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Peak Coordinating Bodies and Invasive Alien Species: Is the Whole Worth More Than the Sum of Its Parts?

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I. INTRODUCTION

Invasive alien species (IAS) are alien species that threaten ecosystems, habitats or other species.[1] The threats posed by IAS have been extensively documented,[2] and include predation on native species,

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1. U.N.E.P., Alien Species: Guiding Principles for the Prevention, Introduction and Mitigation of Impacts, 5th Meeting, Jan. 31–Feb. 4, 2000, 257, UNEP/CBD/SBSTTA/5/5 (Oct. 22, 1999).

2. Ted Center, et al., *Biological Invasions: Stemming the Tide in Florida*, 1 FLA. ENTOMOLOGIST 45, 78 (1995); Steve L. Coles & Lucius G. Eldredge, *Nonindigenous Species Introductions on Coral Reefs: A Need for Information*, 56 PACIFIC SCIENCE 191 (2002); Lyle Glowka, *Bioprospecting, Alien Invasive Species, and Hydrothermal Vents: Three Emerging Legal Issues in the Conservation and Sustainable Use of Biodiversity*, 13 TUL. ENVTL. L.J. 329 (1999–2000); Lyle Glowka & Cyril de Klemm, *International Instrument, Processes and Non-indigenous Species Introductions–Is a Protocol Necessary?,* 27 ENVTL. POL'Y & L. 247 (1997); Peter Jenkins, *Paying for Protection from Invasive Species*, 67 ISSUES IN SCIENCE AND TECHNOLOGY (Fall 2002) *available at* http://www.issues.org/19.1/jenkins.htm; Todd E. McDowell, *Slow-Motion Explosion: The Global Threat of Exotic Species and the International Response to the Problem in the South Pacific*, 9 COLO. J. INT'L ENVTL. L. & POL'Y 187 (1998); Jeff McNeely, *Invasive Species; A Costly Catastrophe for Native Biodiversity*, Land Use and Water Resources Research (2002) *available at* http://www.luwrr.com/uploads/paper01-02.pdf; Anne M. Perrault & William Carroll Muffett; *Turning Off the Tap: A Strategy to Address International Aspects of Invasive Alien Species*, 11 (2) REVIEW OF EUROPEAN COMMUNITY AND INTERNATIONAL ENVIRONMENTAL LAW 211 (2002); GLOBAL INVASIVE SPECIES PROGRAMME (GISP), GLOBAL STRATEGY ON INVASIVE ALIEN SPECIES (Jeffrey A. McNeely et al. eds. 2001), *available at*

modification of habitat, and introduction of pests and diseases.[3] Each of these impacts has the potential to lead to a decline in biodiversity, including irreversible outcomes such as species' extinctions.[4] Notorious examples of IAS include rabbits and cane toads in Australia,[5] the Giant African Snail and Red Imported Fire Ant in the United States of America (US),[6] and grey squirrels and the Chinese Mitten Crab in the United Kingdom.[7] It is telling that, at the time of writing, each of these examples are also categorized by the International Union for the Conservation of Nature (IUCN) as one of the 100 worst invasive species in the world.[8]

Although governments are increasingly aware of the need to develop effective IAS regimes, regulators face many challenges. To start with, IAS regimes rarely start from a clean slate. Indeed, they often derive from measures initially designed to protect primary production from pests and diseases. Accordingly, in many jurisdictions, IAS regulation is best developed for the agricultural product sector and represents what has been described as a "crisis" response to a chronic problem.[9] As such, regulation is often fragmentary, with gaps in coverage interposed by areas of overlap. Moreover, the design and

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http://www.fws.gov/invasives/volunteersTrainingModule/pdf/bigpicture/globalstrategy.pdf; Marc L. Miller & Lance Gunderson, *Biological and Cultural Camouflage: The Challenges of Seeing the Harmful Invasive Species Problem and Doing Something About It, in* HARMFUL INVASIVE SPECIES: LEGAL RESPONSES (Marc Miller and Robert Fabian, eds., Environmental Law Institute 2004), *available at* http://ssrn.com/abstract=452982.

3. CLAIRE SHINE, NATTLEY WILLIAMS, AND LOTHAR GüNDING, A GUIDE TO DESIGNING LEGAL AND INSTITUTIONAL FRAMEWORKS ON ALIEN INVASIVE SPECIES 1.4 (2000).

4. AN INVENTORY OF ALIEN SPECIES AND THEIR THREAT TO BIODIVERSITY AND ECONOMY IN SWITZERLAND 9 (Rüdiger Wittenberg ed., 2005) [hereinafter AN INVENTORY OF ALIEN SPECIES]; Stokes, K., O'Neill, K. & McDonald, Invasive Species in Ireland (2004)(unpublished Report to Environment & Heritage Service and National Parks & Wildlife Service); State of the Environment Report, Environment Protection Authority 1997, ¶ 2.6 (NSW) (Austl.); GREG SHERLEY AND SARAH LOWE TOWARDS A REGIONAL INVASIVE SPECIES STRATEGY FOR THE SOUTH PACIFIC: ISSUES AND OPTIONS, 1 (2000).

5. DEPARTMENT OF SUSTAINABILITY, ENVIRONMENT, WATER, POPULATION AND COMMUNITIES: FERAL ANIMALS IN AUSTRALIA, *available at* http://www.environment.gov.au/biodiversity/invasive/ferals/index.html (last visited Nov. 2012).

6. NATIONAL INVASIVE SPECIES INFORMATION CENTRE: LIST OF INVASIVE ANIMALS, http://www.invasivespeciesinfo.gov/animals/main.shtml (last visited Nov. 2012). The Zebra Mussel is also a notorious invasive species in the United States of America.

7. U.K. FORESTRY COMMISSION: SQUIRRELS AND ENGLAND'S WOODLANDS (2013), http://www.forestry.gov.uk/greysquirrel; *Chinese Mitten Crab*, Factsheet, Woodlands (2006) (last visited Sept. 2011); *Chinese Mitten Crab*, NATURAL HISTORY MUSEUM (2013), http://www.nhm.ac.uk/nature-online/life/other-invertebrates/chinese-mitten-crabs/index.html (last visited Sept. 2011).

8. *100 of the World's Worst Invasive Species*, INVASIVE SPECIES SPECIALIST GROUP (2008), *available at* http://www.issg.org/worst100_species.html (last visited Sept. 2011).

9. DEP'T FOR ENV'T, FOOD AND RURAL AFFAIRS WORKING GROUP, REVIEW OF NON-NATIVE SPECIES POLICY REPORT, 2003, DEFRA at 21–22 (U.K.) [hereinafter FOOD AND RURAL AFFAIRS]; ENVIRONMENTAL LAW INSTITUTE, STATUS AND TRENDS IN STATE INVASIVE SPECIES POLICY: 2002-2009 (2010).

implementation of measures is further complicated by the presence of a range of jurisdictions, government agencies, and interest groups. Part of the problem flows from the tendency of each unit to consider the IAS problem according to its specific remit and thus in isolation from the regime as a whole. Hence, a common but problematic challenge for regulators is deciding how to coordinate and synthesize processes across many lines of responsibility and levels of government.[10]

To deal with these types of challenges, authorities in jurisdictions such as the US and Great Britain (GB) have established peak bodies to coordinate the regulatory response to IAS. These bodies are well-placed to consider the "big picture" and to take the lead in implementing initiatives that can draw the regime together, including: developing overarching policy, defining an IAS, providing services, such as one-stop information portals, and fostering community engagement. In this study, these types of bodies are described as "peak coordinating bodies" (PCBs). In Australia, the use of PCBs has been dismissed, primarily on the basis that they duplicate systems and procedures already established at the Federal, State and Territory levels.

The purpose of this paper is to undertake a comparative study of IAS regulation in Australia, the US and GB in order to evaluate whether coordination mechanisms instituted by way of a peak body duplicate processes found at other levels of government; or whether such bodies add value to existing regulation by fostering a greater level of efficiency than would otherwise flow from the individual components of the regime. Australia, the US and GB have been selected for discussion because they illustrate different approaches for dealing with the IAS challenge in the context of multi-layered systems of regulation.

The Australian regime operates within a Federal system of government and is characterized by a large volume of law and policy that lacks an overarching coordinating body.[11] By way of contrast, the US regime, which also operates within a Federal system, enjoys the benefit of a peak coordinating body that targets IAS-related activities across a range of Federal departments and bureaus.[12] The US body, however, has no direct power with respect to State and Territory agencies. Great Britain has similarly adopted a coordinated approach to IAS by establishing the GB Non-Native Species Coordination

10. U.N.E.P., *supra* note 1, ¶¶ 10 (b), (c), (d) and (f); DEP'T FOR ENV'T, FOOD AND RURAL AFFAIRS,THE INVASIVE NON-NATIVE SPECIES FRAMEWORK STRATEGY FOR GREAT BRITAIN (2008) [hereinafter NON-NATIVE SPECIES FRAMEWORK]; ENVIRONMENTAL LAW INSTITUTE, *supra* note 9, at 15.

11. Sophie Riley, *Law is Order, and Good Law is Good Order: the Role of Governance in the Regulation of Invasive Alien Species*, 1 ENVTL. & PLAN. L. J. 16, 27 (2012).

12. NAT'L INVASIVE SPECIES COUNCIL, http://www.invasivespecies.gov (last visited Nov. 2012).

Mechanism.[13] While GB does not operate as a Federal system of government, regulators still need to take into account the power of semi-autonomous parliaments, such as those established in Scotland and Wales. Accordingly, as with Australia and the US, GB also faces many real-world difficulties in coordinating initiatives across an array of processes and jurisdictions.

The comparative methodology adopted for this study is largely based on the functionalist approach that focuses on similarities among the three jurisdictions. In doing so, however, the writer is mindful of the lively debate surrounding the functionalist versus contextualist approaches and the practicality of using functionalism as a "rule of thumb."[14] Accordingly, while the legal rules and institutions of the three jurisdictions can be roughly compared, some rules and institutions may appear similar, but operate in different ways, and vice versa.[15] The study further combines what Professor Jaakko Husa has described as the "legislator's standpoint," with the "harmonizer's standpoint" to search for models as solutions to problems.[16] The "legislator's standpoint" critiques the models against the Australian system; while the "harmonizer's standpoint" searches for the "best" model.[17]

This paper will provide a short overview of the systems of government applied in Australia, the US and GB, and explain how this impacts the design and implementation of their IAS regimes. This paper will then examine the IAS regimes themselves, highlighting the use of peak bodies, related institutions and coordinating mechanisms. This paper argues that coordination is essential to the effective operation of IAS regimes and that in order to achieve this objective, it is crucial to establish peak bodies that can act as a focal point for open dialogue and consistency of approach.

II. SYSTEMS OF GOVERNMENT: AUSTRALIA, UNITED STATES AND GREAT BRITAIN

An examination of the systems of government in Australia, the US

13. GB NON-NATIVE SPECIES COORDINATION MECHANISM, https://secure.fera.defra.gov.uk/nonnativespecies/home/index.cfm (last visited Nov. 2012).

14. *See, e.g.*, Jaakko Husa & Jan Smits, *A Dialogue on Comparative Functionalism*, 18 MASSTRICHT J. EUR. & COMP. L. 554 (2011), *available at* http://ssrn.com/abstract=1965933.

15. *Id.*

16. COMPARATIVE ENVIRONMENTAL LAW AND POLICY: CASE STUDIES AND METHODOLOGICAL PERSPECTIVES, AUG. 15–17 2007, *FINNISH ENVIRONMENT INSTITUTE* 5, *available at* http://www.aka.fi/Tiedostot/Tiedostot/ENVLAW/comparative%20report.pdf; *see also* Lin Harmon, Teaching Environmental Law from a Global Resources Perspective, Paper Presented at the 10th Annual Colloquium of the IUCN Academy of Environmental Law (July 2012).

17. *Id.*

and GB[18] is important to developing an understanding of the policy and legislative context of IAS regimes in each jurisdiction. In particular, it helps to explain constitutional and political limitations on the exercise of power by a centralized authority, which in turn shapes attitudes towards the creation of PCBs.

Australia is established as a constitutional monarchy with a Federal system of government. In accordance with the *Commonwealth of Australia Constitution Act 1900* (Imp) ("Australian Constitution"), law-making powers are shared between the Federal, State and Territory parliaments.[19] The majority of powers available to the Federal government are the "concurrent" powers, set out in section 51 of the Australian Constitution.[20] In theory, these powers are exercisable by both the State and Federal parliaments;[21] however the High Court of Australia has interpreted many of these powers as falling within the exclusive domain of the Federal parliament.[22] Any matters not referred to in the Australian constitution are known as the residual powers, which are exercisable solely by the States and Territories.[23] The environment is not specifically mentioned in section 51; hence, until the early 1980s it was presumed that, in line with land and resource management, the exercise of environmental regulation was a residual power vested in State and Territory parliaments.[24] Such powers extended to dealings with weeds, feral animals and other agricultural pests.[25]

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18. Although the paper later mentions devolved powers in Northern Ireland, the focus remains on England, Scotland and Wales, which together comprise Great Britain. Hence the term Great Britain is used in this paper, rather than the term, United Kingdom, which would also include Northern Ireland.

19. Australia's Federal system of government comprises: the Federal or Commonwealth government, the governments of the six states (Queensland, New South Wales, Victoria, Tasmania, South Australia, and Western Australia) and the two territories (the Northern Territory and the Australian Capital Territory).

20. A small number of powers, largely those found in section 52, are exercisable exclusively by the Federal parliament. These powers primarily relate to the seat of government of the Commonwealth and places acquired by the Commonwealth for public purposes.

21. These powers include quarantine under section 51(ix), census and statistics under section 51 (xi) and the external affairs under section 51(xxix). In situations of conflict between valid State and Federal laws, section 109 of the Constitution provides that State law gives way to the extent of the inconsistency; *see Commonwealth v Tasmania* (1983) 158 CLR 1.

22. *See, e.g.,* TONY BLACKSHIELD, GEORGE WILLIAMS, & BRIAN F. FITZGERALD, AUSTRALIAN CONSTITUTIONAL LAW AND THEORY, 325–74, 885–929 (5th ed. 2010) (discussing the interpretation of the Constitution and the scope of the external affairs power therein).

23. The residual legislative power that the States have covers a wide range of matters, including health, education and the environment.

24. Australian Senate, Environment, Communications, Information Technology and the Arts Committee *Commonwealth Environment Powers*, COMMONWEALTH OF AUSTRALIA (1999) ¶ 2.1–14, 6.1.

25. *See, e.g., Agriculture and Related Resources Protection Act*, *1976* (W. Austl.); *Agriculture and Related Resources Protection Act 1976* (WA) (Austl.); *Plant Diseases Act 1924*

In 1983, however, the High Court of Australia held that the external affairs power in section 51(xxix) of the Australian Constitution "authorizes a law which gives effect to an obligation imposed on Australia by a bona fide international convention or treaty to which Australia is a party . . . ."[26] While this power extends to environmental matters, it has never endowed the Federal government with a *carte blanche* to legislate across the board for protection of the environment.[27] Key restrictions center on the proportionality between the purpose of the treaty and the means by which the law seeks to achieve that purpose.[28] Notwithstanding these limitations, Australia is a signatory to the Convention on Biological Diversity (CBD), and is thus under obligation to comply with the convention, including article 8(h), which specifies that members should "prevent the introduction of, or control or eradicate those alien species which threaten" biodiversity.[29] It is arguable that the Federal government could have legislated in a broad manner to provide uniform regulation with respect to the deleterious impacts of IAS.

As just noted, however, land and resource management, including the regulation of what are now termed IAS, has historically been a matter for determination by the States and Territories,[30] with some legislation pre-dating the Australian Constitution.[31] By 1992, when Australia ratified the CBD, State and Territory initiatives had already extended across a range of IAS-related matters, including stopping the introduction and spread of pests and diseases,[32] as well as protecting rural land.[33]

Consequently, even if the Federal Government were mindful of legislating for broad-scale IAS management, such regulation would intersect with pre-existing arrangements already established by the States and Territories.[34] Indeed, the 1980s saw increasing debate on how

(NSW) (Austl.); *Plant Diseases Control Act 1979* (NT) (Austl.).

26. *Commonwealth v Tasmania*, (1983) 158 CLR 1, ¶ 5 (Austl.); *see also* Jacqueline Peel & Lee Godden, *Australian Environmental Management: A 'Dams' Story*, 28 U.N.S.W.L.J. 668, 668–75 (2005).

27. *See* James Crawford, *The Constitution and the Environment,* 13 SYDNEY L. REV. 11, 21–24 (1991).

28. *Commonwealth*, *supra* note 26, ¶ 54.

29. Convention on Biological Diversity, Article 8(h), [1992], 1760 U.N.T.S. 79 (Austl.). The Convention entered into force December, 29 1993. It had 193 Parties as of November 2012.

30. GERRY BATES, ENVIRONMENTAL LAW IN AUSTRALIA 76 (6th ed. 2006).

31. The Australian State of Victoria, for example, introduced the *Thistle Act 1890* (Vic) to oversee the eradication of thistles some ten years before Federation.

32. *See generally Plant Diseases Act 1924* (NSW) (Austl.); *Noxious Weeds Act 1921* (ACT); *Stock Diseases Act 1923* (NSW); *Noxious Weed Act 1950* (WA); and *Vermin and Noxious Weeds Act 1958* (Vic).

33. *See, e.g., Pastures Protection Act 1934*, (N.S.W.) (Austl.).

34. BATES, *supra* note 30, at 76.

Federal, State, and Territory Governments could create "mutually agreed institutional and policy-making mechanisms" that took into account governance concerns stemming from each level of government.[35] The pathway eventually chosen was a political one, designated "co-operative Federalism."

Co-operative Federalism operates through the Council of Australian Governments (COAG), which is a peak inter-governmental body established in 1992. The members of COAG consist of the Prime Minister of Australia, the Premiers of each of the six States, the Chief Ministers of the two Territories and the President of the Australian Local Government Association. COAG's decisions are made by consensus and the Council develops and monitors the implementation of policy reforms that are of national significance. The latter are determined by consultation amongst ministers, including at meetings of COAG. COAG is assisted by the operation of Commonwealth-State Ministerial Councils (Ministerial Councils), and the development of Intergovernmental Agreements and national strategies.[36] The regulation of IAS is not designated as a matter of national significance. Hence, the Federal government does not provide a comprehensive regulatory regime for dealing with these species.[37] Rather, as discussed below, the regime is characterized by a mix of laws and strategies that deal with individual aspects of the IAS problem.

The US is similarly governed by a Federal system of government. Unlike Australia, however, the US is established as a Federal constitutional republic with an elected president as head-of-state rather than the reigning monarch of the United Kingdom. Notwithstanding this fundamental difference, the US and Australian parliamentary systems have much in common. To begin with, law-making powers in both jurisdictions are shared between a centralized government and state/territory governments. In addition, both jurisdictions enjoy the benefit of a written constitution that enumerates heads of power that the respective Federal parliaments can exercise. In the Constitution of the United States ("US Constitution"), these include powers found in Article I, section 8, authorizing the US parliament (Congress) to legislate on matters such as the coining of currency,[38] the maintenance of military forces[39] and the regulation of commerce with foreign

35. *Id*.

36. Other institutions include specialist sub-committees. *See* BATES, *supra* note 30, at 78.

37. In accordance with the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) matters of national environmental significance are: world heritage properties, national heritage places, wetlands of international importance, listed threatened species and ecological communities, migratory species, Commonwealth marine areas, the Great Barrier Reef Marine Park and nuclear actions.

38. U.S. CONST. art. I, § 8, cl. 5.

39. *Id.* art. I, § 8, cls. 12, 13.

countries.[40] Matters not precisely listed in Article I, section 8 are classified as "residual" powers that fall within the legislative domain of the states and territories. As with the Australian Constitution, the US Constitution does not specifically refer to the environment, this traditionally being regarded as a matter under state and territory jurisdiction.

The structure of both the Australian and US constitutions evinces a clear intent to leave a large volume of "residual" powers in the hands of the States[41] and to create Federal legislatures with limited central powers.[42] In both jurisdictions, however, judicial interpretation of the constitution has led to a different result.[43] As already noted, in Australia, an expansive interpretation of the external affairs power has given the Federal government a potentially wide ambit over environmental matters; while in the US, a similar result has been achieved by the Supreme Court's interpretation of the commerce power and the provisions in Article VI, clause 2 of the US Constitution, which specifies that treaties are the "supreme law of the land."[44] In *Missouri v Holland,* the Supreme Court interpreted this clause and Article II, section 2, which relates to the President's power to enter into treaties, to allow Federal laws to override State laws where the Federal law is designed to give effect to a treaty.[45]

One point of difference between the US and Australia is that the US has not ratified the CBD and has not, therefore, accepted obligations with respect to Article 8(h) of that convention.[46] Consequently, attempts by Congress to introduce uniform IAS regulation that conflict with State laws may run afoul of the *Missouri v Holland* doctrine. It is, however,

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40. *Id.* art. I, § 8, cl. 3.

41. James A. Thompson, *American and Australian Constitutions: Continuing Adventures in Comparative Constitutional Law*, 30 J. MARSHALL. L. REV. 627 (1996–97). Notwithstanding this intent, it should also be kept in mind that the constitutions of Australia and the US contain other provisions that may curtail the exercise of power by states. For example, Sections 9 and 10 of Article I of the US Constitution limit the exercise of legislative power by both state and federal governments so that neither may grant any title of nobility. In Australia, section 52 of the Australian Constitution sets out powers that may be exercised exclusively by the federal government.

42. *Id*. at 652–53; *see generally* TONY BLACKSHIELD & GEORGE WILLIAMS, *supra* note 22 (discussing generally the interpretation of the Constitution and the scope of the external affairs power).

43. Thomson, *supra* note 41, at 652–53.

44. LACKLAND H. BLOOM, JR., METHODS OF INTERPRETATION: HOW THE SUPREME COURT READS THE CONSTITUTION 344 (2009).

45. Missouri v. Holland, 252 U.S. 416 (1920).

46. The US, however, is a member of other international treaties that relate to IAS, including the *Marrakesh Agreement establishing the World Trade Organization*, adopted 15 April 1994, [1995] ATS No 8, 1 (entered into force 1 January 1995). As of November 2012, the WTO has 157 members. The Marrakesh Agreement consists of the agreement to set up the WTO and a number of annexures, including the Agreement on the Application of Sanitary and Phytosanitary Measures that influences the design and implementation of national quarantine regimes.

arguable that the US would be liable under customary international law, with respect to the deleterious impacts of IAS that emanate from its territory, although the precise nature and extent of such obligations are not clearly delineated.[47] Notwithstanding these ambiguities, the fact remains that IAS are a threat to US biodiversity;[48] and the Federal government has responded to this challenge by proclaiming Executive *Order 13112 on Invasive Alien Species* (*Executive Order 13112*).[49]

Executive orders operate as an addition to the legislative powers of Congress. They are legally binding orders issued by the President that give direction to Federal agencies and departments in the exercise of their functions under existing laws. Accordingly, following the issuing of *Executive Order 13112* by President Clinton on February 3, 1999, provisions of the order applied directly to Federal agencies and departments, but not State agencies.[50] The order itself is designed to prevent the introduction of, and otherwise regulate, invasive species.

Unlike the US, and similar to Australia, the UK is a constitutional monarchy. The UK, however, does not have a written constitution. Instead, its constitution is found in sources such as treaties, legislation, judicial pronouncements, and formative instruments, including the *Magna Carta*.[51] Prior to 1997 the UK was governed by the parliament at Westminster, that comprising the House of Commons, the House of Lords and the reigning monarch. This parliament had power to legislate for environmental matters across the board, including with respect to IAS.[52]

Since 1997, however, the UK government has followed a decentralization policy, which amongst other things, has generated a devolution of environmental law-making powers. The UK has, for example, devolved legislative power on a Scottish unicameral Parliament that now legislates on a wide range of matters, including

47. *See generally* Sophie Riley, *Preventing Transboundary Harm from Invasive Alien Species*, 18 REV. OF EUROPEAN CMTY. & INT'L L. 198 (2009).

48. NATIONAL INVASIVE SPECIES COUNCIL, Factsheet on Invasive Species, http://www.invasivespecies.gov/Factsheets/Issue_Overview.pdf (last visited Nov. 2012).

49. The preamble to *Executive Order No 13112 on Invasive Alien Species*, states, "the authority to make the order is vested in the President by virtue of: the *National Environmental Policy Act of 1969*, as amended (42 U.S.C. 4321 et seq.), the *Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990*, as amended (16 U.S.C. 4701 et seq.), the *Lacey Act*, as amended (18 U.S.C. 42), the *Federal Plant Pest Act* (7 U.S.C. 150aa et seq.), the *Federal Noxious Weed Act of 1974*, as amended (7 U.S.C. 2801 et seq.), and the *Endangered Species Act of 1973*, as amended (16 U.S.C. 1531 et seq.)." Exec. Order No. 13112, 3 C.F.R. 159 (1999), *available at* http://ceq.hss.doe.gov/nepa/regs/eos/eo13112.html (last visited Nov. 2012).

50. *See* Exec. Order No. 13112, *supra* note 49.

51. For sources and commentary on the constitutional conventions of the UK, see generally MALCOLM JACK ET AL., ERSKINE MAY'S TREATISE ON THE LAW, PRIVILEGES, PROCEEDINGS AND USAGE OF PARLIAMENT (23rd ed. 2011).

52. *See*, *e.g.*, Countryside Act, 1968, c. 41 (Eng.); Prevention of Oil Pollution Act, 1971, c. 60 (Eng.).

education, health and the environment; although not on matters "reserved" for the UK government, such as currency, national security and foreign policy.[53] In a similar vein, legislative power has also been devolved to the National Assembly for Wales and the Northern Ireland Assembly.[54] As England does not have its own separate parliament, Westminster, the Parliament of the UK, undertakes legislative functions for England.[55] Following the process of devolution, representatives of the governments of the UK, Scotland, Wales and Northern Ireland entered into a memorandum of understanding that created a Joint Ministerial Committee.[56] Part of the function of the Committee is to facilitate discussion on the way that devolved powers are implemented in different parts of the UK.[57]

At first glance, the system of government in the UK appears to be "quasi- Federal" because it involves sharing law-making powers amongst Westminster and the legislative institutions of Scotland, Wales and Northern Ireland. As England, however, does not have its own parliament and is ruled directly from Westminster, the UK lacks a true sharing of powers, as opposed to Australia and the US. At the same time, Australia, the US and the UK operate under multi-layers of governments, agencies and departments. Accordingly, regulators face similar problems, particularly with respect to coordinating policies, activities and competing values across the range of institutions that touch upon IAS. Indeed, as will be discussed in the next section, the need to implement effective coordination mechanisms is a common policy theme in all three jurisdictions; yet, governance structures and regulation vary greatly.

53. Scotland Act, 1998, sched. 5, (Eng.).

54. Devolution did not occur uniformly through the UK. For example, the National Assembly for Wales derives the majority of its legislative powers from the Government of Wales Act 2006. Unlike the devolution of power to Scotland, the Government of Wales Act 1998 merely permitted the National Assembly of Wales to make secondary legislation as authorised by the UK Parliament. With respect to Northern Ireland, the Belfast Agreement established the Northern Ireland Assembly and, in accordance with section of 4 of the Northern Ireland Act 1998, devolved powers to the Assembly are the equivalent of "transferred powers". Devolution of powers was suspended in 2002 and restored in 2007 with the entry into force of the Northern Ireland Act 2006.

55. Peter Leyland, *Devolution, the British Constitution and the Distribution of Power*, 53 N. IR. LEGAL Q. 408, 413–16 (2002).

56. UNITED KINGDOM GOVERNMENT, THE SCOTTISH MINISTERS, THE WELSH MINISTERS, AND THE NORTHERN EXECUTIVE COMMITTEE, MEMORANDUM OF UNDERSTANDING AND SUPPLEMENTARY AGREEMENTS, 2010, Cm. 7864, ¶¶ 23–25 Part I.

57. *Id.* at A1.2(b).

III. IAS REGIMES: AUSTRALIA, THE UNITED STATES AND GREAT BRITAIN

1. Australia

In Australia, the Federal Parliament has enacted the *Quarantine Act, 1908* (Cth) (The Quarantine Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act), both of which are important to the regulation of IAS.[58] The former statute is intended to prevent or control the introduction of pests, diseases and IAS, including those that impact the environment.[59] The Quarantine Act is supported by regulations and proclamations such as Quarantine Proclamation 1998,[60] which prohibits the entry of animals, plants and their products into Australia, unless they are already on an authorized list, or have been assessed and granted a permit for their importation.[61] Although the Quarantine Act establishes border controls to prevent the entry of unwanted species, it does not deal with permitted species that develop into an IAS. Nor does the Act deal with species already present in Australia, such as those introduced prior to 1998, that prove to be invasive.

At the time of writing, the Federal Parliament released a draft exposure of the Biosecurity Bill 2012.[62] The Bill updates Australia's biosecurity arrangements, yet apart from one or two isolated examples, such as the regulation of ballast water, does not fully engage with the linkages stemming from invasive alien species, biosecurity and the environment.[63] Accordingly, if a species proves to be invasive, it is still largely left to the states and territories to implement their own measures.[64]

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act), was designed to fulfil Australia's international obligations under various international instruments, including Article

58. *Quarantine Act No. 3 of 1908* (Cth) s 4(b) (Austl.); *Environment Protection and Biodiversity Conservation Act 1999* (Austl.).

59. *Quarantine Act No. 3 of 1908*, *supra* note 58. References to the environment were added to the *Quarantine Act* after the *Nairn Report* recommended that the scope of quarantine should be extended to the natural environment. *See* M. E. NAIRN, P. G. ALLEN, A. R. INGLIS AND C. TANNER, AUSTRALIAN QUARANTINE: A SHARED RESPONSIBILITY ¶ 2.2.4 (1996).

60. *Quarantine Proclamation 1998* (Austl.), *available at* http://www.comlaw.gov.au/comlaw/legislation/legislativeinstrumentcompilation1.nsf/current/bytitle/AE38C4F883931ACECA256FC60003F7DB?OpenDocument&mostrecent=1.

61. Essentially, only plant seeds listed in Schedule 5 of Quarantine Proclamation are permitted entry. All other importation of plant and animal products must undergo a risk assessment. *Quarantine Act No. 3 of 1908*, *supra* note 58.

62. *Exposure Draft: Biosecurity Bill 2012* (Cth) (Austl.).

63. *Id.*

64. *Id.* at 4.

8(h) of the Convention on Biological Diversity.[65] That article stipulates that parties are under obligation to prevent or control the introduction of species that threaten biodiversity.[66] One means afforded by the EPBC for complying with that provision is to list the deleterious impacts of IAS as a "key threatening process."[67] Indeed, numerous key threatening processes directly related to IAS have been accepted for listing, including: predation, competition and land degradation by rabbits, feral cats, rats; and loss of biodiversity caused by the yellow crazy ant, cane toads and the red fire ant.[68] Once a threatening process has been listed, the Minister must prepare a threat-abatement plan, but only if he or she considers that such a plan is a "feasible, effective and efficient way to abate the process."[69]

The listing process is not infallible, as demonstrated by the events surrounding the listing of escaped garden plants as a key threatening process.[70] In January 2010, the Minister accepted that "Loss and Degradation of Native Plant and Animal Habitat by Invasion of Escaped Garden Plants, Including Aquatic Plants," should be listed as a key threatening process under the EPBC.[71] At the same time, the Minister also decided that a threat abatement plan was not a feasible, effective or efficient way to abate the process because existing institutions established under the auspices of the Australian Weeds Strategy were sufficient to deal with escaped garden plans.[72] Yet, gaps and inconsistencies with weed regulation in Australia are notorious and have been well documented in the literature.[73]

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65. *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (Austl.) [hereinafter EPBC Act].

66. Convention on Biological Diversity, *supra* note 29.

67. *See EPBC Act*, *supra* note 65, §§ 528, 188(4). A "threatening process" is defined as one that threatens the survival, abundance, or evolutionary development of a native species or ecological community.

68. *Listed Key Threatening Processes*, (Nov. 25, 2009), AUSTRALIAN GOV'T DEPT. OF SUSTAINABILITY ENV'T, WATER, POPULATION AND COMMUNITIES, (Nov. 25, 2009), *available at* http://www.environment.gov.au/cgi-bin/sprat/public/publicgetkeythreats (last visited Mar. 2011).

69. EPBC Act, *supra* note 65, § 270A(2).

70. Threatened Species Scientific Committee, Advice to the Minister for the Environment, Heritage and the Arts from the Threatened Species Scientific Committee (the Committee) on Amendments to the List of Key Threatening Processes under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), Australian Gov't Dept. of Sustainability Env't, Water, Population and Communities, *available at* http://www.environment.gov.au/biodiversity/threatened/ktp/pubs/garden-plants-listing-advice.pdf (last visited June 2011).

71. *Id*.

72. Natural Resource Management Ministerial Council, Australian Weeds Strategy, Australian Government, Australian Weeds Committee, 9 (2006).

73. RICHARD GROVES, ROBERT BODEN & MARK LONSDALE, JUMPING THE GARDEN FENCE: INVASIVE PLANTS IN AUSTRALIA AND THEIR ENVIRONMENTAL AND AGRICULTURAL IMPACTS 29, 71, 73 (WWF-Australia, 2005); PAUL MARTIN, ROBYN BARTEL, JACK SINDEN,

The Federal government has also developed a number of strategies and plans that relate to IAS. These include the Australian Weeds Strategy and the Australian Pest Animal Strategy, as well as Australia's Biodiversity Conservation Strategy 2010-2030.[74] Marine pests, in particular, have been the target of concerted efforts.[75] In 2005, the Federal, State and Territory governments negotiated the Intergovernmental Agreement on a National System for the Prevention and Management of Marine Pest Incursions.[76] The Agreement provides for cooperative efforts,[77] consistency of measures and the establishment of a National Standing Committee to coordinate measures.[78]

At the State and Territory levels, authorities have established regimes for dealing with the eradication and control of declared animals and weeds,[79] as well as regulation of species that impact on the natural environment.[80] In the latter case, some states, such as New South Wales, have drafted Invasive Species Plans;[81] while in other cases, legislation provides for listing the deleterious impacts of IAS as a threatening process.[82]

NEIL GUNNINGHAM, IAN HANNAM, DEVELOPING A GOOD REGULATORY PRACTICE MODEL FOR ENVIRONMENTAL REGULATIONS IMPACTING ON FARMERS – OVERVIEW, RESEARCH REPORT, 2 23 (2007), *available at* http://lwa.gov.au/files/products/social-and-institutional-research-program/pk071355/pk071355.pdf; JACK SNIDEN, RANDALL JONES, SUSIE HESTER et al., THE ECONOMIC IMPACT OF WEEDS IN AUSTRALIA, 25 (Mar. 2004), *available at* http://www.southwestnrm.org.au/sites/default/files/uploads/ihub/sinden-j-et-al-2003-economic-impact-weeds-australia.pdf.

74. NATURAL RESOURCE MANAGEMENT MINISTERIAL COUNCIL (AUSTRALIAN GOV'T, DEP'T OF SUSTAINABILITY, ENV'T, WATER, POPULATION AND COMMUNITIES), AUSTRALIA'S BIODIVERSITY CONSERVATION STRATEGY 2010-2030, 9 (2010), *available at* http://www.environment.gov.au/biodiversity/publications/strategy-2010-30/pubs/biodiversity-strategy-2010.pdf.

75. *Id.* at 24; Natural Resource Management Ministerial Council, *Australian Pest Animal Strategy – A National Strategy for the Management of Vertebrate Pest Animals in Australia*, DEP'T OF THE ENV'T AND WATER RES. (i) (2007), *available at* http://www.environment.gov.au/biodiversity/invasive/publications/pubs/pest-animal-strategy.pdf (Aus.) [*hereinafter* NRMMC]; Natural Resource Management Ministerial Council, Australian Weeds Strategy, Australian Government, Australian Weeds Committee, iv (2006).

76. *Intergovernmental Agreement on a National System for the Prevention and Management of Marine Pest Incursions*, http://www.marinepests.gov.au/__data/assets/pdf_file/0007/772864/Marine_IGA.pdf (last visited Nov. 2012).

77. *Id.* at 3–6.

78. *Id.* at 6.

79. *See, e.g.*, *Agriculture and Related Resources Protection Act*, *1976* (W. Austl.) 40 (Austl.), *Catchment and Land Protection Act*, *1994* (Vict.) 95–140 (Austl.), *Plant Quarantine Act*, *1997* (Tas.) (Austl.), *Weeds Management Act*, *2001* (N. Terr.) 5–10 (Austl.).

80. *Catchment and Land Protection Act*, *supra* note 79, at 9; *Plant Quarantine Act*, *supra* note 79.

81. *New South Wales Invasive Species Plan 2008-2015,* N.S.W. GOV'T DEP'T. OF INDUS., (Aug. 2008), http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0020/236900/nsw-invasive-species-plan.pdf.

82. *Threatened Species Conservation Act*, *1995* (N.S.W.) s 6 (Austl.). Not all Australian

The consequence of this assortment of instruments is that while Australian policy highlights the importance of establishing an effective IAS regime, the regime itself operates in a piecemeal, fragmented and inconsistent manner.[83] Indeed, the major piece of legislation dealing with protection of biodiversity at the Commonwealth level—the *Environment Protection and Biodiversity Conservation Act* 1999 (CTH)—contains few special provisions to deal with IAS.[84] Section 301A does stipulate that regulations may be promulgated to tackle IAS, yet to date only one regulation has been made:[85] Regulation 12.66 that allows a park warden to implement measures in a Commonwealth reserve to control or remove non-native species.[86]

Given the fragmented and *ad hoc* development of the regime, environmental groups have long called for more effective leadership by the Federal government.[87] One development that has the potential to establish a more harmonised IAS regime is the Intergovernmental Agreement on Biosecurity.[88] The aim of the Agreement is to extend Australia's existing biosecurity arrangements to the species that impact the economy, environment and community.[89] While the Agreement has the potential to create an overarching strategy to prevent the introduction and establishment of invasive animals, plants and diseases, it does not tackle the problem of IAS that has already been established.[90]

In 2002, the fragmented and inconsistent nature of Australia's IAS regime prompted Senator Andrew Bartlett to introduce the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002 ("Invasive Species Bill") into Federal Parliament as

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States afford a legislative base for listing of threatening processes. Western Australia, Northern Territory, South Australia, Tasmania, and Queensland, for example, do not accommodate official lists of Key Threatening Processes.

83. Sophie Riley, *Law is Order, and Good Law is Good Order: the Role of Governance in the Regulation of Invasive Alien Species*, 29 ENVTL. & PLAN. L. J. 16, 29 (2012).

84. *See Environment Protection and Biodiversity Conservation Act 1999* (Cth) § 301A (Austl.).

85. *Id.*

86. Environment Protection and Biodiversity Conservation Regulations, 228–301, 2000 (Austl.).

87. *See, e.g.,* Australian Parliament Senate Env't, Commc'ns, Info. Tech. and the Arts References Comm., TURNING BACK THE TIDE: THE INVASIVE SPECIES CHALLENGE [REPORT ON THE REGULATION, CONTROL AND MANAGEMENT OF INVASIVE SPECIES AND THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION AMENDMENT (INVASIVE SPECIES) BILL 2002 (2004), *available at* http://www.aph.gov.au/Parliamentary_Business/Committees/Senate_Committees?url=ecita_ctte/completed_inquiries/2004-07/invasive_species/report/report.pdf.

88. Council of Australian Gov'ts (COAG), *Intergovernmental Agreement on Biosecurity*, COAG (Jan. 2012), http://www.coag.gov.au/node/47 (last visited Nov. 2012).

89. *Id.* at 3.

90. *Intergovernmental Agreement on Biosecurity*, *supra* note 88.

a private member's Bill.[91] The Bill was designed to provide for better coordination of measures to deal with IAS.[92] Amongst other things, it would have created a national database of invasive alien species[93] and established an Invasive Species Advisory Committee.[94] The composition of the Committee would have been widely drawn, providing a voice to non-government organizations, community groups and Indigenous peoples.[95] As such, the Committee would have acted as a unifying institution by drawing together a diverse range of stakeholders to advise cabinet Ministers of the impacts of IAS.[96]

The Bill was defeated in Federal Parliament, but triggered a senate inquiry, which was published as a report in 2004 entitled, *Turning Back the Tide, the Invasive Species Challenge* (the Senate Invasive Species Inquiry).[97] The inquiry identified a range of shortcomings of the Bill, many of which centered on the imbalance that the Bill would have created with respect to governance mechanisms established under co-operative Federalism.[98] Indeed, several State and Territory governments voiced their concerns at the scope and breadth of powers that the Federal government would need to exercise in order to implement the provisions of the Bill.[99] The senate was also of the view that the Bill was redundant, as it duplicated regulation established by the EPBC Act and also conflicted with regimes developed by the states and territories.[100] The Senate concluded that:

> [t]he Bill's single greatest strength is symbolic. It represents an attempt to codify in one piece of legislation a range of regulations currently scattered throughout the statute books which relate to the regulation, control and management of invasive species. This is a commendable, if somewhat idealistic, approach as there may be risks and confusion arising from . . . duplication . . . [in] . . . existing regulations . . . .[101]

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91. *Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill*, *2002* (Cth) (Austl.).

92. *Id.* at 19.

93. *Id.* at 7–11.

94. *Id.* at 30. The composition of the committee would have included representatives from AQIS, non-governmental conservation organizations, members of the scientific community, indigenous peoples, the commonwealth, the business community, and animal welfare groups. The role of the committee would have been to advise the Minister on protection of native biodiversity and agricultural commodities from IAS.

95. *Id.* at 23.

96. *Id.* at 30.

97. TURNING BACK THE TIDE, *supra* note 87, at xiii.

98. *Id.*

99. *Id.* at 200–02, 208.

100. *Id.* at 198.

101. *Id.* at 207.

This conclusion, which has not been revisited for almost a decade, contrasts sharply with developments in the US, where coordination of the IAS regime is now seen as a priority.

2. The United States of America

As already noted, the US has not ratified the CBD. Nevertheless, it has still introduced a considerable volume of regulation that is consistent with the principles of Article 8(h) of the CBD, which sets out obligations with respect to IAS.[102] To start with, the Animal and Plant Health Inspection Service (APHIS) undertakes border controls, and a program established within APHIS (the Plant Pest Program) is charged with "safeguarding agriculture and natural resources from entry, establishment, and spread of animal and plant pests and noxious weeds."[103] APHIS operates in accordance with the Plant Protection Act 2000,[104] and under delegated authority from the United States Department of Agriculture.[105] Other legislation, such as the Aquatic Nuisance Prevention and Control Act of 1990, targets invasive species of the aquatic environment.[106] Elsewhere, the *Lacey Act 1900*[107] and the *Endangered Species Act 1973*[108] can be used by regulators to deal with IAS, although neither pieces of legislation are specifically designed to target these species. The *Lacey Act 1900* can assist with controlling the transport of invasive species, while the *Endangered Species Act 1973* can be invoked to protect endangered species where they are threatened by IAS.

In addition to legislation, the US Federal government has developed a number of policy instruments in the form of strategies and plans designed to eradicate and control IAS. These include the 2004 National Strategy and Implementation Plan for Invasive Species Management, which stresses the need for collaboration and accountability in IAS regimes.[109]

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102. *See* U.N.E.P., *supra* note 1, ¶ (i).

103. *Plant Health,* Usda-Aphis, (Nov. 30, 2011), *available at* http://www.aphis.usda.gov/plant_healthHealth.

104. *Plant Protection Act*, 7 U.S.C. § 7701 (2000). *See also* History of APHIS, U.S. Dept. of Agric. Animal and Plant Health Inspection (last visited Aug. 7, 2013), http://www.aphis.usda.gov/about_aphis/history.shtml (providing further information on the implementation of legislation).

105. *Id.* In addition, in September 2005, the USDA delegated authority to APHIS to implement the Noxious Weed Control and Eradication Act.

106. *Id.*

107. *Lacey Act*, 16 U.S.C. §§ 3371–3378 (1900).

108. *Endangered Species Act*, 16 U.S.C. §§ 1531–1544 (1973).

109. U.S. Dept. of Agric., Forest Serv., Nat'l Strategy and Implementation Plan for Invasive Species Mgmt., Invasive Species, 3 (2004), *available at* http://www.fs.fed.us/invasivespecies/documents/Final_National_Strategy_100804.pdf (last visited Nov. 2012).

Much regulation at the "grass roots" level is undertaken by the States and Territories; and has been studied in detail by the Environmental Law Institute (ELI).[110] The ELI notes that many States deal with "pest" species by way of listing processes: either "white" lists to identify species that can be possessed and traded freely; or "black" lists to enumerate prohibited species.[111] The white lists effectively ban the introduction of any species unless it is set out on the permitted list, while the black lists freely allow the introduction, possession or sale of species unless they have been explicitly deemed harmful and banned.[112] Most States in the US rely on black lists.[113] Yet, one of the problems with black lists is that they identify those species that have already caused damage and can thus be classified as invasive. As such, black lists do not necessarily deal with the *potential* of species to become invasive. In addition, as has been noted in Australia, listing mechanisms in general are ineffective to prevent the internal trade in declared species.[114]

Other than listing mechanisms, the United States has developed strategies and management plans to deal with IAS; these regularly highlight the need to coordinate activities and regimes. The Florida Exotic Pest Plant Council, for example, has developed management plans to deal with invasive species such as melaleucas, Brazilian pepper and Chinese tallow;[115] while Louisiana has introduced a comprehensive plan to deal with aquatic IAS.[116] The ELI has concluded that in many cases, states have developed such plans in response to the need for "cooperative regulation."[117] At the same time, the ELI has also noted that difficulties inherent in drawing together such a vast range of policies and measures have led to a system where:

> invasive species from different taxa and ecosystems [are regulated] in substantially different ways—aquatic species, wildlife, plants and

110. U.S. Dept. of Agric., Forest Serv., Nat'l Strategy and Implementation Plan for Invasive Species Mgmt., INVASIVE SPECIES, 3 (2004*), available at* http://www.fs.fed.us/invasivespecies/documents/Final_National_Strategy_100804.pdf (last visited Nov. 2012).

111. *Id*.

112. *Id*.

113. *Id*. at 17.

114. NATURAL RES. MGMT. MINISTERIAL COUNCIL, AUSTRALIAN GOV'T DEP'T OF AGRIC., FISHERIES AND FORESTRY, A STRATEGIC APPROACH TO THE MANAGEMENT OF ORNAMENTAL FISH IN AUSTRALIA 8 (2006), *available at* http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/288425/Management-of-ornamental-fish-in-Australia.pdf.

115. *See* FLORIDA EXOTIC PEST PLANT COUNCIL, (last updated June 4, 2013), http://www.fleppc.org/publications.htmmanagement.

116. MARK MCELROY ET AL., STATE MANAGEMENT PLAN FOR AQUATIC INVASIVE SPECIES IN LOUISIANA, LOUISIANA, DEP'T OF WILDLIFE AND FISHERIES (2005), *available at* http://is.cbr.tulane.edu/docs_IS/Louisiana-AIS-Mgt-Plan.pdf (last visited Nov. 2012).

117. ENVIRONMENTAL LAW INSTITUTE, *supra* note 9, at 16.

> plant pests are regulated through entirely separate mechanisms by agencies that place different priorities on and use different strategies to address invasive species.[118]

These were the types of challenges that prompted President Clinton to declare *Executive Order 13112*. As already noted, this order applies directly to Federal agencies and requires them to cooperate in preventing harm from IAS. The order also sets up the National Invasive Species Council (NISC) and the Invasive Species Advisory Committee (ISAC).[119] The NISC provides guidance to Federal administrators and regulators on IAS regulation and also coordinates IAS measures across a range of "state, tribal and local" stakeholders.[120] The ISAC is comprised of experts and other interested parties who are not affiliated with Federal departments or agencies. It meets at least twice a year and provides advice to the NISC. [121]

The catchphrase of the NISC is "Prepare, Prevent, Protect" and these ideals are reflected in the management plans that guide the operations of the NISC. The first plan, titled "Meeting the Invasive Species Challenge Management Plan," was introduced in 2001 and acknowledged that the primary role of the NISC was to provide "national leadership and oversight" on invasive species.[122] This objective is still important to the operation of the second management plan, the "2008-2012 National Invasive Species Management Plan" (2008 NISC Plan).[123]

The 2008 NISC Plan is based on five strategic goals: Prevention; Early Detection and Rapid Response; Control and Management; Restoration; and Organizational Collaboration.[124] The fifth goal, organizational collaboration, particularly targets coordination of activities by stressing the importance of maximizing "organizational effectiveness and collaboration on invasive species issues among international, Federal, state local and tribal governments, private organizations and individuals."[125]

Given the fact that Executive Order 13112 does not endow the NISC with legal authority to compel agencies to take particular action,

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118. *Id*. at 15.

119. Executive Order No 13112, *supra* note 49, at §§ 3(a)–(b).

120. NATIONAL INVASIVE SPECIES COUNCIL, MEETING THE INVASIVE SPECIES CHALLENGE, MANAGEMENT PLAN 4 (2001).

121. The Charter of the U.S. Department of the Interior Invasive Species Advisory Committee, *available at* http://www.invasivespecies.gov/global/ISAC/ISAC_documents/ISAC_Charter_2010.pdf (last visited Nov. 2012).

122. NATIONAL INVASIVE SPECIES MANAGEMENT PLAN, *supra* note 120, at 3.

123. *Id*. at 28.

124. *Id*. at 5–6.

125. *Id*. at 28.

or to re-organize departments, its remit is ambitious.[126] The concept of coordination, for example, which is inherent in the notion of organizational collaboration, not only includes coordination of activities between the Federal government and other levels of government, but also includes coordination of activities amongst Federal agencies and departments themselves. In accordance with the 2008 NISC Plan, these activities are to be evaluated against eighty-seven performance targets, involving some thirty-five departments and agencies.[127]

An important aspect of the NISC's leadership flows from its ability to conduct evaluations across Federal departments and agencies. In this regard, the NISC management plan "not only serves as a framework for overall priorities, but also sets ballpark performance indicators for evaluating success."[128] As part of the evaluation process, the NISC also collects budget information on agency spending related to invasive species. This allows continuous overview of the Federal government's operations in a strategic way.[129]

A further initiative is the special category of funding proffered by the Federal government for research into IAS, administered under the auspices of the United States Department of Agriculture (USDA). These grants provide a starting point for stakeholders researching IAS to apply for funding.[130] One successful example of the funding process is drawn from the design of management plans for the control of aquatic IAS. In addition to the regulation of aquatic IAS, a number of states have used the same plans as a platform from which to evaluate their terrestrial IAS.[131] In these cases, the funding has become value-added, as the projects promote appraisal of IAS regulation that extends beyond the initial scope of the funds. While these developments are positive, the funding process has nevertheless received its share of criticism. The ELI, for example, notes that the funding streams operate inconsistently and do not support state IAS regimes in as effective a manner as possible.[132]

The most striking feature of the operation of the NISC is the

126. NATIONAL INVASIVE SPECIES COUNCIL (NISC), FIVE-YEAR REVIEW OF EXECUTIVE ORDER 13112 ON INVASIVE SPECIES 10 (2005), *available at* http://www.invasivespecies.gov/home_documents/Five-Year%20Review-FINAL%20PRINT%20VERSION.pdf [hereinafter NATIONAL INVASIVE SPECIES COUNCIL (NISC)].

127. NATIONAL INVASIVE SPECIES MANAGEMENT PLAN, *supra* note 120, at 5.

128. Discussion with Stanley Burgiel, NISC, in Wash., D.C. (Oct. 2010).

129. *Id.*

130. *See, e.g.*, U.S. DEP'T OF AGRIC., GRANT AND PARTNERSHIP PROGRAMS THAT CAN ADDRESS INVASIVE SPECIES RESEARCH, TECHNICAL ASSISTANCE, PREVENTION AND CONTROL-FEDERAL FISCAL YEAR 2012 2, 17 (2011).

131. ENVIRONMENTAL LAW INSTITUTE, *supra* note 9, at 10.

132. *Id*. at 9–10.

importance that the Federal government attaches to the coordination of IAS-related activities. Against this backdrop, leadership by Federal authorities is the crucial linchpin. Accordingly, the NISC draws on its strengths, which includes the ability to offer a high-level forum for stakeholders to exchange information, and to discuss and settle mutually beneficial goals and objectives.[133] Meetings of the NISC have thus played an important role in shaping uniform policy for the regulation of IAS. Indeed, dialogue and consultation are seen as so vital that, although the NISC's principal goal is coordination across Federal agencies, collaboration with other entities is an important, if secondary, function. Thus, beyond domestic regulation, the NISC sponsored regional workshops that included participants such as the Global Invasive Species Program (GISP).[134] Although the GISP was closed at the end of March 2011, such cooperation is still regarded as important.[135] Such cooperation is regarded as important to building knowledge and sharing techniques and technology for stopping the introduction and spread of IAS, especially among regional trading partners.

Another significant achievement of the NISC has been the establishment of an online information portal, the National Invasive Species Information Centre, which the NISC has achieved with the assistance of the United States Department of Agriculture and the National Agricultural Library.[136] The portal links online information and the websites of government departments and agencies as well as non-government groups.[137] As such, it facilitates dialogue on IAS across a range of government and non-government agencies. For example, it allows regulators, researchers and community groups to determine whether they are working towards the same goals and objectives and also facilitates scrutiny of regulatory processes for consistency and acceptance by stakeholders. In so doing, the NISC has become a hub for the dissemination of information as well as for encouraging the development of harmonised regulatory objectives for IAS.

This is not to say that the NISC has been a panacea for meeting the IAS challenge in the US. The activities and effectiveness of the NISC

133. NATIONAL INVASIVE SPECIES COUNCIL (NISC), *supra* note 126, at 9, 10.

134. *Id.* at 2, 14. GISP was the Global Invasive Species Programme. It was an international organization that was formed in 1997 to develop best practices to control IAS on a global scale. The institution closed on 31 March 2011. *See Closure of the Global Invasive Species Programme (GISP),* BOTANIC GARDENS CONSERVATION INT'L (last visited Mar. 2011), http://www.bgci.org/resources/news/0794.

135. *Id.*

136. *See* NAT'L INVASIVE SPECIES INFO. CTR. (NISIC), http://www.invasivespeciesinfo.gov (last visited Nov. 2012).

137. NATIONAL INVASIVE SPECIES COUNCIL (NISC), *supra* note 126, at 2.

are regularly reviewed[138] and a 2003 review indicated that the NISC had only met a small proportion of its goals.[139] Yet this conclusion still needs to be understood in context. In particular, before the establishment of the NISC, the US lacked an overarching coordination mechanism for the regulation of IAS. As already noted, the NISC was charged with an ambitious remit and the achievement of a large number of goals and objectives. This meant that the NISC had much ground to cover, especially in its early years. Moreover, the NISC operates within the confines of the constitutional powers of the Federal government. Accordingly, the NISC does not exercise legal authority across the board. Indeed, notwithstanding these challenges, as the *Five-Year Review of Executive Order 13112 on Invasive Species* notes, the NISC has chalked up an impressive track record.[140] In an analogous manner, the collaborative approaches of the NISC and its emphasis on coordination of activities are also acknowledged as important in jurisdictions such as GB.

3. Great Britain

As with Australia and the US, the IAS regime in GB consists of a mix of border controls and internal regulation. Again, with similarity to Australia and the US, the latter includes a combination of policy and legislative instruments.

Border Controls in GB are maintained by the Department for Environment, Food and Rural Affairs (DEFRA), and are shaped by EU directives aimed at preventing the introduction and spread of pests and diseases. By way of example, EC Plant Health Directive (2000/29/EC)[141] has been implemented in GB by means of Secondary legislation, including the Plant Health (England) Order 2005, the Plant Health (Wales) Order 2006, and the Plant Health (Scotland) Order 2005.[142] Other legislation prohibits the importation of "non-indigenous mammalian species" with destructive habits.[143] Permanent Orders have been made banning some species such as musk rats, grey squirrels, and

138. *See, e.g.*, *Federal Efforts and State Perspectives on Challenges and National Leadership*, U.S. GEN. ACCT. OFF. (June 2003), *available at* http://www.gao.gov/new.items/d03916t.pdf (last visited Nov. 2012); NATIONAL INVASIVE SPECIES COUNCIL (NISC), *supra* note 126, at 13.

139. U.S. GEN. ACCT. OFF., *supra* note 138, at 2.

140. NATIONAL INVASIVE SPECIES COUNCIL (NISC), *supra* note 126, at 2.

141. Council Directive 2000/29 (EC), Protective Measures Against the Introduction into the Community of Organisms Harmful to Plants or Plant Products and Against their Spread within the Community, 2000 O.J. (L 169) 1.

142. *See* HELEN LONG ET AL., GUIDELINES ON LEGISLATION, IMPORT, PRACTICES AND QUARANTINE FOR BOTANIC GARDENS AND KINDRED INSTITUTIONS 4 (Judith Cheney ed., 2006).

143. Destructive Imported Animals Act, 1932, 22 Geo. 5, c. 12, §10 (Eng.).

non-indigenous rabbits.[144]

Apart from border controls, for many years, section 14 of the *Wildlife and Countryside Act 1981* was the main legislative instrument dealing with IAS in GB.[145] The section initially created offences with respect to keeping or releasing prohibited species listed in schedule 9 of the Act, otherwise known as the "Keeling Schedule." Offences included: allowing listed animals which were not ordinarily resident in, or a regular visitor to GB, to escape into the wild; releasing these animals into the wild; allowing such animals to escape from captivity; and, planting or causing a listed plant to grow in the wild.[146] Regulation was thus based on a "black list" approach, which is similar to the systems established in Australia and the US.

Over the years, section 14 was amended on an *ad hoc* basis, either to comply with European Union directives, or to fulfil recommendations following internal reviews of non-native species. For example, the section was amended to give effect to the Wild Birds Directive[147] and the Habitats Directive,[148] which require members to prevent and control the introduction of invasive non-native species. The *Wildlife and Countryside Act 1981* was further amended in 2004 following a review of non-native species policy in 2001.[149]

By the beginning of the 21st century the focus of regulation had begun to shift towards governance issues. In 2006, for example, DEFRA commissioned an audit into governance structures for non-native species.[150] The audit concluded that 101 "business units" were charged with responsibilities relating to non-native species.[151] In some cases, business units comprised entire departments, while in other cases

144. Musk Rats Act 1933 (S.I. No. 199/1965) (Ir.); Grey Squirrels (Prohibition of Importation and Keeping) Order, 1937, SI 1937/478 (N. Ir. 478), art. 1; The Non-Indigenous Rabbits (Prohibition of Importation and Keeping) Order, 1954, SI 1954/927 (N. Ir. 927), art. 2.

145. *The Wildlife & Countryside Act 1981*, WILD BIRDS AND THE LAW, http://www.rspb.org.uk/ourwork/policy/wildbirdslaw/birdsandlaw/wca/ (last visited Apr. 13, 2013). Section 14 of the Wildlife and Countryside Act 1981 created offences if a person released an animal or allowed it to escape in circumstances where the animal "is not an ordinarily resident in and is not a regular visitor to Great Britain in a wild state." *See* Wildlife and Countryside Act, 1981, c. 69, *available at* http://www.legislation.gov.uk/ukpga/1981/69/contents.

146. Wildlife and Countryside Act, 1981, c. 69, §§ 14 (1)(A), (14), (2).

147. Council Directive 79/409 (EC), Conservation of Wild Birds, Directive 1979 O.J. (L. 103) 1.

148. Council Directive 92/43 (EC), Conservation of Natural Habitats and of Wild Fauna and Flora, 1992 O.J. (L 206).

149. The amending regulations were: The Wildlife and Countryside Act 1981 (England and Wales) (Amendment) Regulations 2004, and the Wildlife and Countryside Act 1981 (Amendment) (Wales) Regulations 2004. For a short discussion, see Matthew Fasham and Kate Trumper, *Review of Non-Native Species Legislation and Guidance,* DEFRA (2001), *available at* http://archive.defra.gov.uk/wildlife-pets/wildlife/management/non-native/documents/review-report.pdf (last visited Nov. 2012).

150. NON-NATIVE SPECIES FRAMEWORK, *supra* note 10, at 6.

151. *Id.*

they comprised portions of departments or executive agencies.[152] The audit concluded that the IAS regime in GB needed "greater strategic cohesion and a clearer sense of common goals."[153] This finding was consistent with a policy review in 2003 that recommended that "[t]he Government should designate or create a single lead co-ordinating organisation to undertake the role of co-ordinating and ensuring consistency of application of non-native species policies across Government."[154] A peak body was thus seen as vital to drawing together the various components of the IAS regime.

The synthesised conclusions and recommendations from these instruments were integrated into the *Invasive Non-Native Species Framework Strategy for Great Britain* (GB Non-Native Species Strategy).[155] This Strategy emphasized the need for effective coordination of policy and measures across the entire IAS regime, and in particular for the establishment of a coherent and proportionate legislative framework.[156] In furtherance of this objective, the government established the GB Non-native Species Coordination Mechanism, which strengthens initiatives established prior to the release of the 2008 GB Non-Native Species Strategy and also introduces a number of new initiatives.[157] The Coordination Mechanism itself consists of the Non-Native Species Programme Board, the Non-Native Species Secretariat (NNSS), the Risk Analysis Panel, the Stakeholder Forum and a number of Working Groups.[158]

The Non-Native Species Programme Board[159] was established in 2005 and comprises senior representatives of government agencies from England, Scotland, and Wales. The role of the Programme Board includes the development and implementation of the GB Non-Native Species Strategy and the determination of priorities for IAS regulation. The Programme Board also runs the annual Stakeholder Forum, which provides an opportunity for discussion, debate and awareness of emerging IAS issues.[160] The Non-Native Species Secretariat was established in 2006 to support the Programme Board; and additionally, provides an avenue for communication between the Board and

152. *Id.* at 6.
153. *Id.*at 21–22.
154. *Id.* at 32.
155. DEP'T FOR ENV'T, FOOD AND RURAL AFFAIRS, THE INVASIVE NON-NATIVE SPECIES FRAMEWORK STRATEGY FOR GREAT BRITAIN 34 (2008).
156. *Id.* at 24.
157. GB NON-NATIVE SPECIES COORDINATION MECHANISM, https://secure.fera.defra.gov.uk/nonnativespecies/home/index.cfm (last visited Nov. 2012).
158. *Id.*
159. NON-NATIVE SPECIES FRAMEWORK, *supra* note 10, at 34.
160. *Id*. at 35.

stakeholders.[161] The Non-Native Species Risk Analysis Panel will undertake risk assessment and "horizon scanning" with respect to the introduction of alien species.[162] The reports of the Non-Native Species Risk Analysis Panel will guide the operation of the Programme Board.

In tandem with these initiatives, the Scottish government also embarked on a program to update its IAS regulation. Prior to 2011, IAS in Scotland were largely governed by the *Wildlife and Countryside Act 1981* that applied throughout GB. Following devolution of legislative authority over Scotland in 1998, however, the Scottish government began introducing more targeted IAS regulation, including: the *Nature Conservation (Scotland) Act 2004*;[163] and the *Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act* 2003. [164]

The most far-reaching changes, however, stem from the passing of the *Wildlife and Natural Environment (Scotland) Act* 2011 that extensively amended the *Wildlife and Countryside Act 1981* as it applied in Scotland. The explanatory memorandum to the Wildlife and Natural Environment (Scotland) Bill (SP Bill 52) (EM) notes that laws to regulate the keeping of all "potential high-risk invasive animals and plants" were not reflected in Scotland's IAS regime. [165] Proposed measures, however, would need to be proportionate to risks. Hence, banning all known invasive species would be disproportionate if the risks they pose are minor.[166]

Significantly, the EM notes that basing legislation on "black lists" of declared or prohibited species, as occurred under the Keeling Schedule of the *Wildlife and Countryside Act 1981,* is counterproductive because such species will generally be listed once they have proved to be invasive.[167] Accordingly, the legislation is based on a "general no-release approach" intended to operate as a preventative mechanism to stop people from releasing or growing "potentially

161. *Id.* at 34.

162. For example, Schedule 6 of the Nature Conservation (Scotland) Act *2004* and section 50 of the Natural Environment and Rural Communities NERC Act 2006 amend the Wildlife and Countryside Act 1981 to enhance environmental protection from non-native species; FOOD AND RURAL AFFAIRS, *supra* note 9, at 34; *Non-Native Risk Analysis Panel,* NON-NATIVE SPECIES SECRETARIAT (Nov. 2012), https://secure.fera.defra.gov.uk/nonnativespecies/index.cfm?pageid=51 (last visited Nov. 2012).

163. Nature Conservation (Scotland) Act 2004, section 11, amended, among other things, section 14 of the Wildlife and Countryside Act 1981 by introducing a new definition of non-native. Nature Conservation (Scotland) Act, 2004, (A.S.P. 6), 69, 14.

164. *Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003, (A.S.P. 15)*, which came into force in 2008, introduced § 33, which makes it an offence to introduce live fish or spawn, intentionally into inland waters, without a permit.

165. Policy Memorandum (Scotland), Wildlife and Natural Environment, SP Bill 52, part 2 (Donnelly 2010) [hereinafter Policy Memorandum].

166. *Id.* ¶ 106.

167. *Id.* ¶ 103.

harmful animals or plants' plants" that could become established in the wild.[168]

Notwithstanding this policy objective, authorities have power in accordance with Section 14(1) of the Wildlife and Natural Environment (Scotland) Act 2011 to create lists of prohibited species where the threats the species pose are not minor.[169] As the EM notes, however, the legislation is intended to operate without a detailed list of banned species; and banning orders will only be used where crucial, and even then, only after consultation with stakeholders.[170] Where banning orders have been made, the legislation prohibits those species from being sold or offered for sale.[171] The Minister can also exempt species through legislation, and exemptions have been made for pheasants and partridges that are released for game hunting.[172]

To support the no-release policy, the legislation creates a range of offences including: allowing an animal to escape from captivity beyond its native range,[173] and planting or causing a plant to grow in the wild beyond its native range.[174] The notion of a "native range" refers to the locality to which the animal or plant is indigenous.[175] As such, it excludes localities where the animal or plant has been introduced. Moreover, the term does not automatically refer to an entire political or administrative unit, such as the whole of Scotland. Accordingly, the drafters of the legislation evince regulatory acknowledgement that a "native" species can be just as destructive as an alien species if it is introduced outside its native range.

In accordance with section 14C of the *Wildlife and Natural Environment (Scotland) Act* 2011, the Minister may settle on a code of practice that provides practical guidance with respect to activities that would otherwise be deemed an offence. This allows a person adhering to the code to take advantage of specified defences.[176] For example, some animals such as falcons and other raptors may be released temporarily and the codes could provide guidance on how such species

168. *Id*. ¶¶ 69, 79, 86, 105.

169. Wildlife and Natural Environment (Scotland), 2011, (A.S.P. 6). §§ 14(1)(a)(ii), 14(2)(b)(1).

170. Policy Memorandum 52, *supra* note 165, ¶ 86.

171. Wildlife and Natural Environment Act, *supra* note 169, § 14A(1).

172. *Id.* § 14(2A)(a)(b).

173. *Id.* §§ 14(1)(a)(i), 14(1)(b).

174. *Id.* § 14(2).

175. *Id.*

176. These relate to the following sections of the Wildlife and Natural Environment (Scotland) Act 2011: § 14 (release of non-native species), § 14C (offences for banned species), § 14A (prohibition on sale and other dealings of invasive species) and § 14B (notification of the presence of invasive species).

still remain under control for the purposes of the legislation.[177]

Finally, the Scottish Minister may notify persons, such as property managers, and those in a professional capacity of the presence of invasive plants and animals.[178] These notifications channel into rapid response mechanisms designed to prevent IAS from escalating from a comparatively small problem into a more widespread one. To this effect, s14D states that "relevant bodies" may make a species control order with respect to invasive plants and animals.[179] A "relevant body" includes Scottish Ministers, the Scottish Natural Heritage, the Scottish Environment Protection Agency and the Forestry Commission.[180]

The Scottish legislature has thus placed its IAS regulation under the umbrella of a robust and unifying statute. If successful, there is potential for identical or similar legislation to be introduced in other jurisdictions in GB. This uniform approach to IAS regulation, however, is not the norm elsewhere. For example, in Australia and the US, the quality and effectiveness of IAS measures, and ultimately the regime itself, varies from jurisdiction to jurisdiction. Even regulation within the same level of government is plagued by gaps, inconsistencies and areas of overlap. The key issue for the purposes of this paper is whether peak coordinating bodies are a feasible means of drawing together many components to create a "whole" IAS regime that is greater than the sum of its individual laws and regulations.

IV. THE WHOLE VS. THE SUM OF ITS PARTS

The US and GB have sought to effect coordination by establishing peak institutions consisting respectively of the National Invasive Species Council and the Non-Native Species Secretariat. Although these bodies are established in differing political and legal systems, the NISC and NNSS share similarities stemming from the role they play and the tacit understanding that their operation will lead to transformation and improved regulation.

Each body is designed to provide guidance and leadership, but not to have wide-ranging legal powers to impose homogenous regulations on the spectrum of agencies, departments and jurisdictions across the different levels of government.[181] Accordingly, the backbone of these

177. Policy Memorandum, *supra* note 165, ¶ 81. At the time of writing, the government had released a code of practice detailing how the legislation in general is to operate. *See* Non-Native Species Code of Practice (2012), *available at* http://www.scotland.gov.uk/Publications/2012/08/7367/0 (made by the Scottish Ministers under Section 14C of the Wildlife and Countryside Act 1981).

178. Policy Memorandum, *supra* note 165, at § 14C.

179. Wildlife and Natural Environment Act, *supra* note 169, §14D.

180. *Id.* at § 14P(6).

181. *See generally* THE NATIONAL INVASIVE SPECIES COUNCIL, http://www.invasivespecies.gov/main_nav/mn_about.html (last visited. Mar. 15, 2013).

bodies lies in their ability to draw the IAS regime together by coordinating the diverse responses to IAS. Common coordinating mechanisms include: the promotion of unified policy-making; the use of broad-based advisory bodies; the use of an overarching definition of an IAS; and the provision of services such as a one-stop information portal.

1. Unified Policy

Policy may be described as "a set of principles and intentions used to guide decision making."[182] As with other areas of regulation, it is an important tool for formulating effective environmental regimes because it draws together social, economic, environmental and scientific considerations.[183] In the context of IAS, policy shapes how regulators set the parameters of regulation by determining which species are subject to measures, as well as how regulators determine optimal governance arrangements. The latter are particularly crucial where regulation is spread across a multiplicity of sectors, compelling regulators to make value-based decisions on how to deal with competing interests.

The policy approaches of Australia, the UK and the USA are found in a range of agreements, orders, statements, action plans and strategies that all acknowledge the importance of coordination to the success of IAS regimes. In Australia, for example, principle 6 of the Australian Pest Animal Strategy—A National Strategy for the Management of Vertebrate Pest Animals in Australia notes that "[p]est animal management requires coordination among all levels of government in partnership with industry, land and water managers and the community, regardless of land tenure."[184] Similar policy statements in GB[185] and the US[186] also stress the need for collaboration, communication, and "procedural streamlining."[187]

Notwithstanding general consensus for a coordinated response to IAS regulation, the Australian regime still remains fragmented, incomplete and lacking in effective leadership. In the Senate Invasive

182. JANE ROBERTS, ENVIRONMENTAL POLICY 2 (1st ed. 2010).

183. *Id*. at 2–3.

184. NRMMC, *supra* note 75; *see also* Natural Heritage Trust, *Australian Emergency Marine Pest Plan EMPPlan: Control Centres Management Manual*, NAT. HERITAGE TRUST (2005), *available at* http://www.marinepests.gov.au/__data/assets/pdf_file/0008/526283/EMPPlan_web_version_16_Oct_06_2.pdf (Working Draft). For a discussion on the protection of marine environment and the effectiveness of the national framework, see generally Ian Peebles, *Towards A National Emergency Management Framework For Marine Bio-Invasions*, 19 AUSTL. J. OF EMERGENCY MGMT. 50 (2004).

185. FOOD AND RURAL AFFAIRS, *supra* note 9, at 8.

186. *See generally* Exec. Order No. 13112, *supra* note 49 (establishing the Invasive Species Council); *see also*, NATIONAL INVASIVE SPECIES MANAGEMENT PLAN, *supra* note 120, at 5.

187. *See* NATIONAL INVASIVE SPECIES MANAGEMENT PLAN, *supra* note 120, at ii.

Species Inquiry, the Australian Senate noted that the Federal government needed to "strengthen its leadership role in the national effort to combat invasive species by developing a robust national framework, in consultation with State, Territory and local governments, to regulate, control and manage invasive species"[188]

The need for greater Federal leadership was also stressed elsewhere in the report.[189] Yet, one of the perceived drawbacks of the IAS Bill is that it was predicated on strengthened Federal legislative powers;[190] and as already noted, the Senate was concerned at the potential for this to destabilize the balance of power in Australia's system of government.[191]

The use of legislation to impose uniform or coordinated regulation, however, is just one way of drawing the IAS regime together. Shine, Williams, and Gündling have identified three models for coordinating IAS regimes, and only the first model depends on centralised and robust legal processes that can override State and Territory jurisdictions.[192] This model, described as a "unitary legislative framework," stands in contrast to the second and third models that involve decreasing degrees of central control.[193] The second model, for example, consists of establishing a coordinating body with authority to harmonise aims, methods and processes, but with a lesser concentration of power than the first model.[194] The third option comprises a coordinating body that does not have legal authority to impose uniform or harmonised IAS measures.[195] Instead, that body largely functions on political persuasion.[196] At the same time, the second and third models are still reliant on a central government taking a leadership role.[197]

The NISC, for example, appears to be based on the third model.[198] Although it has power to direct Federal agencies, it does not have authority to overrule State and territory agencies.[199] In the latter, its role is to guide regimes using soft techniques.[200] Accordingly, the NISC neither dismantles institutions already established by the states and territories, nor encroaches on state and territory jurisdiction.[201] Instead,

188. TURNING BACK THE TIDE, *supra* note 87, at v.
189. *Id.* ¶ 8.13.
190. *Id.*
191. *Id.* ¶¶ 6.15, 6.26, 7.27, 7.29.
192. SHINE, *supra* note 3, ¶ 4.3.4.
193. *See id.*
194. *See id.*
195. *See id.*
196. *See id.*
197. *See id.*
198. *See* NATIONAL INVASIVE SPECIES MANAGEMENT PLAN, *supra* note 120.
199. *See id.* at 9, 28.
200. *See id.* at 7.
201. *See id.*

the NISC exerts its influence by acting as a coordinating role-model.[202] Indeed, fostering a unified policy-base is one of the key features of peak bodies and in the US, the NISC has been able to consider the "big picture" and identify "trends in invasions" influencing state regimes.[203]

2. Advisory Panels and Committees

In the US, the Invasive Species Advisory Committee (ISAC) is constituted as an advisory body to assist the NISC.[204] In accordance with its charter, membership of the ISAC is widely drawn and includes educators, biologists, lawyers, representatives from industry, tribal representatives, economists and representatives from non-government organisations.[205] This range provides the ISAC with considerable expertise, allowing the views of the Committee to be representative in the broadest possible sense. To encourage stakeholder engagement, meetings of ISAC are open to the public and the minutes of meetings are also available for public scrutiny.[206] Advisory bodies, however, are not fool proof. Their membership needs to be truly representative to avoid accusations of bias.[207] Nevertheless, if properly constituted, they do provide opportunities for public input and discussion that enhances the effectiveness of regulation.[208]

Neither Australia nor the UK has a comparable advisory body, although each has committees and panels that act in an advice-giving capacity with respect to parts of the IAS problem. In Australia, for example, the Threatened Species Scientific Committee (TSSC),[209] is constituted in accordance with the EPBC Act and provides advice on the listing of threatening processes, including the impacts of IAS, as well as advising with respect to the adoption of threat abatement plans. In the case of weeds, the Australian Weeds Committee (AWC) was established as a governmental forum to resolve weeds issues.[210] Neither the TSSC, nor the AWC, however, are as widely representative as the ISAC,—either in terms of composition of committee members or in

202. *Id.* at 28.

203. ENVIRONMENTAL LAW INSTITUTE, *supra* note 9, at 20.

204. The Charter of the U.S. Department of the Interior Invasive Species Advisory Committee, *supra* note 120, at 4.

205. ENVIRONMENTAL LAW INSTITUTE, *supra* note 9, at 12.

206. *Id.* at 15.

207. Daniel E. Walters, *The Justiciability of Fair Balance Under the Federal Advisory Committee Act: Toward a Deliberative Process Approach*, 110 MICH. L. REV. 677, 679–80 (2011-2012). Another example of a truly representative body is the Aquatic Nuisance Species Task Force (ANSTF) that includes representatives from federal agencies, state departments, and regional panels.

208. ENVIRONMENTAL LAW INSTITUTE, *supra* note 9, ¶ 15.

209. EPBC Act §§ 502 and 503 establish the Threatened Species Scientific Committee.

210. AUSTRALIAN WEEDS COMMITTEE, *available at* http://www.weeds.org.au/awc.htm (last visited Nov. 2012).

their sphere of activity.[211] This is not surprising as neither committee was designed to deal with IAS at large, nor intended as a forum for engaging with the public and other stakeholders.

Although the UK has not established a comparable body to the ISAC, it has initiated the GB Non-native Species Coordination Mechanism, which, as already discussed, includes a secretariat, the Non-Native Species Programme Board and the Stakeholder Forum. Recall that the Programme Board directs the secretariat, while the Stakeholder Forum engages with government, industry and the community. Combined, these two panels perform a similar function to the ISAC, especially with respect to oversight of country-wide coordination mechanisms that encourage stakeholder input.

Two features set the US and UK regimes apart from the Australian one. First, the US and UK processes cover the range of IAS, while the Australian system is fragmented and piece-meal with insufficient unifying elements. Undoubtedly, the committees established in Australia do a great deal of good work within their own disciplines. They, however, are not coordinating bodies because they do not bring the regime together in a cohesive manner. No agency, for example, sees the "big picture." Second, the Australian system lacks comprehensive means for engaging stakeholders at the Federal level. This is at least partly due to the absence of advisory and consultative panels with widely-drawn membership that would otherwise provide a forum for open discussion and community consultation. A further and related drawback of the Australian regime is the lack of uniform terminology, which makes it difficult for stakeholders to be clear about primary goals and objectives.

3. Uniform Definition

Adopting a uniform definition of an IAS is perhaps one of the most significant features of coordinating mechanisms. Governments are often faced with competing views and values that determine whether species should be treated as IAS. This situation can be particularly problematic in formulating policy and regulation where one person's IAS is

211. In accordance with §§ 502 and 503 of the EPBC Act, the Minister determines the qualifications and appoints the members of the Threatened Species Scientific Committee. The members have traditionally been drawn from a science background. Membership of the Australian Weeds Committee is drawn from government departments, including the Department of Agriculture, Fisheries and Forestry as well as the Department of Sustainability, Environment, Water, Population and Communities. Other agencies, such as Plant Health Australia, have been granted observer status. *See* Department of Sustainability, Environment, Water, Population and Communities, Roles and Responsibilities (Austl.), *available at* http://www.environment.gov.au/biodiversity/invasive/weeds/government/roles/index.html.

another's resource.[212] Definitions are thus crucial in guiding the operations of regimes by setting parameters and triggers for regulation.

In the US, the Executive Order on IAS defines an IAS as a species that is not native to an ecosystem and whose "introduction does or is likely to cause economic or environmental harm or harm to human health."[213] This definition adopts an ecosystem approach to regulation and contrasts with implementation of regimes that often correspond to local government, territory or state boundaries. Using ecosystem parameters is important because it brings the fact that administrative boundaries rarely coincide with ecological ones to the forefront, and allows regulation to be formulated accordingly.[214]

In a similar manner, the GB Framework defines a "non-native species" (NNS) as "the equivalent of 'Alien species' as used by the Convention on Biological Diversity."[215] Within the CBD, the Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species (CBD Guiding Principles) define an alien species as one that has been introduced outside its natural past or present distribution.[216] Invasive non-native species, which are the equivalent of IAS, are broadly defined as species whose "introduction and/or spread threaten biological diversity or have other unforseen impacts."[217] Although the CBD and GB Framework each use different phrases, the salient point when defining an IAS and an NNS is that both focus on ecological rather than administrative parameters. Accordingly, a species moved from one part of a country to another is not automatically classified as a native species. A similar policy approach has been taken in Scotland, where, as already discussed, the *Wildlife and Natural Environment (Scotland) Act* 2011 Act defines native species in terms of their indigenous range.[218]

By way of contrast, Australia does not enjoy the benefit of an ecologically-based definition of an IAS.[219] The EPBC Act, the main legislation regulating the protection of biodiversity at the Federal level, defines a "native species" as one that was present in Australia, or an

212. RICHARD GROVES, ROBERT BODEN & MARK LONSDALE, JUMPING THE GARDEN FENCE: INVASIVE PLANTS IN AUSTRALIA AND THEIR ENVIRONMENTAL AND AGRICULTURAL IMPACTS 29 (2005).

213. Exec. Order No. 13112, *supra* note 49.

214. A. Morrison, *Management of Introduced Species in the Murray-Darling Basin – A Discussion Paper,* Murray-Darling Basin Commission Proceedings of the Workshop on Native Fish Management Murray-Darling Basin Commission Canberra 149 (1989); P. L. Shafland and W. M. Lewis, Terminology Associated With Introduced Organism (1984) 9 (4) Fisheries 17, 18.

215. DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS, *supra* note 9, at 8.

216. U.N.E.P., *supra* note 1, at 257.

217. DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS, *supra* note 9, at page 8.

218. Wildlife and Natural Environment (Scotland) Act, 2011, (A.S.P. 6), § 14P(2).

219. *Environment Protection and Biodiversity Conservation Act 2011* (Cth) vol. 2, § 528 (Austrl.).

external Territory, before 1400.[220] This temporal definition that nominates a cut-off date is useful for administrative purposes, but lacks the functional competence of ecologically-based definitions. In particular, it does not evince recognition that a native species can become invasive if introduced beyond its native range.

The one attempt at introducing a uniform definition for IAS in Australia pursuant to the Invasive Species Bill 2002 was unsuccessful.[221] Similar to other provisions of the Bill, the Senate Invasive Species Inquiry considered an overarching definition unnecessary, as it would duplicate existing processes.[222] Yet Australia does not enjoy the benefit of a prime definition for an IAS. At the same time, jurisdictions in the US, GB and Scotland demonstrate that there are many ways of integrating such definitions into IAS practice. It is significant, for example, that the definition found in section 14P of the *Wildlife and Natural Environment (Scotland) Act* 2011 applies to one political unit, namely Scotland.[223] By way of contrast, the national definitions found in the US and GB apply co-extensively to many different levels of government. Accordingly, these national definitions do not operate from a legislative base, which could otherwise potentially override or invalidate regulation found in those other jurisdictions. In this way, the US and GB approaches do not trespass against constitutional balances of power. Rather, they comprise part of a suite of coordination mechanisms that include other initiatives, such as the creation of information portals.

4. Information Portals

The establishment of one-stop information portals, accessible via the Internet, is a key feature of the IAS regimes in the US and GB. In GB, the GB Non-native Species Coordination Mechanism is in the process of establishing the "Non-Native Species Information Portal";[224] while in the US, the National Invasive Species Council was instrumental in launching the National Invasive Species Information Centre (NISIC) in 2005.[225] The Information Centre operates under the auspices of the National Agricultural Library, although the NISIC creates and manages the online information.[226]

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220. *Id*.

221. Invasive Species Bill 2002 § 226AB(1)(a) (Cth) (Austl.).

222. TURNING BACK THE TIDE, *supra* note 87, ¶ 7.20.

223. Wildlife and Natural Environment (Scotland) Act, *supra* note 218.

224. *See* GB NON-NATIVE SPECIES INFORMATIONAL PORTAL, *available at* https://secure.fera.defra.gov.uk/nonnativespecies/factsheet/index (last visited Nov. 2012) [*hereinafter* GB Portal].

225 NAT'L INVASIVE SPECIES INFO. CTR. (NISIC), http://www.invasivespeciesinfo.gov/ (last visited Nov. 2012).

226. *Id.*

Information portals serve as gateways for holding data and making it available to stakeholders in a readily accessible manner. As The National Biodiversity Network in GB has noted:

> [A]lthough a huge amount of information exists, it isn't always easy to access. The National Biodiversity Network (NBN) idea could not be simpler: capture wildlife data once in a standard electronic form; integrate data from different sources; and use the internet to enable data to be used many times in different ways by as many people as possible.[227]

Given that one of the strengths of peak bodies lies in their strategic approach to regulation, it is important that they be able to access and share data as effectively as possible. The NISIC, for example, acts as a gateway, linking information and data at the individual, local, regional, national and international levels. The Non-Native Species Information Portal in GB is being established with similar expectations.[228]

Australia lacks a comparable information portal. Currently, information on IAS is gathered and held by numerous agencies and organizations, which provide information gateways for specific IAS such as weeds[229] or feral animals.[230] This information, however, is located at separate electronic sites and lacks the cohesiveness of a one-stop portal. Non-government organisations (NGOs), such as the Invasive Species Council, have also established websites to provide information and up-to-date material.[231] Yet, it is unrealistic to expect NGOs to fund the construction and upkeep of dedicated information portals for an entire regime and for the whole country. Arguably, the lack of dedicated information systems in Australia flows from the absence of a peak body to oversee the regime. For example, it is no coincidence that information portals in the US and GB were, or are, being established under the auspices of PCBs. While this is one positive argument in favor of peak bodies, a further consideration is whether peak bodies are the most appropriate way to coordinate the regulation of IAS.

5. Are Peak Bodies the "Best" Model?

To address this question, at least three matters need to be considered: first, whether peak bodies in general are the most effective

227. The National Biodiversity Network, NBN, www.nbn.org.uk (last visited Nov. 2012).

228. *See* GB Portal, *supra* note 224.

229. WEEDS NAT'L SIGNIFICANCE, http://www.weeds.org.au/WoNS (last visited Nov. 2012).

230. FERAL ANIMALS AUSTRL., http://www.environment.gov.au/biodiversity/invasive/ferals/index.html (last visited Nov. 2012).

231. The Invasive Species Council is a non-government organization in Australia. INVASIVE SPECIES COUNCIL, http://www.invasives.org.au (last visited Nov. 2012).

way to "solve" coordination problems; second, whether peak bodies are the best way of engaging with stakeholders; and third, whether peak bodies disrupt Federal-state and/or constitutional arrangements.

From the discussion thus far, it is clear that one of the major challenges to designing and implementing effective IAS regimes stems from the need to adopt coordinated, if not uniform, approaches to IAS. Where measures are designed and implemented across multiple layers and levels of government, regulation in one jurisdiction will often be ineffective without cooperation and collaboration by other jurisdictions.

In the US, for example, the Environmental Law Institute has concluded that:

> each state government has evolved a unique complex web of authorities to enable it to address different types of invasive species and different invasion pathways. . . . [F]ew states address all pathways and because invasive species reproduce, spread and are often moved by people, each state is hindered or helped by the quality of neighbouring states' laws. As a result, state and local efforts depend on effective interstate collaboration and on Federal help.[232]

Even within the same level of government, the need for coordinated efforts is underscored by the myriad of laws, departments and agencies that touch upon IAS regulation. Again, in the US, the NISC has noted that with respect to Federal laws:

> [I]nvasive species coordination is complex and dynamic, encompassing 25 Federal laws that address invasive species issues, which govern the activities of over 40 agencies and many more programs. In addition, NISC staff members estimate about 300 non-Federal programs, 175 organizations, and 140 groups have at least some involvement with invasive species issues.[233]

In 2003, a review of non-native species policy in GB reached similar conclusions, noting that the parts of the IAS regime that were the "most developed" were those that affected economic interests.[234] One of the challenges stemmed from the fact that IAS regulation

> inherently cuts across many policy interests. At present, the executive responsibilities for non–native species issues are devolved and administrative responsibilities are also spread across different Government Departments and Agencies in each part of Great Britain. There is a variety of statutory powers under different legislation and also non-statutory measures in place to address

232. ENVIRONMENTAL LAW INSTITUTE, STATUS AND TRENDS IN STATE INVASIVE SPECIES POLICY: 2002–09, 6 (2010).

233. NATIONAL INVASIVE SPECIES COUNCIL (NISC), *supra* note 126, at 21.

234. FOOD AND RURAL AFFAIRS, *supra* note 9, at 21.

> invasive non-native species problems.[235]

Part of the reason for this assortment of fragmentary and overlapping regulation was identified as the lack of a "single Government contact point or lead co-ordinating organisation."[236] Accordingly, the review recommended the establishment of a peak body to provide leadership in coordinating the GB regime.[237]

Similar conclusions can be reached with respect to the Australian regime and the need for more harmonised efforts.[238] Indeed, the Senate Invasive Species Inquiry recommended that:

> the Commonwealth Government strengthen its leadership role in the national effort to combat invasive species by developing a robust national framework, in consultation with State, Territory and local governments, to regulate, control and manage invasive species.[239]

Unlike the review of non-native species policy in GB, the senate report stopped short of recommending the establishment of a peak regulatory body; however, it did set out the key features for a proposed national framework. These include: a national policy that determines aims, targets and focus; common definitions; "harmonised state and territory legislation consistent with the national statutory framework"; and a national information portal to assist with "strategic planning."[240] One issue that the Senate did not address was how these objectives could be achieved in the absence of a unifying instrumentality.

It is theoretically possible that without the guidance of a centralised body, the states and territories could collaborate amongst themselves to establish a harmonised IAS regime. In some respects, this has already been partially achieved with respect to initiatives such as the Weeds of National Significance Program.[241] This type of program, however, does not cover the full range of IAS. Moreover, as the review of non-native species policy in GB pointed out, while it is possible to boost dialogue and linkages among government departments, this may not be a sufficiently effective coordination pathway.[242] In particular, where authorities must grapple with decades of *ad hoc* regulation, it is almost impossible to achieve an effective regime unless measures are underpinned by coordination and prioritization of aims and

235. *Id.*
236. *Id.*
237. *Id.* at 25, Key Recommendation 1.
238. *See generally* Riley, *supra* note 11.
239. TURNING BACK THE TIDE, *supra* note 87, ¶ 8.12.
240. *Id.* ¶ 8.13.
241. *See* Weeds of National Significance, *available at* http://www.weeds.org.au/WoNS/ (last visited Nov. 2012).
242. DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS WORKING GRP., *supra* note 9, at 24.

objectives.[243]

It is also significant to the balance of power issue that in GB, the fact that legislative power for IAS is divided amongst devolved legislatures, and that Westminster was not considered a barrier to the establishment of a peak body. Indeed, it is arguable that the more the lines of responsibility for IAS are spread out, the more relevant it is to establish a peak coordinating body. Additionally, a peak body can give representation to the private sector to enhance a "coherent approach" towards regulation.[244]

In reality, the need to engage with stakeholders from within and outside government is an important coordination feature that merges with the composition of coordinating bodies and their associated advisory panels—a matter that has already been discussed. The advantages of structuring such broadly based panels not only include the fact that it gives a voice to a variety of stakeholders, but also extends to engaging with stakeholders in a way that allows them to have input into the regulatory process. This means that the processes are better tailored and understood, and thus more likely to be successful. In addition, these panels act as a catalyst for facilitating regulatory dialogue. The NISC, for example, provides a one-on-one service, where it consults and advises States on the development of management plans and strategies. To implement this program more successfully, members of the NISC have travelled to States to advise and to "encourage broad coordination efforts."[245]

The benefits just discussed and the very fact that governance structures in the US and GB establish peak bodies with a significant coordination role indicate that PCBs have a crucial role to play. The importance of their role is also implicit in the three options proffered by Shine, Williams and Gündling—that each depends on the establishment of a centralised coordinating body. PCBs therefore offer a better, if not the best, solution to the difficulty of harmonising and synchronizing regimes across multi layers of government.

This is not to say, however, that PCBs operate in a vacuum. As the Senate Invasive Species Inquiry noted, if the Federal government were to take on a more comprehensive role, it would not likely succeed without strong support from the States.

> [T]he Commonwealth will be dependent on State and Territory co-operation by virtue of the distribution of most invasive species. The legislation is likely to be ineffective in the management of invasive species in Australia if it does not support and encourage other

243. *Id.* at 22–24.
244. *Id.* at 25.
245. NATIONAL INVASIVE SPECIES COUNCIL (NISC), *supra* note 126, at 13.

jurisdictions to participate.[246]

The Senate's conclusion clearly acknowledges that centralized regulation needs the support of those who actually carry out the ground work. Yet, if regimes are to operate along national frameworks, it will invariably require some changes to existing institutions and practices, even if these are not mandated from the top. Australia's experience with respect to the Weeds of National Significance program demonstrated that States found it extremely challenging to participate in national frameworks within their existing structures.[247] At the same time, as the ELI has pointed out, states are hesitant to reconfigure existing regulation specifically to introduce new IAS regimes.[248]

At the heart of these dilemmas lie issues stemming from the Federal-state relationship and in particular, jurisdiction over trade. In Australia and the US for example, the Federal government regulates international trade and border controls, which cover the movement of a significant volume of potentially invasive species.[249] Thus, the onus of preventing entry of IAS is largely placed on the Federal government, while the states are more focused on controlling and eradicating existing IAS.[250] Accordingly, support by a central body that takes into account this division of functions is crucial to the success of nationwide IAS regulation. Moreover, the form that such support takes is important to determining governance structures of the IAS regime. It is unlikely, for example, that States and Territories would concur on a full-scale Federal takeover of IAS regulation. A case in point is the Australasian states' opposition to the Invasive Species Bill. An analogous situation exists in the US: a report by the General Accounting Office noted resistance by the States to enhancing the legislative underpinning of the NISC, even though

> [almost] all of the Invasive Species Advisory Committee . . . Officials from USDA, the Department of Defense, and EPA . . . [advised] . . . that legislative authority, if properly written, would make it easier for Council agencies to implement the management plan, as implementing actions under the executive order are perceived to be lower in priority than are programs that have been legislatively mandated.[251]

246. TURNING BACK THE TIDE, *supra* note 87, ¶ 7.53.

247. *Id.*

248. ENVIRONMENTAL LAW INSTITUTE, *supra* note 9.

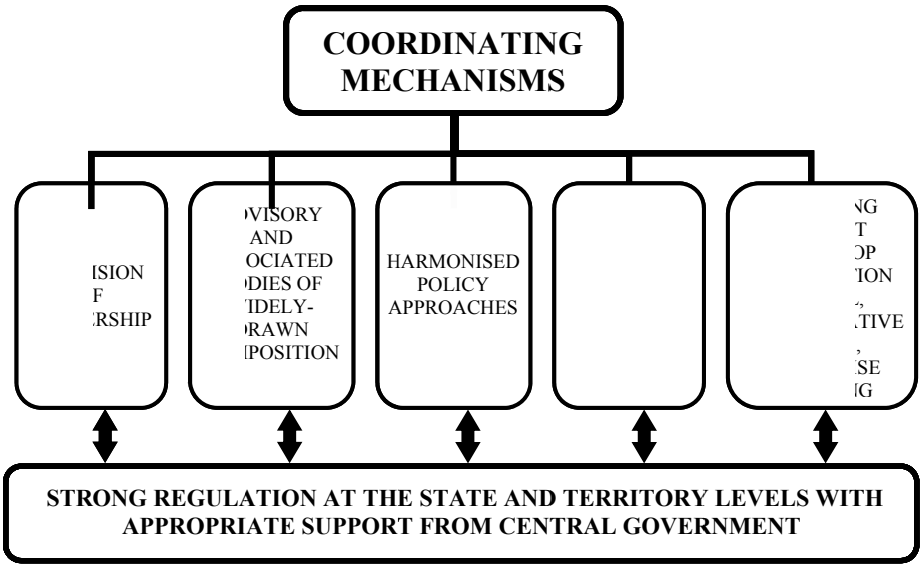
249. Read D. Porter & Nina C. Robertson, *Tracking Implementation of the Special Need Request Process Under the Plant Protection Act*, 41 ENVTL. REP. 1000, 1002 (2011) (discussing the Federal government's almost overarching control over invasive species control).

250. Discussion with Stanley Burgiel, *supra* note 128.

251. U.S. GEN. ACCT. OFF., *supra* note 138, at 14.

Taking these circumstances into account, the most compelling argument is that the building blocks of national IAS regimes need to start from a solid foundation of effective regulation at the state or territory levels—even if that means that some States and territories would need to reconfigure their regimes. The *Wildlife and Natural Environment (Scotland) Act* 2011, for example, contains the ingredients of a strong IAS regime. The legislation includes a definition of an IAS, covers the range of IAS and backs up the regime with sanctions.[252] Figure 1 demonstrates how a regime headed by a peak body might appear.

Figure 1
PEAK COORDINATING BODY



The model provides inbuilt flexibility, allowing regulators to adjust the degree of centralised control according to relevant political and legal circumstances. It also allows regulators to keep existing structures intact and make changes and adjustments that evolve with the need of the regime. The important operative features are the coordination mechanisms, including development of uniform policy, a uniform definition of an IAS, and the strong regulatory base provided by the states and territories.

Given the flexibility inherent in this model, the peak coordinating body can be underpinned by whatever mix of legislation and policy governments deem fit. If the legislative base is minimal, such bodies can provide leadership through non-legislative avenues, in the form of

252. Wildlife and Natural Environment (Scotland) Act, 2011; Wildlife and Countryside Act, *supra* note 146, § 14252.

harmonisation of policy and encouragement of uniformity in key regulatory indicators, such as uniform definitions.

V. CONCLUSION

This paper undertook a comparative study to evaluate the utility of peak bodies as coordinating mechanisms in IAS regimes. In particular, the study considered whether such bodies can improve regulation in the context of multi-layered regulatory systems—a consideration that is particularly important to Federal systems of government.

The study was prompted by the evolution of IAS regimes in the US and GB towards a peak coordinating body model. This contrasts with Australia's regime, which is based on a collection of individual components that are loosely coordinated for particular IAS, such as those covered by the Weeds of National Significance program. An Australian Senate investigation on the feasibility of enhancing Federal leadership for IAS concluded that many proposed coordination mechanisms would not only duplicate existing measures but also trespass upon the division of powers set out in the Australian Constitution.

The reasons the Australian Senate gave for rejecting a greater leadership role by the Federal government were context-specific and driven by an inquiry to determine whether a Federal, legislative-based regime would serve Australia well. Although the Senate vetoed the adoption of the legislation, it nevertheless acknowledged that the Federal government needed to take a greater leadership role. The impediment at the time of the Senate report was the use of a legislative-based model that was emphatically rejected by the States. The experience in the US and GB, however, demonstrates that there are advantages to using a peak coordinating body; and that furthermore, such a body need not be premised on a central legislature, overriding state and territory regimes. Indeed, experience in the US has shown that peak coordinating bodies foster a range of formal and informal discussions on topics that may not be covered by legislation or regulation. This can be particularly crucial in circumstances requiring prompt action—for example, when there was an increased risk of IAS in the US due to marine debris following the 2012 tsunami in Japan. In such cases, a peak coordinating body can serve as a forum for discussion and support on how best to address the issue.[253]

In reality, the policy approaches of Australia, the US and GB recognize that coordination of activities is essential to the success of their IAS regimes. Given this broadly similar policy approach, it might

253. Discussion with Stanley Burgiel, *supra* note 128.

have been expected that the regimes themselves would be designed along similar lines. Yet, this is not the case and coordination systems in Australia lag behind those of the US and GB. The conclusion drawn from this study is that the problems faced by Australia in designing an effective IAS regime are similar to the problems faced by the US and GB at the time of the respective introductions of their systems. The Australian regime, however, has not addressed the coordination issue to any great extent. Consequently, Australia can benefit by examining developments occurring abroad. This is especially helpful in jurisdictions where the establishment of peak coordinating bodies draws together regulation established at different levels of government; indeed making the whole worth more than the sum of its parts.