

Chapter 5

Regulation of mitigation and deterrent measures under the *Environment Protection and Biodiversity Conservation Act 1999*

5.1 This chapter focuses on paragraph (b) of the terms of reference for this inquiry: the regulation of mitigation and deterrent measures under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Essentially, this chapter examines the responsibilities with respect to the lethal shark control programs operated by state governments arising from the Commonwealth's principal piece of environmental legislation.

5.2 This chapter:

- outlines the referral, assessment and approval process for actions that are otherwise prohibited by the EPBC Act;
- discusses the limitations of the EPBC Act with respect to state government shark control programs that pre-date the commencement of the EPBC Act; and
- examines evidence received about the exemptions from the EPBC Act referral, assessment and approval process granted to state governments to operate certain shark control measures.

5.3 Some evidence was received which commented on changes to state legislation, such as amendments to the *Fisheries Management Act 1994* (NSW) to facilitate shark management trials in New South Wales by way of a plan of management approved by the relevant minister.¹ This evidence helps to ascertain a full picture of how shark control programs are regulated. However, the committee's deliberations and report focus on matters that are linked to the Commonwealth's legislative powers and responsibilities, in line with the terms of reference for the inquiry and the general remit of a parliamentary committee at the Commonwealth level of government.

Relevance of the EPBC Act in relation to sharks in Australian waters

5.4 Among other objects, the EPBC Act seeks to:

- provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance;
- promote the conservation of biodiversity; and

1 See EDOs of Australia, *Submission 42*, p. 5.

- assist in the co-operative implementation of Australia's international environmental responsibilities.²

5.5 The following matters of national environmental significance identified in the EPBC Act are particularly relevant to this inquiry:

- listed threatened species and ecological communities;
- listed migratory species;
- Commonwealth marine areas; and
- the Great Barrier Reef Marine Park.

5.6 Nine species of sharks are listed threatened species under the EPBC Act (see Table 5.1). In addition, Australia is a signatory to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention). Species listed in the Bonn Convention, and other conventions relating to migratory species to which Australia is a signatory, are listed migratory species under the EPBC Act. The Department of the Environment and Energy (DoEE) advised that 18 species of sharks and rays are listed as part of the Bonn Convention, including 11 which occur in Australian waters.³

Table 5.1: Shark species listed as threatened species under the EPBC Act

Conservation category	Species
Critically endangered	Grey Nurse Shark (<i>Carcharias taurus</i>) – East coast population Speartooth Shark (<i>Glyphis glyphis</i>)
Endangered	Northern River Shark (<i>Glyphis garricki</i>)
Vulnerable	Grey Nurse Shark (<i>Carcharias taurus</i>) – West coast population Whale Shark (<i>Rhincodon typhus</i>) White Shark (<i>Carcharodon carcharias</i>) Dwarf Sawfish, Queensland Sawfish (<i>Pristis clavata</i>) Freshwater Sawfish (<i>Pristis microdon</i>) Green Sawfish, Dindagubba, Narrowsnout Sawfish (<i>Pristis zijsron</i>)

Source: DoEE, 'Sharks in Australian waters', www.environment.gov.au/marine/marine-species/sharks (accessed 28 April 2017).

2 *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), ss. 3(1)(a), (c) and (e).

3 These species are as follows: White shark (*Carcharodon carcharias*); basking shark (*Cetorhinus maximus*); narrow sawfish (*Anoxypristis cuspidata*); dwarf sawfish (*Pristis clavata*); green sawfish (*Pristis zijsron*); largetooth sawfish (*Pristis pristis*); reef manta ray (*Manta alfredi*); giant manta ray (*Manta birostris*); pygmy devilray (*Mobula ereegoodootenkee*); Japanese devilray (*Mobula japonica*); and bentfin devilray (*Mobula thurstoni*). Department of the Environment and Energy (DoEE), Answers to questions on notice, 16 March 2017 (received 19 April 2017), p. 7.

Overview of the EPBC Act referral, assessment and approval process

5.7 This section provides a brief overview of the EPBC Act referral, assessment and decision-making processes.⁴

5.8 Under the EPBC Act, a person must not take an action that has, will have, or is likely to have, a significant impact on any matter of national environmental significance without approval from the Minister for the Environment and Energy (the minister) or a decision that approval is not needed. A person who proposes to take such an action must refer that action to the minister. The EPBC Act outlines a process for deciding whether approval of the action is required (Part 7). Actions that the minister considers will have, or are likely to have, a significant impact on a matter of national environmental significance are 'controlled actions' and require an environmental assessment and the minister's approval under Part 9 of the EPBC Act. In deciding whether an action is a controlled action, the minister must consider '[a]ll adverse impacts (if any) that the action has, will have, or is likely to have on each protected matter'.⁵

5.9 Following a decision that a proposed action is a controlled action, the EPBC Act provides for the following levels of assessment:

- accredited assessment (for example, in accordance with a relevant bilateral agreement between the Commonwealth and a state or territory);
- assessment on information provided when the proposed action is referred;
- assessment on preliminary documentation;
- assessment by public environment report; and
- assessment by public inquiry.⁶

5.10 The minister may decide to approve an action, approve an action subject to conditions or not approve the action. In doing so, the minister must consider the impacts of the proposed action on the matters protected by the EPBC Act and other economic and social matters.⁷ The minister must take into account:

- the principles of ecologically sustainable development;
- the outcomes of the assessment of the proposed action's impacts;
- referral documentation;

4 For further detail, refer to the DoEE's submission (*Submission 55*). In particular, Attachment 1 to the submission comprises flow charts that provide a detailed summary of the referral, assessment and decision-making processes.

5 DoEE, *Submission 55*, pp. 4–5.

6 DoEE, *Submission 55*, pp. 4, 9; and 'Environment assessment and approval process', www.environment.gov.au/protection/environment-assessments/assessment-and-approval-process (accessed 2 December 2016).

7 EPBC Act, s. 136(1).

- community and stakeholder comment;
- any other relevant information available on the impacts of the proposed action; and
- relevant comments from other Commonwealth, state and territory ministers, and members of the public (such as information on social and economic factors).⁸

5.11 Furthermore, the DoEE noted that, where species are, have been, or are likely to be impacted by a proposed action, the minister must have regard to additional factors when making their decision. Among others factors, the minister must:

- have regard to the approved conservation advices for the particular species;
- not act inconsistently with Australia's obligations under the Biodiversity Convention, the Bonn Convention, the Apia Convention and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); and
- not act inconsistently with a recovery plan or threat abatement plan.⁹

Interaction between the EPBC Act and existing shark control programs

5.12 In considering the implications of the EPBC Act for shark control programs operated by state governments, and by extension, the role of the Commonwealth in relation to oversight of these programs, several aspects of the EPBC Act are significant. This section examines:

- the exemptions provided under the EPBC Act for prior authorisations and lawful continuing use of land, sea or seabird prior to the commencement of the EPBC Act;
- the meaning of 'significant' in relation to the EPBC Act's terminology of 'a significant impact on any matter of national environmental significance';
- the development of recovery plans and listing of key threatening process; and
- assessment arrangements, including bilateral agreements between the Commonwealth and the states.

8 The minister may also take into account the environmental history of the individual or company proposing to take the action, including in the case of companies the environmental histories of their executive officers, their parent companies and the executive officers of their parent companies. The minister must not consider any matters that they are not required or permitted to consider under Division 1 of Part 9. See EPBC Act, Part 9, Division 1, Subdivision B; DoEE, 'Environment assessment and approval process', www.environment.gov.au/protection/environment-assessments/assessment-and-approval-process (accessed 2 December 2016); and *Submission 55*, p. 5.

9 DoEE, *Submission 55*, p. 5.

5.13 In addition, section 158 of the EPBC Act enables the minister to exempt a person proposing to take an action from the Act's referral, assessment and/or approval requirements. This provision is addressed in a separate section later in this chapter.

Exemptions for prior authorisation and continuing use

5.14 The EPBC Act came into effect on 16 July 2000. Under sections 43A and 43B of the Act, actions that were legally authorised before that date (under Commonwealth, state or territory law), and lawful continuations of use of land, sea or seabed that were occurring immediately before that date, are exempted from the EPBC Act's assessment and approval provisions.¹⁰

5.15 These provisions of the EPBC Act are significant for the long-running lethal shark control programs in New South Wales (first introduced in 1937) and Queensland (commenced 1962). Both jurisdictions consider their actions are covered by the continuing use exemption provided by section 43B of the EPBC Act.¹¹

5.16 The EDOs of Australia submitted that, as a result of the continuing use exemption provided under section 43B of the EPBC Act, these established state government shark control programs 'have not been subject to assessment under modern environmental standards'. The EDOs of Australia's submission argued that the 'current state of knowledge in relation to the importance of sharks in the marine environment and the environmental harm caused by these activities', means that continued reliance on these exemptions is 'inappropriate'. Accordingly, the EDOs of Australia concluded that the historical shark control programs should be subject to a 'full environmental assessment that considers both the environmental impact and alternative beach safety measures'.¹²

5.17 Although section 43B of the EPBC Act provides for a continuing use exemption, there are limits to the scope of this exemption. Importantly, subsection 43B(3) provides that an enlargement, expansion or intensification of use of the land, sea or seabed is not covered by the exemption. In addition, any change in the location of where the use of the land, sea or seabed is occurring, or any change in the nature of the activities comprising the use, that results in a substantial increase in the impact of the use on the land, sea or seabed is not covered by the exemption.

5.18 The limitations of subsection 43B were considered as part of the first New South Wales north coast trial. Although the New South Wales and Australian Governments consider that the long-running shark control program is exempt from the EPBC Act assessment process, correspondence between government departments indicate that the north coast trial of nets and SMART drum lines is covered by the

10 DoEE, *Submission 55*, p. 6.

11 See DoEE, *Submission 55*, p. 7; Queensland Department of Agriculture and Fisheries, *Submission 32*, p. 4.

12 EDOs of Australia, *Submission 42*, p. 3 (emphasis omitted).

continuing use exemption. That is, if either measure has the potential to have a significant impact on a matter of national environmental significance, the EPBC Act referral and assessment process applies. This trial and the decisions made about the application of the EPBC Act are discussed later in this chapter.

'Significant' impact on a matter of national environmental significance

5.19 For actions that are not exempted from the EPBC Act, whether an action is considered to be a controlled action that requires assessment and approval under the EPBC Act depends on whether the minister considers the action will have, or are likely to have, a significant impact on a matter of national environmental significance.

5.20 Officers from the DoEE explained that matters are assessed against significant impact guidelines.¹³ The guidelines that address matters of national environmental significance define a significant impact as one that:

...is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts...[Proponents] should consider all of these factors when determining whether an action is likely to have a significant impact on matters of national environmental significance.¹⁴

5.21 A significant impact is considered 'likely' in the following circumstances:

To be 'likely', it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility. If there is scientific uncertainty about the impacts of your action and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on the environment.¹⁵

5.22 The guidelines set out significant impact criteria for each matter of national environmental significance. For example, the guidelines provide that an action will require approval if the action has, will have, or is likely to have a significant impact on a species that is categorised as extinct in the wild, critically endangered, endangered

13 See Mr Matthew Cahill, First Assistant Secretary; and Mr Dane Roberts, Director, Northern NSW Assessments, Assessments (NSW/ACT) and Fuels, DoEE, *Committee Hansard*, 16 March 2017, p. 23.

14 DoEE, *Matters of National Environmental Significance: Significant impact guidelines 1.1*, 2013, www.environment.gov.au/system/files/resources/42f84df4-720b-4dcf-b262-48679a3aba58/files/nes-guidelines_1.pdf (accessed 28 April 2017), p. 2.

15 DoEE, *Matters of National Environmental Significance: Significant impact guidelines 1.1*, p. 3.

or vulnerable.¹⁶ Significant impact criteria are provided for each of these categories; for example, the criteria for species listed as vulnerable is as follows:

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

- lead to a long-term decrease in the size of an important population of a species
- reduce the area of occupancy of an important population
- fragment an existing important population into two or more populations
- adversely affect habitat critical to the survival of a species
- disrupt the breeding cycle of an important population
- modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat
- introduce disease that may cause the species to decline, or
- interfere substantially with the recovery of the species.¹⁷

5.23 Evidence from the DoEE confirms that some features of state government shark control programs can be assessed as not requiring referral because it is considered that the measure will not have a significant impact on a matter of national environmental significance.

5.24 This was recently demonstrated by correspondence between New South Wales and Commonwealth departmental officers in relation to SMART drum lines. As noted in Chapter 3, SMART drum lines differ from traditional drum lines in that they are not designed to kill sharks. In October 2016, it was announced that the number of SMART drum lines in use in New South Wales would increase to up to 100. The proposal prompted New South Wales departmental officers to write to the Commonwealth Department of the Environment and Energy to seek confirmation that a referral was not required.¹⁸

16 DoEE, *Matters of National Environmental Significance: Significant impact guidelines 1.1*, p. 8.

17 DoEE, *Matters of National Environmental Significance: Significant impact guidelines 1.1*, p. 10.

18 Correspondence between the DoEE and the New South Wales Government regarding the trial use of shark mesh nets, tabled 21 October 2016, Senate Environment and Communications Legislation Committee, Supplementary Budget Estimates 2016–17, p. [6].

5.25 As part of the self-assessment undertaken by the New South Wales department, it was acknowledged that:

While the SMART drumlines have the potential to interact with many threatened, protected and migratory species listed under both State and Commonwealth legislation, the results to date clearly indicate that these drumlines are not likely to have a significant impact on either target shark or non-target species.¹⁹

5.26 After considering the self-assessment undertaken by the New South Wales department, the Commonwealth department advised that the expanded SMART drum line program did not require referral 'at this stage'. The following caveat was made, however:

If the environmental assessment or results of the operation of the program indicate outcomes for protected species that are inconsistent with the trial, you should carefully consider the need to refer the action for assessment and decision.²⁰

5.27 Mr Matthew Cahill, the first assistant secretary at the DoEE who advised the New South Wales department of this decision, noted that this example highlights the need to consider 'the specifics around the matter'. In his evidence to the committee, Mr Cahill stated:

...you have seen the correspondence where we wrote back [to the New South Wales department] and said, 'In this instance, as long as the outcomes or results of that expansion were consistent with what had happened to date, there is no need to refer.' So it goes very specifically to what is the action being taken.²¹

Recovery plans

5.28 The EPBC Act provides for the development of recovery plans for purposes of the protection, conservation, and management of a listed threatened species.²² Essentially, a recovery plan is intended to 'guide actions to help a particular listed threatened species recover'.²³

5.29 Recovery plans made under the EPBC Act are 'are statutory considerations for the minister in deciding whether or not to approve a controlled action that has undergone assessment and proceeded to the approval stage'. The Act provides that the

19 Correspondence between the DoEE and the New South Wales Government regarding the trial use of shark mesh nets, tabled 21 October 2016, Senate Environment and Communications Legislation Committee, Supplementary Budget Estimates 2016–17, p. [6].

20 Correspondence between the DoEE and the New South Wales Government regarding the trial use of shark mesh nets, p. [3].

21 Mr Matthew Cahill and Mr Dane Roberts, DoEE, *Committee Hansard*, 16 March 2017, p. 23.

22 DoEE, *Submission 55*, p. 5.

23 NSW Young Lawyers Animal Law Committee, *Submission 61*, p. 4.

minister 'must not act inconsistently with a recovery plan in deciding whether or not to approve the taking of an action under the EPBC Act, for which that species is a controlling provision of a proposal's assessment'.²⁴

5.30 The DoEE noted that the *Recovery Plan for the White Shark* (2013) and the *Recovery Plan for the Grey Nurse Shark* (2014) both 'identify mortality related to shark control activities (such as beach meshing and drumlining) as one of the two principal and current threats to the species'.²⁵

5.31 The existence of recovery plans for shark species was also noted in other submissions.²⁶ The development and introduction of these plans highlight the importance of the need to minimise actions that could affect the shark population. Several submitters shared the view that lethal shark control programs appear to be inconsistent with these efforts.²⁷

5.32 As noted above, however, the continuing use exemption provided for by the EPBC Act means that the long-running New South Wales and Queensland shark control programs have not been assessed under the EPBC Act. Other actions involving shark mitigation and deterrent measures that commenced more recently and are not covered by the section 43B exemption either have not, or did not, reach the approval stage.²⁸ In its assessment of the then Western Australian Government's proposal to use up to 72 baited drum lines off metropolitan and south west coastal regions of Western Australia for a period of three years, the Western Australian Environmental Protection Authority (EPA) took into account the recovery plan for the white shark. The EPA noted that the recovery plan identified 'the principal threats to the lack of white shark recovery in Australia as mortality resulting from accidental capture by commercial and recreational fishers, and shark control activities'.²⁹

5.33 The EPA considered that a high degree of scientific uncertainty existed as to the 'information and evidence about the south-western white shark population, population trends, and the catch of white sharks from commercial fisheries'. On this basis, the EPA expressed concern that the proposal 'may compromise the viability of

24 DoEE, *Submission 55*, p. 5.

25 DoEE, *Submission 55*, p. 5.

26 See Sydney Coastal Councils Group, *Submission 3*, p. 2; NSW Young Lawyers Animal Law Committee, *Submission 61*, p. 4; Mr Duncan Leadbitter, *Submission 7*, pp. 6–7.

27 For example, see Humane Society International (HSI), *Submission 43*, pp. 14–15; and Project AWARE, *Submission 46*, Attachment 1, p. 2.

28 DoEE, *Submission 55*, p. 5.

29 Western Australian Environmental Protection Authority, *Report and recommendations of the Environmental Protection Authority: Western Australian Shark Hazard Mitigation Drum Line Program 2014–2017 – Director General, Department of the Premier and Cabinet on behalf of the State of Western Australia*, Report No. 1527, September 2014, p. 10.

white sharks at the population level (for the south-western white shark population)' and determined that the proposal should not be implemented.³⁰

Key threatening process

5.34 Under the EPBC Act, certain processes can be identified and listed as a 'key threatening process'. A process can be listed as a key threatening process under the EPBC Act if it could:

- 'cause a native species or ecological community to become eligible for inclusion in a threatened list (other than the conservation dependent category)';
- 'cause an already listed threatened species or threatened ecological community to become more endangered'; or
- 'adversely affect two or more listed threatened species or threatened ecological communities'.³¹

5.35 Assessments of nominations of key threatening processes are undertaken by the Threatened Species Scientific Committee (TSSC). Further information about this process was provided by the DoEE in response to a question on notice as follows:

A key threatening process can be nominated by any person under s194E of the EPBC Act. The priority of nomination is considered along with other nominations received and may be added to the Finalised Priority Assessment List (s194K). If a process is added to the assessment list, it is then assessed by the Threatened Species Scientific Committee with respect to its likely negative effects on multiple species (s188(4)). The Committee makes a recommendation about its eligibility for inclusion on the list. That recommendation is provided to the Minister who makes the final decision about including the process on the EPBC Act list.³²

5.36 After a key threatening process is listed, they minister may establish a threat abatement plan.³³ These plans 'establish a national framework to guide and coordinate Australia's response to key threatening processes'.³⁴

30 Western Australian Environmental Protection Authority, Report No. 1527, pp. ii–iii.

31 DoEE, 'Key threatening processes under the EPBC Act', www.environment.gov.au/biodiversity/threatened/key-threatening-processes (accessed 27 April 2017).

32 DoEE, Answers to questions on notice, 16 March 2017 (received 19 April 2017), pp. 2–3.

33 If the Minister thinks that a threat abatement plan is a feasible, effective and efficient way of abating the process, he must ensure a threat abatement plan is in force. See DoEE, 'Frequently asked questions – key threatening processes', www.environment.gov.au/system/files/pages/10a10e3d-e677-4c5a-ba9a-00bfd70d8db2/files/faq-ktp-tap.pdf (accessed 27 April 2017), p. 2.

34 DoEE, 'Frequently asked questions – key threatening processes', p. 2.

5.37 As key threatening processes are not matters of national environmental significance under the EPBC Act, listing does not trigger obligations under the EPBC Act. Rather, listing a process as a key threatening process 'provides official recognition that a process is a key threat to biodiversity at the national level'. The purpose of this recognition is that it 'raises awareness of how threats to biodiversity are operating across Australia and assists with understanding and prioritising management of these threats'.³⁵ As noted at paragraph 5.11, however, when considering whether to approve a controlled action where species are, have been, or are likely to be impacted by the action, the minister must not act inconsistently with a relevant threat abatement plan.

Assessment of shark control measures

5.38 The DoEE explained that shark nets have undergone assessment as a threatening process on two occasions, as follows:

- Under the former *Endangered Species Protection Act 1992*—on 1 June 1998 the minister accepted advice that shark nets were ineligible to be listed; and
- Under the EPBC Act—on 21 March 2005, the minister agreed with a recommendation that shark nets were ineligible.³⁶

5.39 In addition to these assessments, two further nominations have been received. The DoEE provided the following evidence on how these nominations progressed:

- A nomination received in 2015 was not recommended by the TSSC for inclusion on the assessment list. DoEE added that the nomination 'was carried over into 2016 and again not prioritised'.
- More recently, a nomination for the listing of shark nets has been received for consideration in 2017.³⁷

5.40 Representatives of Humane Society International (HSI), which has sought to have shark nets listed as a key threatening process, advised the following summary of their efforts to date:

We have tried to get it listed. We are actually putting in another submission for this round to get it listed under the EPBC Act. Basically what they are saying, though, is that, because it is concentrated in New South Wales and Queensland, it is not a matter of national interest; it is not occurring on a level of national interest to have it listed under the EPBC Act. But it should be.³⁸

35 DoEE, 'Frequently asked questions – key threatening processes', p. 2.

36 DoEE, Answers to questions on notice, 16 March 2017 (received 19 April 2017), p. 2.

37 DoEE, Answers to questions on notice, 16 March 2017 (received 19 April 2017), p. 2.

38 Ms Jessica Morris, Marine Scientist, HSI, *Committee Hansard*, 17 March 2017, p. 36.

5.41 Furthermore, it was argued that amendments to the EPBC Act have made it more difficult for a process to be listed as a key threatening process compared to similar mechanisms in state legislation:

There were amendments to the EPBC Act to make it harder for nominations to be assessed for listing. Under the New South Wales law, you submit a nomination; the scientific committee has to assess that nomination and make a recommendation to the minister. Under the EPBC Act, there is a filter, so you submit a nomination and then the minister and the committee decide if it is a priority or not. If it is not put on the priority assessment list, it does not get listed. The criteria for what is and is not a priority can allow political decisions to come in. That is a problem with the EPBC Act listing process at the moment.³⁹

5.42 Despite shark nets not being listed as a key threatening process under the EPBC Act, state governments have recognised that these measures will affect matters of national environmental significance (specifically, threatened and protected species, and migratory species). To address this risk, in a letter to the DoEE on the north coast trial, the New South Wales Director-General of the Department of Primary Industries emphasised that 'monitoring of the trial will provide data and information to more accurately gauge the level of that potential impact and would underpin any future assessments or proposals'.⁴⁰

Referral by state government and assessment under bilateral agreements

5.43 The EPBC Act process requires proponents to undertake a self-assessment of whether a proposed action requires referral to the minister. As a result of this, the state governments that develop programs such as shark control measures are required to consider whether these measures have, will have, or are likely to have, a significant impact on any matter of national environmental significance. The DoEE describes the respective roles of the state and territory governments, and the Australian Government, as follows:

State and territory governments need to consider whether shark mitigation measures will have a significant impact on protected matters under the EPBC Act, including shark species, turtles and whales. The Department continues to engage with state agencies to help them understand their obligations under the EPBC Act, including helping them identify any activities which may need to be referred under the EPBC Act.⁴¹

39 Ms Nicola Beynon, Head of Campaigns, HSI, *Committee Hansard*, 17 March 2017, p. 36.

40 Correspondence between the DoEE and the New South Wales Government regarding the trial use of shark mesh nets, tabled 21 October 2016, Senate Environment and Communications Legislation Committee, Supplementary Budget Estimates 2016–17, p. [2].

41 DoEE, *Submission 55*, pp. 4, 9.

5.44 Assessment of a referral can take place within the state jurisdiction if a bilateral agreement under the EPBC Act is in place. The DoEE explained:

Where a bilateral agreement under the EPBC Act is in place with a state or territory, the state or territory may undertake various aspects of the assessment and approval processes where those processes have been found to meet the requirements of the EPBC Act by the Australian Government Environment Minister.⁴²

5.45 This assessment arrangement has been used for proposed shark control programs. In 2014, the then minister determined that the then Western Australian Government's proposed Shark Hazard Mitigation Drum Line Program 2014–2017, which would have involved the deployment of temporary and static drum lines between certain times of the year over three years, was a controlled action under the EPBC Act.

5.46 The EPA assessed the proposal by a Public Environmental Review (PER). In relation to the potential impact of the proposal on matters on national environmental significance, the program was 'assessed by way of an accredited process with the EPA under the bilateral agreement with the Commonwealth Government made under section 45 of the EPBC Act'. The bilateral agreement allowed the minister to 'to rely on the PER process of the State of Western Australia in assessing the action under the EPBC Act'.⁴³

5.47 Another aspect of the relationship between tiers of government is that it appears necessary for the DoEE, in undertaking a risk-based approach to regulation with limited resources, to accept certain information presented by state governments without seeking further details. This is apparent from the committee's questioning of DoEE officers regarding the effects of shark encounters on tourism, which was cited as a reason given by the New South Wales Government to seek an exemption from the EPBC Act's assessment and approval process (this particular matter is discussed later in this chapter). In relation to this, DoEE officers confirmed that the letter from the New South Wales Government outlining these effects on tourism activity were the only details provided by the government in support of this argument. When confirming that a study or further information in support of these statements was not provided, Mr Cahill, a first assistant secretary at DoEE explained:

As a regulator you make judgement calls on which assertions you need to test. Given it came from a tier of government and it was a matter that they were considering in their own statutory process, we relied on that advice.⁴⁴

42 DoEE, *Submission 55*, p. 4.

43 Western Australian Environmental Protection Authority, Report No. 1527, p. 19.

44 Mr Matthew Cahill, DoEE, *Committee Hansard*, 16 March 2017, p. 22.

Exemptions in the national interest

5.48 As noted above, established lethal shark control programs that pre-date the commencement of the EPBC Act are not required to be assessed under the EPBC Act. In addition to this statutory exemption, individual exemptions granted under section 158 of the EPBC Act have been relevant for enabling trials of shark control programs by state governments.

Overview of section 158 exemptions

5.49 Under section 158 of the EPBC Act, a person proposing to take a controlled action, or the designated proponent of an action, may apply in writing to the minister for an exemption from a specified provision of part 3 or chapter 4 of the EPBC Act. That is, the minister may, by written notice, exempt a specified person from any or all steps in the assessment and approvals process in relation to a specified action. However, the minister may grant exemptions under section 158 only when satisfied that it is in the national interest.⁴⁵

5.50 The DoEE explained that the provisions of section 158 'do not prescribe or limit the matters the minister may consider in determining the national interest in taking a particular action'. In addition, beyond a requirement that an application for an exemption must be in writing, the DoEE advised that there are no regulations that prescribe what must be included in an application.⁴⁶ Furthermore, the DoEE confirmed that the minister is not required to specify an end date for a particular action. Mr James Tregurtha, an acting first assistant secretary at the DoEE, commented:

Usually you would expect that an action would have a start and an end date, but it's possible to conceive of an action that may not have an end date which could be granted a national interest exemption. I won't get into hypotheticals, but it is possible to conceive of that.⁴⁷

5.51 The EPBC Act, however, does establish timeframes for decision-making as well as for publication of both the notice exempting an action and the minister's reasons for granting the exemption.⁴⁸

45 The EPBC Act provides the following guidance on the scope of national interest: 'In determining the national interest, the Minister may consider Australia's defence or security or a national emergency. This does not limit the matters the Minister may consider'. EPBC Act, s. 158(5).

46 DoEE, *Submission 55*, pp. 7–8.

47 Mr James Tregurtha, Acting First Assistant Secretary, Environment Standards Division, DoEE, *Proof Committee Hansard*, 14 November 2017, p. 10.

48 Specifically, the minister must decide within 20 business days of receiving an application whether or not to grant the exemption and that, within ten business days of making a written notice exempting an action under section 158, a copy of the notice and the minister's reasons for granting the exemption must be published. EPBC Act, ss. 158(2) and (7).

5.52 The use of section 158 exemptions in relation to shark control measures can trigger Australia's obligations under the Bonn Convention. In addition to offences and assessment requirements relating to migratory species that reflect Australia's obligations under the Bonn Convention, various provisions of the EPBC Act stipulate that the minister must not act inconsistently with Australia's obligations under the Bonn Convention.⁴⁹

5.53 Under Article 3 of the Bonn Convention, four exceptions to the taking of listed migratory species are permitted. Of relevance, one of the allowed exceptions is if 'extraordinary circumstances so require'. Exceptions must be 'precise as to content and limited in space and time' and the taking allowed by the exception 'should not operate to the disadvantage of the species'.⁵⁰

Use of section 158 in relation to shark control programs

5.54 Exemptions under section 158 have been granted in 18 instances since the EPBC Act commenced. Of these 18 exemptions, four relate to lethal shark control measures. The four shark control-related exemptions were for the following matters:

- the Western Australian Government's setting of up to 72 baited drum lines (notice dated 10 January 2014, in effect until 30 April 2014);
- the Western Australian Government's imminent threat policy, which involved the deployment of fishing gear in Western Australian state waters, for up to three days, to catch a shark determined to pose an imminent threat to public safety as defined in the Western Australian Department of Fisheries Guidelines (notice dated 2 October 2014);
- the New South Wales Government's first North Coast Shark Meshing Trial (notice dated 16 November 2016); and
- the New South Wales Government's second North Coast Shark Meshing Trial (notice dated 26 October 2017);

5.55 The exemption for the first New South Wales north coast trial was granted by the minister based on arguments put forward by the New South Wales Government in its application for an exemption and a briefing from the DoEE. Conclusions reached by the minister included the following:

- Risk to human life—the minister concluded that 'there was a material risk to humans from interactions with sharks in the North Coast of NSW'. This conclusion followed advice from the New South Wales minister that there was an 'urgent and imminent threat from shark interactions to human life in the trial area', with 41 interactions with sharks in New South Wales waters since 1 January 2015, including three that resulted in fatalities.

49 EPBC Act, ss. 34E, 37H, 54, 140 and 146L.

50 *Convention on the Conservation of Migratory Species of Wild Animals*, opened for signature 23 June 1979, 1651 UNTS 356 (entered into force 1 November 1983).

- National economic impacts—the minister noted that the North Coast of New South Wales 'is a major national and international recreation and tourism destination' and a gateway to the Gold Coast. The minister concluded that 'the loss of confidence in water-based activities has, and is likely to continue to, impact on tourism and other associated industries, with flow-on effects to the broader Australian economy'. Therefore, the minister formed the view 'that the public safety of water activities in the North Coast of NSW is a matter of national interest'.
- Research objectives—the minister determined that research outcomes of the proposed trial 'are an important benefit, which will be in the national interest in helping to design future shark mitigation' strategies at various locations across Australia'.⁵¹

5.56 The minister also took into account evidence regarding the effectiveness of shark nets in protecting people, potential impacts on matters of national environmental significance, the measures contained in the management plans to minimise the impact of the program on marine fauna, and reporting and monitoring arrangements for the trial. Finally, after noting that the peak time of year for water-based activities was approaching, the minister also accepted that requiring the New South Wales Government to follow the EPBC Act assessment process would 'likely prevent the deployment of the mesh nets until after the peak period of use of the marine environment'.⁵²

5.57 In granting the second exemption for a two-year period, the minister took into account similar factors and reached similar conclusions. The need for data, however, was emphasised. The minister's written reasons for granting the exemption included the following statement:

...subjecting the proposed action to EPBC Act assessment and approval requirements would delay the provision of new data regarding the relative efficacy of the different shark deterrent measures and prevent other jurisdictions from using this data when required to make decisions about shark control measures.⁵³

51 DoEE, *Submission 55*, Attachment 4, p. 6.

52 DoEE, *Submission 55*, Attachment 4, pp. 6, 9.

53 Minister for the Environment and Energy, *North Coast Shark Meshing Trial, New South Wales: Statement of reasons for granting an exemption under section 158 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth)*, 26 October 2017, <http://epbcnotices.environment.gov.au/exemptionnotices/exemptionnotice/?id=a99fcc21-38c0-e711-b175-005056ba00a8> (accessed 9 November 2017), p. 6 [paragraph 30].

Support for the use of section 158 exemptions for shark control measures

5.58 The clearest expressions of support for the use of section 158 to exempt shark control measures in instances where to do so is considered to be in the national interest can be drawn from the applicants and decision-makers who have been involved in recent decisions. That is, although they did not directly participate in this inquiry, it is clear that the current and former ministers and the New South Wales Government have determined that in some instances it is appropriate to use section 158 to enable trials of lethal shark control measures.

5.59 The use of section 158 did not generally attract comment from individuals and organisations which support the use of lethal shark control measures. Nevertheless, some individuals expressed support for the argument that it can be in the national interest to exempt shark control measures from assessment and approval under the EPBC Act. For example, Mr John Heaton wrote in his submission:

I fully support the NSW Government writing to the Federal Minister for the Environment, Josh Frydenberg requesting him under Section 158 of the above Act, to approve the six month trial of shark nets along beaches of the North Coast.

Furthermore, if any other area experiences a similar level of shark/human interaction similar to what I have outlined in my introduction of this submission (2 years – 2 fatalities, 9 attacks with injuries, 7 attacks without injuries), then that area should be afforded the same deterrent measures available.

I make no apology for supporting measures that puts human life above marine life.⁵⁴

Opposition to the use of section 158 for shark control measures

5.60 Most stakeholders who commented on decisions to exempt shark control measures from assessment and approval on the grounds that doing so is in the national interest were opposed to the decisions that have been made. These submitters consider that the use of the national interest exemption for such measures is unjustified and contrary to the overarching principles of the EPBC Act. Key arguments presented include that:

- killing threatened and migratory species is contrary to the protections given to those species under Australian law and international agreements;
- shark nets in particular result in a high level of bycatch of non-target marine species, including protected species; and
- these negative effects are realised for measures that have questionable effectiveness in reducing the likelihood of fatalities or injuries caused by

54 Mr John Heaton, *Submission 11*, p. 3.

shark species known to present a danger to humans (this argument was examined in Chapter 3).

5.61 For example, the NSW Young Lawyers Animal Law Committee (ALC) argued that the section 158 notices given to the New South Wales and Western Australian governments were 'granted without adequate public consultation, were inconsistent with scientific research and represent a significant undermining of intended objects and governmental responsibilities under both domestic and international law'.⁵⁵ After noting that shark control programs remove or reduce shark species from the marine ecosystem, and have 'far-reaching environmental impacts...on other marine fauna', the NSW Young Lawyers ALC submitted that:

...to grant any person an exemption from the requirement to undertake an environmental impact assessment and/or obtain approval in relation to programs for the killing of the White Shark (and their associated problems of bycatch) is in direct opposition with the objects of the EPBC Act to provide for the protection of the environment, promote the conservation of biodiversity and to assist in the co-operative implementation of Australia's international environmental responsibilities.

Furthermore, the grant of exemptions in relation to existing lethal programs would not appear to be guided by the principles of ecologically sustainable development or supported by the application of the precautionary principle.⁵⁶

5.62 In forming its view, the NSW Young Lawyers ALC argued that decisions to allow actions that involve the killing, injuring, taking, trading, keeping or moving of listed threatened species on the grounds that doing so is in the national interest should occur only when such action is 'reasonably necessary to prevent a risk to human health or to deal with an emergency involving a serious threat'.⁵⁷ The ALC stated that 'research illustrates that sharks do not pose the serious public safety that is often suggested and as such the public interest argument relied upon in the grant of the exemptions is not justified'.⁵⁸

5.63 Similarly, Australia for Dolphins argued that the use of section 158 exemptions:

...is not fulfilling the stated objects of the EPBC Act...namely to provide for the protection of the environment and promote the conservation of biodiversity. Exemptions issued under section 158 should only be granted in very rare instances and not in the case of lethal shark nets, where the data demonstrates the threat to marine life is high.⁵⁹

55 NSW Young Lawyers Animal Law Committee, *Submission 61*, p. 7.

56 NSW Young Lawyers Animal Law Committee, *Submission 61*, pp. 8–9.

57 NSW Young Lawyers Animal Law Committee, *Submission 61*, p. 7.

58 NSW Young Lawyers Animal Law Committee, *Submission 61*, p. 7.

59 Australia for Dolphins, *Submission 4*, p. 3.

5.64 The Australian Marine Conservation Society (AMCS) acknowledged that although rare, 'unwanted interactions with sharks...can have tragic consequences'. Nevertheless, the AMCS argued that such interactions 'cannot be entirely prevented and do not constitute a national emergency of any kind'.⁶⁰ SEA LIFE Trust expressed a similar position:

SEA LIFE Trust is of the view that the relatively small number of shark incidents, although tragic when they do occur—in northern New South Wales particularly—does not qualify as a national emergency, nor is it in the national interest to have, and it does not warrant, an exemption to the EPBC Act to enable the expanded deployment of shark nets and drum lines.⁶¹

5.65 Ms Nicola Beynon from HSI described the decisions as being an 'abuse of the national interest exemption'.⁶²

5.66 Some submitters argued that, rather than it being in the public interest to exempt the measures, the actions permitted by the exemptions were contrary to the national interest. The Australian Conservation Foundation argued that the deaths and injuries to threatened species such as dugongs and turtles that shark nets and drum lines cause is 'against Australia's national interest'.⁶³ Likewise, Australia for Dolphins submitted:

...given a high proportion of tourists come to Australia to view our beautiful marine life, it is not in the national interest to deploy nets which cause significant harm to already threatened and endangered marine animals. Indeed, the nets are arguably doing the most harm to the animals that tourists come to Australia to see.⁶⁴

5.67 The EDOs of Australia argued that the use of section 158 to exempt shark control measures from environmental assessment is 'inappropriate' as:

- the measures have 'questionable efficacy' for reducing the risk of human–shark interactions, but are known to impact on threatened and protected species; and
- there is a lack of knowledge 'about the extent to which many of these species can withstand the loss arising from shark culls'.⁶⁵

60 Australian Marine Conservation Society, *Submission 38*, p. 4.

61 Ms Claudette Rechterik, Manager, SEA LIFE Trust Australia/New Zealand, *Committee Hansard*, 16 March 2017, p. 7.

62 Ms Nicola Beynon, HSI, *Committee Hansard*, 17 March 2017, p. 34.

63 Australian Conservation Foundation, *Submission 51*, pp. 1–2.

64 Australia for Dolphins, *Submission 4*, p. 3.

65 EDOs of Australia, *Submission 42*, p. 6.

5.68 Accordingly, the EDOs of Australia argued that 'all existing shark cull measures and any new proposals should be subject to full and rigorous environmental assessment'.⁶⁶

5.69 Professor Daniel Bucher argued that in assessing section 158 proposals for shark control measures, the minister should require three issues to be addressed satisfactorily:

- First, the proponent of an activity should demonstrate that the proposed activity is likely to achieve its desired objective. For example, Professor Bucher argued that 'if you are proposing a beach netting exercise to reduce the risk of shark attack, you should be able to demonstrate that that net will actually intercept the majority of sharks coming into the beach—not 10 per cent'. Professor Bucher questioned whether a 10 per cent difference would be notice—he remarked: 'Is it going to change the risk and behaviour of people using that beach?'⁶⁷
- Secondly, it should be considered whether the measure has a minimal impact on the rest of the environment. Professor Bucher argued that 'if you have a process that is supposed to catch sharks and is trying not to catch other things but kills—not catches, but kills—five times as many protected species as it catches sharks then it is not really succeeding in that line either'.
- Thirdly, in a point related to the preceding two, the minister should consider whether there are alternatives that are more efficient at catching sharks and less damaging to the rest of the environment. In developing this final point, the professor referred to SMART drum lines that have minimal bycatch mortality as evidence of a more efficient method than nets that is currently available. The professor concluded: 'if someone was to come to the Commonwealth and say they want an exemption to expand the netting program, I think it would fail on all three of those questions'.⁶⁸

Concern about the recent usage and scope of section 158

5.70 Submitters expressed concern that the interpretation of what constitutes the national interest is changing over time. The EDOs of Australia observed that 'up until 2014, use of these exemptions were extremely rare and were most often used to protect threatened species at immediate risk of harm or for emergency responses in disaster situations'. However, the EDOs of Australia noted that the use of section 158 for shark control programs has only occurred from 2014 onwards.⁶⁹ A list of instances where section 158 has been used is at Table 5.2.

66 EDOs of Australia, *Submission 42*, p. 6.

67 Professor Daniel Bucher, *Committee Hansard*, 2 May 2017, p. 45.

68 Professor Daniel Bucher, *Committee Hansard*, 2 May 2017, p. 45.

69 EDOs of Australia, *Submission 42*, p. 4.

Table 5.2: List of exemptions granted under section 158 of the EPBC Act

Title/summary of exemption activity	Date of notice
North Coast Shark Meshing Trial, New South Wales	26 October 2017
North Coast Shark Meshing Trial, New South Wales	16 November 2016
Dispersal of the Grey-headed Flying-Fox camps at Batemans Bay, New South Wales	17 May 2016
The deployment of fishing gear in Western Australian state waters to catch a shark posing an imminent threat to public safety	2 October 2014
The exemption to capture, remove and establish a captive colony of Bramble Cay melomys (<i>Melomys rubicola</i>) from Bramble Cay, Queensland	3 September 2014
The establishment and operation of a captive management program for the Christmas Island Flying-fox (<i>Pteropus melanotus natalis</i>)	26 June 2014
Exemption for maritime environmental emergencies in accordance with the National Plan for Maritime Environmental Emergencies	6 March 2014
The setting of up to seventy two (72) baited drum lines each with a single approximately size 25/0 hook, in Western Australian state waters, and management of those lines	10 January 2014
Remediation of Flood Damage to the Warrego Highway near Marburg Range in Queensland	17 April 2011
The drilling of a relief well (and all associated activities) in production licence AC/L7 or AC/L8 to stop the current uncontrolled flow of oil, gas and condensate from the Montara H1 well	6 September 2009
Captive breeding program for the Christmas Island pipistrelle (<i>Pipistrellus murrayi</i>)	7 July 2009
Captive breeding program for the Christmas Island Blue-Tailed Skink (<i>Cryptoblepharus egeriae</i>) and the Christmas Island Forest Skink (<i>Emoia nativitatis</i>)	7 July 2009
All actions taken in response to the current severe bushfires in Victoria, including but not limited to clearance of vegetation, building of fire breaks and back burning	11 February 2009
Release of water from Lake Crescent Tasmania for essential human needs and stock	7 November 2007
The consolidation, during 2004, of science and technology activities	10 August 2004
Christmas Island Immigration Reception and Processing Centre and associated infrastructure	3 April 2002
South Australian Minister for Primary Industries and Resources, Spring-Summer 2000-2001 Australian plague locust control program	21 October 2000

Source: DoEE, Answers to questions on notice, 16 March 2017 (received 19 April 2017), p. 9; 'EPBC Exemption Notices', <http://epbcnotices.environment.gov.au/exemptionnotices> (accessed 9 November 2017).

5.71 The EDOs of Australia, which expressed concern that the shark control measures have not been subject to assessment 'under present environmental standards', emphasised that it 'is important that these exceptional circumstances do not continue without the usual legal checks and balances enshrined in our environmental laws'. Accordingly, the EDOs of Australia argued that lethal measures should 'not be permitted to continue under an exemption to federal laws'.⁷⁰

5.72 In light of the use of section 158 to enable the use of lethal shark control measures, some submitters expressed concern about the broad scope of 'national interest'. These submitters advocated for the section to be reviewed or amended.

5.73 As section 158 currently stands, DoEE officers confirmed that the term 'national interest' can be broadly interpreted. This was noted at paragraph 5.50, although the following evidence given by Ms Kim Farrant of the DoEE also provides a useful summary of the broad nature of the term:

There are a range of reasons that the minister can use. The legislation sets out a range of reasons, like defence and other emergencies, but does not place any particular limits around the minister's discretion under that section of the act... There are no limiting matters.⁷¹

5.74 HSI noted that stated reasons for using section 158 to exempt trials of shark control measures include improving public safety and averting negative economic effects linked to potential reductions in coastal tourism. HSI expressed concern that the 'absence of information specifying what the minister must consider when making decisions as to whether an action is in the national interest enables the exercise of unrestrained ministerial discretion'. HSI argued that the current pattern of use of section 158 facilitates 'the making of decisions which go against the objects of the EPBC Act'.⁷²

5.75 During evidence given at a public hearing, Ms Beynon, Head of Campaigns, HSI, elaborated on her organisation's concerns about the trend in the use of section 158:

We are extremely concerned about the misuse of that clause, not just for shark nets and drum lines. It is also being used in the destruction of a flying

70 EDOs of Australia, *Submission 42*, p. 4 (emphasis omitted).

71 Ms Kim Farrant, Assistant Secretary, Assessments (NSW & ACT) and Fuel, DoEE, *Committee Hansard*, 16 March 2017, p. 20.

72 HSI, *Submission 43*, p. 13.

fox camp at Batemans Bay. We think that, for the use of this clause, the bar for using 'national interest' is now set so low by the precedents that we are very concerned about what it could be used for in the future.⁷³

5.76 Ms Beynon added:

I think the clause needs constraint. Humane Society International was involved in the passage of the EPBC Act and advising the senators at the time who were supportive of the act. We were supportive of the act, and we looked at that clause. We thought, 'Well, that's broad,' but, at the time, everyone's understanding of the intention of that clause was for it to be used in very serious national emergencies—natural disasters, terrorism attacks; things of that ilk—not for declines in Nippers enrolments and sales at surf shops.⁷⁴

5.77 To address this issue, HSI argued that section 158 should be reviewed and that guidance 'should be provided to outline the factors that must be considered when determining whether an action is in the national interest'. HSI argued that these factors should include 'conservation of biodiversity, promotion of ecologically sustainable development and protection of the environment'.⁷⁵

5.78 The NSW Young Lawyers ALC also called for factors that must be taken into account when considering an application under section 158 to be prescribed. The ALC argued that 'the assessment of the exemption application should involve mandatory consideration of the principles of ecologically sustainable development and animal welfare issues and the appropriate balancing of those matters against competing interests'. To facilitate this, the ALC argued that the following test should be used when considering whether a proposed action that has, is likely to have or will have a significant impact on a listed threatened species, is in the national interest:

- the 'impacts of the proposed action on any listed threatened species must be identified, having regard to the objects of the EPBC Act, the principles of ecologically sustainable development and any animal welfare concerns';
- 'any identified conflicts with the objects of the EPBC Act and the principles of ecologically sustainable development and impacts on animal welfare must be considered in light of the harm to the national interest sought to be avoided or benefit to the national interest to be gained by granting the exemption'; in relation to this:
 - the 'objects of the EPBC Act and the principles of ecologically sustainable development are considered and adhered to the fullest extent possible';

73 Ms Nicola Beynon, HSI, *Committee Hansard*, 17 March 2017, p. 35.

74 Ms Nicola Beynon, HSI, *Committee Hansard*, 17 March 2017, p. 35.

75 HSI, *Submission 43*, p. 14.

- that any compromise to the objects of the EPBC Act, the principles of ecologically sustainable development or animal welfare is:
 - necessary to avoid the harm or achieve the benefit (that is, 'encroachments on animal welfare should be the minimum necessary to achieve the proposed outcome'),
 - reasonable and proportionate to the ends sought to be achieved; and
- the proposed action can be, and will be, executed and controlled in a way that meets high animal welfare standards and avoids unacceptable animal welfare outcomes.⁷⁶

5.79 Whether the operation of section 158 has been considered in detail recently was of interest to the committee. The DoEE confirmed that section 158 was last reviewed in 2009 as part of the independent review of the EPBC Act undertaken by Dr Allan Hawke (the Hawke Review). The DoEE noted that the operation of the section was noted in the interim report of the Hawke Review, however, the 2009 final report 'made no recommendations in relation to section 158'.⁷⁷

76 NSW Young Lawyers Animal Law Committee, *Submission 61*, pp. 13–14.

77 DoEE, Answers to questions on notice, 16 March 2017 (received 19 April 2017), pp. 4–5.