrate from their facilities or transport systems.<sup>89</sup>

7.76 Similarly, Ms Taylor from the Tangaroa Blue Foundation commented that there is a lack of compliance with state and territory environmental laws and noted that the Tangaroa Blue Foundation has been tracking plastic resin pellets used by industry since 2007. Pellets are now being found in significant numbers on remote beaches. Unofficial site inspections of public land near factories conducted by the Tangaroa Blue Foundation found:

Six out of eight factories had leaching of pellets, and for some of them there were phenomenal amounts.<sup>90</sup>

7.77 Ms Taylor reported that funding had been received in 2015 from the Victorian Government to run Operation Clean Sweep, which is a US industry led program that was run by the industry to stop resin pellets at the source. In addition, the Tangaroa Blue Foundation have engaged PACIA, the national body representing the chemicals and plastic industry in Australia, to help review the program to make sure it was appropriate for the Australian industry. A website had been launched about Operation Clean Sweep.<sup>91</sup> Ms Taylor expressed frustration that this work had to be carried out by the Tangaroa Blue Foundation rather than the state environmental protection agencies.<sup>92</sup>

7.78 Another area where greater enforcement action was suggested, was compliance of foreign ships with MARPOL Annex V. Take3 stated that it continues to 'retrieve "fresh" foreign pollutants from our coastline that are clearly from ships moored off coastal ports (eg. Newcastle, Wollongong) and passing along the

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89 Total Environment Centre, *Submission 1*, p. 11; see also National Toxics Network, *Submission 4*, p. 5.

90 Ms Heidi Taylor, Tangaroa Blue Foundation, *Committee Hansard*, 10 March 2016, pp. 32–33.

91 Ms Heidi Taylor, Tangaroa Blue Foundation, *Committee Hansard*, 10 March 2016, pp. 32–33.

92 Ms Heidi Taylor, Tangaroa Blue Foundation, *Committee Hansard*, 10 March 2016, p. 33.

Australian coast'. Take3 concluded that it 'would like to see stronger measures and greater controls to address this clear and present problem'.<sup>93</sup>

7.79 The Australian Maritime Safety Authority (AMSA) told the committee that it has undertaken a number of investigations into the discharge of garbage in Australian waters, which have been successfully prosecuted under the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (the POTS Act).<sup>94</sup> Under Port State Control provisions, AMSA has the power to detain ships on a number of grounds, including safety, and non-compliance with waste management regulations. Mr Matt Johnston, Manager of Marine Environment Standards at AMSA told the committee that in 2014 there were 270 ships detained, with 10.4 per cent detained for failing to comply with waste management standards. As a result of these detentions, two prosecutions were undertaken. Similarly in 2015, three prosecutions occurred.<sup>95</sup>

7.80 AMSA also stated that it is now also considering alternative compliance and enforcement options, such as issuing directions and improvement notices, in order to deter offenders from discharging garbage in Australian waters.<sup>96</sup> Mr Toby Stone, AMSA, also told the committee that in addition to compliance and enforcement measures, extensive education campaigns have been initiated to ensure that ships' crews are aware of waste management requirements. Mr Stone explained:

...there is a 'Welcome to Australia' DVD which we put out to ships through the agents, and through the surveyors. We also work with other organisations, like AUSMEPA. AUSMEPA is the Australian Marine Environment Protection Association, and they work with us. We have jointly produced this video, which we try and get across to ships' masters and the crew as to what you cannot do in Australia. That is all the foreign ships coming into Australian waters.<sup>97</sup>

7.81 AMSA highlighted the 'zero tolerance' under MARPOL Annex V and concluded that 'overall, we feel that the system is working in Australia and that it is working globally.'<sup>98</sup>

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93 Take3, *Submission 72*, p. 5.

94 Australian Maritime Safety Authority, *Submission 68*, pp. 3–4.

95 Mr Matt Johnston, Australian Maritime Safety Authority, *Committee Hansard*, 26 February 2016, p. 23.

96 Australian Maritime Safety Authority, *Submission 68*, pp. 3–4.

97 Mr Toby Stone, Australian Maritime Safety Authority, *Committee Hansard*, 26 February 2016, p. 23.

98 Mr Toby Stone, Australian Maritime Safety Authority, *Committee Hansard*, 26 February 2016, p. 23.

## **Committee view**

7.82 The committee supports the view that source reduction strategies must also include increased product stewardship, changes to production and manufacturing practices, and regulatory reform.

7.83 Producers and manufacturers are able to effect significant change through design and innovation in packaging, and participation in voluntary schemes such as the Australian Packaging Covenant. The committee believes that increased product stewardship through increased reporting and compliance under the Australian Packaging Covenant is also critical. In addition, the committee considers that product stewardship should be recognised in the revised Threat Abatement Plan.

7.84 The committee is of the view that voluntary product stewardship and producer responsibility should also be supported with regulatory and legislative reform. In particular, the banning of the use of single-use lightweight plastic bags was considered, and the evidence indicates that this is an appropriate measure considering the volume of these items found in the marine environment. The committee believes that states and territories which have not already implemented a ban should be encouraged to do so. The committee also believes that alternatives, such as biodegradable plastic bags, should not be encouraged under such a ban until there is conclusive evidence that such alternatives do not pose a risk to the environment.

7.85 A ban on the importation and production of personal care products which contain microbeads also received widespread support during the inquiry. The committee notes the Australian Government's commitment to introducing a legislative ban if a voluntary, industry initiated phase-out does not result in the removal of all such items by 2017. However, the committee believes that the evidence of significant microplastic pollution resulting from the use of such products requires an immediate ban.

7.86 The committee notes that a range of alternative regulatory and legislative mechanisms are also available, including the use of state and territory environmental protection legislation. The committee supports initiatives that increase the use of such legislation, particularly in relation to preventing the movement of nurdles into the marine environment through the stormwater system.