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## **Towards a biodiversity law**

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*Published in:*  
Journal of International Wildlife Law and Policy

*DOI:*  
[10.1080/13880292.2012.724326](https://doi.org/10.1080/13880292.2012.724326)

*Publication date:*  
2012

*Document Version*  
Peer reviewed version

[Link to publication in Discovery Research Portal](#)

*Citation for published version (APA):*  
Reid, C. T. (2012). Towards a biodiversity law: the changing nature of wildlife law in Scotland. *Journal of International Wildlife Law and Policy*, 15(3-4), 202-227. <https://doi.org/10.1080/13880292.2012.724326>

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## TOWARDS A BIODIVERSITY LAW: The Changing Nature of Wildlife Law in Scotland

Colin T. Reid<sup>1</sup>

Attitudes towards nature have changed greatly in the last 60 years. Wildlife laws that contribute effectively to conserving biodiversity<sup>2</sup> will look very different from the laws that were developed when wildlife was viewed simply as a resource to be exploited or when a few species or places were first granted legal protection. The purpose of this paper is to examine the attributes that laws supporting biodiversity<sup>3</sup> should possess and to explore how the law has evolved to develop these by examining how the laws in one country, Scotland, have changed since the conservation of nature first came to be accepted as a desirable objective deserving legislative support. The early conservation measures simply prohibited specific forms of direct harm to a few selected species. Then the protective measures were extended in their range and a new dimension added by the recognition of the need to look after habitat as well as to prevent direct harm. In turn the habitat measures too have been extended, becoming stronger and responding to the appreciation that maintaining habitat in good health demands active conservation measures rather than just passive prevention of harmful activities. Now there is further emphasis on the eco-system approach to conservation<sup>4</sup> and on biodiversity in all its forms<sup>5</sup> and in all areas, requiring a further shift in approach.

Such laws are still not proving enough to halt the loss of biodiversity,<sup>6</sup> but their development, and continuing weaknesses, help to illustrate what is needed if wildlife laws are to support biodiversity in a worthwhile way. The points that emerge may seem to set out a fairly obvious vision of what conservation laws should do, but as the example explored in this paper shows, the journey towards that vision has not been smooth and is still not complete. Learning from experience, starting with the first steps to recognise interests other than private legal property rights, piecemeal laws have slowly groped towards a more holistic and proactive approach that gives greater priority to biodiversity. Substantial criticism can still be

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<sup>2</sup> This goal was agreed by the 193 parties to the Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 79, art. 1.

<sup>3</sup> The focus here is on wildlife law, but of course a properly holistic set of biodiversity laws would deal with a much wider range of topics, covering among other things virtually all aspects of the management of land and aquatic resources, the commercial utilisation of species of all types, trade, procurement, taxation, property rights and genetic manipulation.

<sup>4</sup> See note 35 below. In the British context see HOUSE OF COMMONS ENVIRONMENTAL AUDIT COMMITTEE, HALTING BIODIVERSITY LOSS, 2007–8, H.C. 743, paras 18-22 and GOVERNMENT RESPONSE, 2008-9 H.C. 23, at 3-5.

<sup>5</sup> The definition of biodiversity in art.2 of the Convention on Biological Diversity is widely accepted: "*Biological diversity*' means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems."

<sup>6</sup> SCOTTISH NATURAL HERITAGE (E.C. MACKEY & G. MUDGE (EDS)), SCOTLAND'S WILDLIFE: AN ASSESSMENT OF BIODIVERSITY IN 2010 (2010).

made, but this journey serves to illustrate why the points mentioned below are important, where obstacles have been overcome and are still being met, and the scope for further change, incremental or radical, to achieve what can properly be called a biodiversity law.

Several points emerge as essential if the law relating to wildlife is to fulfil its potential. The law must be pervasive in its efforts to conserve biodiversity rather than dealing with designated sites or species in isolation from the wider environment. It must be positive, actively supporting biodiversity rather than just seeking to prevent particular harm. It must give conservation adequate priority in the face of competing interests. It must be participative, engaging a wide range of parties rather than being a closed matter for dedicated agencies and landowners. Finally, in view of the dynamic nature of our environment, and our understanding of it, it must be precautionary and proactive if the future health of the natural environment is to be secured. Only laws which display these attributes can be expected to meet the challenge of combating the many threats to biodiversity.

## Scotland

Scotland provides a good focus for study for several reasons. It is a country still rich in natural habitats<sup>7</sup> and wildlife, although as elsewhere these are under often intense pressure from changes in land use and management, development, pollution and climate change. The natural environment is at the heart of major economic activity through activities such as agriculture, forestry and tourism,<sup>8</sup> with the areas of greatest conservation value predominantly on land that is privately owned and often in regions that are vulnerable in economic and social terms. Moreover competing uses of the countryside inevitably give rise to conflicts that require a legal basis for resolution, e.g. between renewable energy developments and the protection of areas of conservation value,<sup>9</sup> between protecting fragile environments and developing facilities for people to enjoy them,<sup>10</sup> and between managing large areas of open countryside as shooting estates or for conservation.<sup>11</sup>

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<sup>7</sup> Although throughout the British Isles few habitats are truly “natural” as opposed to showing the impact of direct or indirect human intervention over many centuries.

<sup>8</sup> RPA & CAMBRIDGE ECONOMETRICS, *THE ECONOMIC IMPACT OF SCOTLAND’S NATURAL ENVIRONMENT*, 2008 (Scottish Natural Heritage Commissioned Report No.304 (ROAME No. R07AA106)). This states that 11% of total economic output, supporting 14% of full-time jobs, is dependent on the natural environment (p.i). A summary report is available as SCOTTISH NATURAL HERITAGE, *VALUING OUR ENVIRONMENT: THE ECONOMIC IMPACT OF SCOTLAND’S NATURAL ENVIRONMENT* (<http://www.snh.gov.uk/docs/B313698.pdf>).

<sup>9</sup> Aylwin Pillai, Colin T. Reid & Andrew L. Black, *Reconciling Renewable Energy and the Local Impacts of Hydro-electric Development* (2005) 7 ENV. L. REV. 110.

<sup>10</sup> As illustrated in relation to the development of the Cairngorm funicular railway; see *WWF-UK Ltd. v. Secretary of State for Scotland*, [1999] 1 C.M.L.R. 1021, [1999] Env. L.R. 632.

<sup>11</sup> The income from shooting parties hunting deer or red grouse is the mainstay of the local economy in some areas, but managing the land for that purpose can conflict with conservation measures seeking to encourage natural regeneration of woodland or to protect and restore populations of raptors whose prey includes grouse; the Langholm Moor

From a legal perspective, the law in Scotland contains elements from several different ages. Against a background of older legal rules on property ownership, modern conservation legislation has been introduced in stages since the late nineteenth century, with major shifts during the second half of the twentieth century, some of which have been driven by the need to comply with measures made at European Union level.<sup>12</sup> This history has produced a certain lack of coherence across the law but a general pattern of change can be identified, broadening the scope of the law to benefit a wider range of habitats and species and to affect more parties, giving more priority to nature and taking a more integrated approach. The legislative developments have taken place against a legal background where the basic law of property follows the Roman example<sup>13</sup> of not recognising wild creatures as legal objects unless and until taken into possession, at which point they become the property of their possessor; wild plants belong to the landowner as an accretion to the soil. Until very recent change, the specific laws on game<sup>14</sup> dated back to the eighteenth and nineteenth centuries but essentially continued the approach dating from the middle ages, regarding game as a natural resource whose exploitation is to be controlled, primarily for the benefit of landowners.<sup>15</sup>

More conservation-minded legislation appeared in the late nineteenth century, with various statutes to protect birds,<sup>16</sup> and then seals<sup>17</sup> in the early twentieth century. The first designation of habitat came with protection for Nature Reserves under the National Parks and Access to the Countryside Act 1949,<sup>18</sup> an Act which also recognised Sites of Special Scientific Interest (SSSIs) but on purely advisory basis. Further legislation extended the number and range of creatures and plants given protection,<sup>19</sup> but the modern law really begins with the Wildlife and Countryside Act 1981, which recast the law on species protection,

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Demonstration Project is an attempt to find ways of resolving the latter tension (see <http://www.langholmproject.com/index.html>).

<sup>12</sup> COLIN T. REID, NATURE CONSERVATION LAW (3<sup>rd</sup> ed.) (2009), chap.1.1.

<sup>13</sup> G. INST. 1.66-68, 74-75; J. INST.1.1.12-16, 31-32; DIG.41.1.

<sup>14</sup> STANLEY SCOTT ROBINSON, THE LAW OF GAME, SALMON & FRESHWATER FISHING IN SCOTLAND (1990), Part I; REID, *supra* note 12, at 146-150.

<sup>15</sup> Major reforms to the game laws are effected by the Wildlife and Natural Environment (Scotland) Act 2011 (A.S.P. 6), ss.1-11, bringing the landowners' rights within the framework of the conservation laws and removing the anachronistic powers of landowners to detain suspected poachers.

<sup>16</sup> Starting with the Sea Birds Preservation Act 1869, 32 & 33 Vict., c.17, and the Wild Birds Protection Act 1872, 35 & 36 Vict., c.78, there was a score of statutes dealing with birds until 1967.

<sup>17</sup> Grey Seals (Protection) Act 1914, 4 & 5 Geo.5, c.3. There had been earlier legislation on hunting seals, following activity in the northern Pacific Ocean; Behring Sea Award Act 1894, 58 & 59 Vict., c.21, Seal Fisheries (North Pacific) Acts 1895, 58 & 59 Vict., c.21 and 1912, 2 & 3 Geo. 5, c.10.

<sup>18</sup> 12, 13 & 14 Geo. 6, c.97. Although this Act established National Parks in England and Wales, these provisions did not apply in Scotland, where a separate National Parks (Scotland) Act 2000 (A.S.P. 10) was eventually passed. It should be noted that National Parks in the UK are very different from the internationally accepted concept of such parks; according to the IUCN Guidelines, the British National Parks fall within category V ("Protected Landscape/Seascape") not category II; [http://www.unep-wcmc.org/iucn-protected-area-management-categories\\_591.html](http://www.unep-wcmc.org/iucn-protected-area-management-categories_591.html).

<sup>19</sup> E.g. Conservation of Wild Creatures and Wild Plants Act 1975, c.48.

bringing the provisions on birds and other animals into the same Act and greatly extending the number and range of species protected and reformed. The Act also strengthened the law on SSSIs as the main designation of sites identified as being of value for nature. As well as being driven by national policy to strengthen conservation, this Act was a response to two external measures. The first was the Bern Convention on the Conservation of European Wildlife and Natural Habitats<sup>20</sup> that calls on parties to “take appropriate and necessary legislative and administrative measures to ensure the conservation” of habitats and species.<sup>21</sup> The second was the Birds Directive,<sup>22</sup> which as a Member State of the European Union (EU)<sup>23</sup> the United Kingdom was bound to implement fully in its domestic law<sup>24</sup> and which required both strengthening and broadening the existing protective measures for wild birds.<sup>25</sup>

Since then, the Habitats and Species Directive<sup>26</sup> has required further laws<sup>27</sup> to ensure the level of protection required to protect the species and sites designated under its provisions, protection well beyond that offered under the 1981 Act. This example of stronger

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<sup>20</sup> Sept. 19, 1979, U.K.T.S. no.56 (1982), Cmd.8738. In relation to treaties the United Kingdom legal systems follow a dualist approach so that the Convention by itself has no legal force within the UK.

<sup>21</sup> *Id.*, arts 4-7.

<sup>22</sup> Council Directive 79/409, 1979 O.J. (L 103) 1 (EC), now re-enacted, taking account of amendments, as Directive of the Parliament and the Council 2009/147, 2010 O.J. (L 20) 7 (EC).

<sup>23</sup> The European Union has evolved substantially since the Treaty of Rome in 1957 and the UK’s accession in 1972. The current structure is established by the Treaty on European Union and the Treaty on the Functioning of the European Union, as agreed under the Treaty of Lisbon in 2007, Dec.13 2007, 2007 O.J. (C 306) 1 and coming into force in December 2009 – a consolidated version of the treaties is published at 2010 O.J. (C 83) 1; a useful guide with links to the treaty texts is available at [http://europa.eu/abc/treaties/index\\_en.htm](http://europa.eu/abc/treaties/index_en.htm).

<sup>24</sup> In the area of environmental law, the EU exercises its powers primarily by means of Directives (Treaty on the Functioning of the European Union, art.288), which the Member States must implement within their own legal system; if they fail to do so correctly, any state can be taken, by the European Commission or another Member State, before the European Court of Justice (Treaty on the Functioning of the European Union, arts 258-260) and ultimately can be subject to substantial fines if it fails to respond to an adverse judgment (e.g. Case C-278/01, *Comm’n v. Spain*, 2003 E.C.R. I-14141), whilst decisions taken in breach of a Directive’s requirements can be declared invalid (e.g. Case C-127/02, *Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse Vereniging tot Bescherming van Vogels v. Staatssecretaris van Landbouw, Natuurbeheer en Visserij*, 2004 E.C.R. I-7405). See generally MARTIN HEDEMANN-ROBINSON, ENFORCEMENT OF EUROPEAN UNION ENVIRONMENTAL LAW: LEGAL ISSUES AND CHALLENGES (2007).

<sup>25</sup> Later amendments were needed when it was realised that the 1981 Act did not in fact meet the Directive’s requirements, e.g. by allowing several species to be killed or taken in a wide range of circumstances; Wildlife and Countryside Act 1981 (Variation of Schedules 2 and 3) Order 1992, S.I. 1992/3010, art.2, which removed all species from the list of species excluded from protection by virtue of Part II of Sched. 2 to the 1981 Act.

<sup>26</sup> Council Directive 92/43, 1992 O.J. (L 206) 7 (EC).

<sup>27</sup> Conservation (Natural Habitats, etc.) Regulations 1994, S.I. 1994/2716, which have again had to be amended to ensure proper compliance with the Directive. These regulations were made under the broad powers allowing ministers to make regulations to implement within the UK legislation made by the EU; European Communities Act 1972, c.68, s.2.

protection, together with dissatisfaction with the operation of aspects of the 1981 Act, led to further changes, most notably reform of SSSIs and additional species protection measures made through the Nature Conservation (Scotland) Act 2004,<sup>28</sup> an Act which also imposes on public bodies a duty to further the conservation of biodiversity.<sup>29</sup> Separate policy moves have led to the creation of National Parks,<sup>30</sup> and legislation to provide liability for “biodiversity damage” (the latter again in response to a European initiative).<sup>31</sup> Further legislation passed in 2011 has consolidated and modernised the game laws, tidied up various provisions and introduced tighter controls on non-native species.<sup>32</sup>

This brief summary of the development of the law shows how it has become a more powerful tool offering protection to an increasing range of wildlife, yet still the loss of biodiversity continues.<sup>33</sup> The law has evolved to be more pervasive and more positive, enjoying greater priority and involving greater participation from a range of stakeholders and has begun to take a more precautionary and proactive approach. Each of these attributes is necessary if biodiversity conservation is to be achieved and must now be considered in turn before reflecting on what the future might hold.

## **Pervasive**

Laws seeking to conserve biodiversity must not be restricted to particular sites,<sup>34</sup> species or activities but must be pervasive. This is what lies at the core of the ecosystem approach that has been accepted by the parties to the Convention on Biological Diversity as the basis for making progress towards that Convention’s goals and is set out in Decision V/6 of the Conference of the Parties held in Nairobi in 2000:<sup>35</sup>

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<sup>28</sup> A.S.P. 6. Under the Scotland Act 1998, c.46, the devolution settlement that took effect in 1999 created the Scottish Parliament and Scottish Executive (now the Scottish Government) with legislative powers in all areas except those expressly reserved to the UK authorities in London, although since devolution is in essence a delegation of power rather than a fundamental division of competences as under a federal system, the UK authorities retain certain overlapping and overriding powers. Some aspects of the settlement have been amended by the Scotland Act 2012 (c.11). One limitation on the Scottish authorities is that they cannot make laws incompatible with EU law; Scotland Act 1998, s.29. Separate devolution arrangements have also been made for Wales (Government of Wales Acts 1998, c.38, and 2006, c.32) and Northern Ireland (Northern Ireland Act 1998, c.47, as amended).

<sup>29</sup> Nature Conservation (Scotland) Act 2004 (A.S.P. 6), s.1; see text from note 66, below.

<sup>30</sup> National Parks (Scotland) Act 2000 (A.S.P. 10); see note 18, above.

<sup>31</sup> Environmental Liability (Scotland) Regulations 2009, S.S.I. 2009/266, implementing the Environmental Liability Directive, Directive of the Parliament and Council 2004/35 2004 O.J. (L 143) 56 (EC).

<sup>32</sup> Wildlife and Natural Environment (Scotland) Act 2011 (A.S.P. 6); Colin T. Reid, *Wildlife Reforms in Scotland* (2010) 12 ENV. L. REV. 256.

<sup>33</sup> *Supra* note 6.

<sup>34</sup> Although protection of these remains important; Convention on Biological Diversity, art.7.

<sup>35</sup> Convention on Biological Diversity COP 5 (2000); see also Decisions VII/11 from COP 7 (2004).

1. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way....
2. An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organisms and their environment. ...
3. This focus on structure, processes, functions and interactions is consistent with the definition of "ecosystem" provided in Article 2 of the Convention on Biological Diversity...[and] does not specify any particular spatial unit or scale, in contrast to the Convention definition of "habitat"... but can refer to any functioning unit at any scale. Indeed, the scale of analysis and action should be determined by the problem being addressed. ...
4. The ecosystem approach requires adaptive management to deal with the complex and dynamic nature of ecosystems and the absence of complete knowledge or understanding of their functioning. ....
5. The ecosystem approach does not preclude other management and conservation approaches, such as biosphere reserves, protected areas, and single-species conservation programmes, as well as other approaches carried out under existing national policy and legislative frameworks, but could, rather, integrate all these approaches and other methodologies to deal with complex situations.

This approach calls for the law to be pervasive in several ways. In the first place it means that effort must not be concentrated on just a handful of high profile species, but must consider the whole range of elements that make up the complex web of biodiversity. Although legal protection often begins with large and obvious species which attract public attention, a biodiversity law must extend to those that are hidden or do not have immediate public appeal. This widening of concern has been a feature of the development of the law in Scotland. After the early legislation on birds<sup>36</sup> and seals,<sup>37</sup> it was only with the Conservation of Wild Creatures and Wild Plants Act 1975 that protection was extended to other species less likely to have a place in the public's affections (two bats, a lizard, a snake, a toad and a butterfly). The law was greatly extended by the Wildlife and Countryside Act 1981, and subsequent amendments to its Schedules have conferred protection on an increasing number of cold-blooded creatures<sup>38</sup> and invertebrates.<sup>39</sup> Similarly, plants were given general protection for the first time under the Conservation of Wild Creatures and Wild Plants Act 1975, and the 21 species listed then have now been extended to over 180,<sup>40</sup> with increasing attention to species which are not so widely appreciated by the public such as mosses and liverworts. Within the ecosystem approach there will remain a place for laws that are based

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<sup>36</sup> Starting with the Sea Birds Preservation Act 1869, c.32 & 33 Vict., c.17, there were almost twenty statutes on protecting birds before consolidation and reform in the Protection of Birds Acts 1954, 3 & 4 Eliz. 2, c.30, and 1967, c.46.

<sup>37</sup> Grey Seals (Protection) Acts 1914, 4 & 5 Geo. 5, c.3, and 1932, 22 & 23 Geo.5, c.23, and Conservation of Seals Act 1970, c.30.

<sup>38</sup> The absence of public sympathy for some species was shown by the leader in *The Times* (January 4, 1991) and subsequent letters when the adder was first given statutory protection.

<sup>39</sup> There are now over 80 species of birds and 120 of animals (from whales to sea slugs and moths) protected under Schedules 1 and 5 to the 1981 Act.

<sup>40</sup> Wildlife and Countryside Act 1981, c.69, Sched.8.

on particular species and that provide protection against the direct threats that these face, but the species selected must be chosen on the basis of biodiversity needs, not public popularity.

Secondly, the law must be pervasive through paying attention to the state of the environment as a whole, rather than being too narrowly concentrated on designated sites and habitats alone. If the focus of the law is solely on specific designated sites this risks establishing these as isolated islands in an otherwise hostile environment, not only vulnerable to local disaster but cut off from the “cross-fertilisation” (literal and metaphoric) necessary to maintain long-term health and resilience. The need to care for biodiversity outwith the boundaries of designated areas is increasingly being recognised as fundamental to successful conservation.<sup>41</sup> The point is expressly made in the Habitats and Species Directive which in addition to its measures on designated sites calls on states to use land-use planning and development policies “to encourage the management of features of the landscape which are of major importance for wild fauna and flora”,<sup>42</sup> especially features which act as wildlife corridors or stepping-stones “essential for the migration, dispersal and genetic exchange of wild species.”<sup>43</sup>

Thirdly, the law must be pervasive in that it supports conservation not only through measures designed specifically for that purpose, but also through provisions in other areas of law which could have an impact on biodiversity.<sup>44</sup> Thus, the fact that environmental impact assessments, which require consideration of the effects of proposed activities on fauna and flora,<sup>45</sup> are required for an increasing range of activities ensures that biodiversity is not ignored<sup>46</sup> in considering applications for permission for many activities.<sup>47</sup> At a higher level, the requirement for strategic environmental assessment of policies also ensures that this issue is not ignored, especially in Scotland where this requirement is applied generally, not just to the specific categories of policies marked out by EU law.<sup>48</sup> Even where the circumstances do

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<sup>41</sup> E.g. art.8 of the Convention on Biological Diversity.

<sup>42</sup> Habitats and Species Directive, art.10, implemented by Conservation (Natural Habitats, etc.) Regulations 1994, S.I. 1994/2716, reg.37.

<sup>43</sup> The Directive refers to features which serve this purpose “by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems of field boundaries) or their function as stepping stones (such as ponds or small woods).”

<sup>44</sup> Convention on Biological Diversity, art.6(b).

<sup>45</sup> Environmental Assessment (Scotland) Regulations 1999, S.S.I. 1999/1, Sched.4 para.3.

<sup>46</sup> Biodiversity concerns can, of course, be overridden by other considerations and damaging projects can still be given approval, since the environmental assessment procedure is concerned only with the process by which a decision is reached not the final outcome, ensuring only that environmental concerns are taken into account, not that they are given any particular weight.

<sup>47</sup> The categories of project covered are listed in the Annexes to the Environmental Assessment Directive (Council Directive 85/337 1985 O.J. (L 175) 40 (EC), as amended, most significantly by Council Directive 97/11 1997 O.J. (L 73) 5 (EC)). The Directive is implemented primarily through the Environmental Assessment (Scotland) Regulations 1999, S.S.I. 1999/1, with separate regulations for some circumstances, including the Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999, S.S.I. 1999/43 and the Environmental Impact Assessment (Agriculture) (Scotland) Regulations 2006, S.S.I. 2006/582.

<sup>48</sup> Environmental Assessment (Scotland) Act 2005 (A.S.P.15), implementing and extending the application of Council Directive 2001/42 2001 O.J. (L 197) 30 (EC).



not trigger an environmental assessment, it is recognised that biodiversity is a material consideration in deciding whether to grant planning permission,<sup>49</sup> and the same is true in other contexts where permission may be necessary including significant planting<sup>50</sup> or felling of trees<sup>51</sup> or converting grassland to more intensive agricultural use<sup>52</sup> or works that affect watercourses.<sup>53</sup>

The increasing pervasiveness of concern for the conservation of nature is shown by the fact that anti-pollution laws also recognise the impact on biodiversity. The Pollution Prevention and Control Act 1999 authorises measures designed to prevent environmental pollution that may give rise to any harm, and such terms are defined in a way which protects other species in addition to man; "harm" includes "impairment of, or interference with, the ecological systems of which any living organisms form part".<sup>54</sup> More significantly the Water Framework Directive<sup>55</sup> and the laws that implement it<sup>56</sup> are based on seeking to ensure that water resources attain "good status", a concept exhaustively defined with the emphasis on ecological criteria.<sup>57</sup>

The last few years have also seen biodiversity concerns pervading agricultural law and policy,<sup>58</sup> a particularly important issue in a country where most rural areas are actively farmed, and where changes in agricultural practice during the second half of the twentieth century have probably had a greater impact on biodiversity than any other factor. After the Second World War policy was directed to maximising production and this produced a background inimical to conservation, where financial support was available for agricultural "improvements" that destroyed habitats. Indeed at times compensation was available from the statutory conservation body for farmers agreeing not to proceed with projects that were only ever viable on the basis of grants to be paid by other branches of government.<sup>59</sup>

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<sup>49</sup> SCOTTISH GOVERNMENT, SCOTTISH PLANNING POLICY (2010), paras 125-148. Landowners have no general right to carry out "development" on their land unless they get planning permission from the relevant local authority (Town and Country Planning (Scotland) Act 1997, c.8). "Development" covers all forms of building, engineering and mining operations and also material changes of use (*id.*, s.26(1)), although many exceptions apply, e.g. in relation to most agricultural activity.

<sup>50</sup> Forestry Act 1967, c.10, ss.9,17.

<sup>51</sup> Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999, S.S.I. 1999/43.

<sup>52</sup> Environmental Impact Assessment (Agriculture) (Scotland) Regulations 2006, S.S.I. 2006/582.

<sup>53</sup> Water Environment (Controlled Activities) (Scotland) Regulations 2005, S.S.I. 2005/348.

<sup>54</sup> Pollution Prevention and Control Act 1999, c.24, s.1(3). Similar broad definitions are used in other areas, e.g. the provisions on waste management define "harm" as including "harm to the health of living organisms or other interference with the ecological systems of which they form part"; Environmental Protection Act 1990, c.43, s.29(5).

<sup>55</sup> Council Directive 2000/60 2000 O.J. (L 327) 1 (EC).

<sup>56</sup> Primarily the Water Environment and Water Services (Scotland) Act 2003 (A.S.P. 3) and the Water Environment (Controlled Activities) (Scotland) Regulations 2005, S.S.I. 2005/348.

<sup>57</sup> Water Framework Directive, Annex V.

<sup>58</sup> REID, *supra* note 12, chap.8.4.

<sup>59</sup> SPICe BRIEFING 03/84, NATURE CONSERVATION (SCOTLAND) BILL (Scottish Parliament, 2003) pp.11-12 (available at <http://www.scottish.parliament.uk/SPICeResources/Research%20briefings%20and%20fact%20sheets/sb03-84.pdf>).

Biodiversity concerns are now a basis for refusing grants and further change took the form of specific schemes to support less intensive agricultural practices (which benefit biodiversity).<sup>60</sup> Now care for the environment is an integral part of the support schemes authorised under EU law,<sup>61</sup> with a failure to abide by conditions imposed for the benefit of biodiversity risking the loss of substantial financial support.<sup>62</sup> Landowners can also get support for managing their land in a way that assists biodiversity through various options under the Scottish Rural Development Programme,<sup>63</sup> which “brings together a wide range of formerly separate support schemes including those covering the farming, forestry and primary processing sectors, rural enterprise and business development, diversification and rural tourism”<sup>64</sup> and in so doing integrates conservation with other concerns. The overall result is that specific biodiversity measures are now running with, rather than against, the tide of more general rural and agricultural policy.

A final way in which the law must be pervasive is in ensuring that conservation is a concern for society as a whole, not just a few dedicated actors. Concern for wildlife must extend to those whose impact on biodiversity takes effect indirectly as well as those whose activities have an obvious “hands-on” contact with wildlife. The inclusion of biodiversity concerns in the ways noted above contributes to this goal, especially in relation to development and agriculture, as do innovations such as the obligation to prevent or repair damage to wildlife sites under the Environmental Liability Directive,<sup>65</sup> but there are further measures that more expressly require a wide range of public bodies to engage with conservation.

Building on earlier provisions requiring authorities to have regard to the desirability of conserving the natural heritage,<sup>66</sup> all public bodies and office-holders<sup>67</sup> are under a duty “in exercising any function, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions,”<sup>68</sup> in doing so regard must be had to the Scottish

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<sup>60</sup> E.g. Environmentally Sensitive Areas; Agriculture Act 1986, c.49, s.18. Cf. Convention on Biological Diversity, art.11.

<sup>61</sup> Following the “Health Check” of the Common Agricultural Policy in 2008 (see <http://ec.europa.eu/agriculture/healthcheck/>), given effect largely through the Single Farm Payment Scheme (for an outline, see [http://europa.eu/legislation\\_summaries/agriculture/environment/ag0003\\_en.htm](http://europa.eu/legislation_summaries/agriculture/environment/ag0003_en.htm)).

<sup>62</sup> In 2008 one landowner was required to repay £107,650 of agricultural subsidies following the discovery of illegal pesticides connected with the poisoning of birds of prey; (2008) 405 ENDS REPORT 53.

<sup>63</sup> See the Scottish Government’s website at <http://www.scotland.gov.uk/Topics/farmingrural/SRDP> and especially the Rural Development Contracts (Land Managers Options) (Scotland) Regulations 2008, S.S.I. 2008/159.

<sup>64</sup> SCOTTISH GOVERNMENT, WHAT IS SRDP? at <http://www.scotland.gov.uk/Topics/farmingrural/SRDP/WhatIs>.

<sup>65</sup> Directive of the European Parliament and Council 2004/35 2004 O.J. (L 143) 56 (EC), implemented by the Environmental Liability (Scotland) Regulations 2009, S.S.I. 2009/266.

<sup>66</sup> Countryside (Scotland) Act 1967, c.86, s.66, as amended by Natural Heritage (Scotland) Act 1991, c.28, Sched.10 para.4.

<sup>67</sup> These terms are broadly defined; Nature Conservation (Scotland) Act 2004 (A.S.P. 6), s.58.

<sup>68</sup> *Id.*, s.1.

Biodiversity Strategy designated by the Scottish Ministers and the Convention on Biological Diversity.<sup>69</sup> More specific obligations require regulatory bodies to consult Scottish Natural Heritage<sup>70</sup> and take its advice into account in exercising functions in SSSIs,<sup>71</sup> whilst in relation to forestry, agriculture and sea fisheries there are obligations to balance conservation with the development of the industries concerned.<sup>72</sup> Moreover, the widespread obligations to have regard to sustainability should also entail an element of regard for biodiversity.<sup>73</sup>

These duties are more symbolic than substantial since it is hard to envisage their direct enforcement by the courts.<sup>74</sup> This is especially the case because the duties confer no rights on anyone who might then be in a position to enforce them, because they are usually subject to the primacy of a bodies other functions and because it will often be arguable which of the options open to a decision-making body are actually the ones that further biodiversity,<sup>75</sup> given the complexity of the real world.<sup>76</sup> Nevertheless, without some such provision permitting them to take biodiversity into account, authorities acting in the interests of conservation might well be found to be acting *ultra vires* and unlawfully by allowing an irrelevant consideration to influence the exercise of their statutory functions.<sup>77</sup> The presence of such provisions therefore ensures that conservation can take its place among the other considerations that an authority must bear in mind as it decides on how to exercise its powers and that authorities cannot shut their ears to arguments based on biodiversity.

A study of the biodiversity duty in England and Wales<sup>78</sup> reported that “although many public authorities were undertaking work that is relevant to the duty, this cannot be taken to

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<sup>69</sup> *Id.*, ss.1(2), 2. A duty to produce at least every three years a report on compliance with this duty has been now been added; *id.* s.2A, added by Wildlife and Natural Environment (Scotland) Act 2011 (A.S.P. 6), s.36.

<sup>70</sup> Scottish Natural Heritage is the statutory body in Scotland with responsibilities for biodiversity conservation; Natural Heritage (Scotland) Act 1991, c.28; REID, *supra* note 12, chap. 2.6.

<sup>71</sup> Nature Conservation (Scotland) Act 2004 (A.S.P. 6), ss.12-18.

<sup>72</sup> Forestry Act 1967, c.10, s.1(3A); Agriculture Act 1986, c.49, s.17; Sea Fisheries (Wildlife Conservation) Act 1992, c.36, s.1.

<sup>73</sup> Andrea Ross, *Why Legislate for Sustainable Development? An Examination of Sustainable Development Provisions in UK and Scottish Statutes* (2008) 20 J. ENV. L. 35.

<sup>74</sup> A degree of political enforceability or accountability is achieved where there is a reporting obligation, such as the requirement on Scottish Ministers and now all public bodies to report every three years on implementation of the Scottish Biodiversity strategy; Nature Conservation (Scotland) Act 2004 (A.S.P. 6), ss.2(7), 2A.

<sup>75</sup> And *a fortiori* sustainable development.

<sup>76</sup> See generally Sarah Hendry, *Worth the paper that it's written on? An analysis of statutory duty in modern environmental law* [2005] J. PLANNING L. 1145; Colin T. Reid & Ian R. Roberts, *Nature Conservation Duties: More appearance than substance* (2005) 17 ENV. L. & MANAGEMENT 162 at 166-168; Andrea Ross, *Why Legislate for Sustainable Development? An Examination of Sustainable development Provisions in UK and Scottish Statutes* (2008) 20 J. ENV. L. 35 at 60-65.

<sup>77</sup> *Associated Provincial Picture Houses Ltd. v. Wednesbury Corporation*, [1948] 1 K.B. 223 (Eng.). See for example the controversy over whether the gas industry regulator was legally entitled to provide funds for the Energy Saving Trust; (1994) 231 ENDS REPORT 31.

<sup>78</sup> The duty there is simply to “have regard to” the conservation of biodiversity rather than to “further” it; Natural Environment and Countryside Act 2006, c.16, s.40.

indicate a high overall level of performance relating to biodiversity as, in many areas of work, there were opportunities for further action to implement the duty” and that “[b]etter integration of biodiversity across the whole suite of public authorities’ functions is one of the main opportunities for improvement.”<sup>79</sup> By themselves, therefore, such duties may not be achieving the full integration of biodiversity concerns, but nevertheless they do remove obstacles to this and as authorities become more accustomed to the duties they may have a greater impact in establishing a pervasive concern for nature.<sup>80</sup> General biodiversity duties are therefore vital to ensure that nature conservation cannot be ignored and can be integrated into the policies and actions of bodies across the public sector.

## Positive

Effective conservation of biodiversity is not just about preventing direct harm but about taking positive action to maintain and enhance the quality of ecosystems and habitats. Especially in a country where the countryside has been affected by human influence for many centuries, the “natural” environment will not survive unless it is managed to a certain extent, e.g. scrub and eventually woodland will take over areas of grass or heath unless a certain amount of grazing continues, whereas unless deer numbers are controlled, their excessive grazing pressure will prevent the natural regeneration of woodlands in upland areas. The earlier laws on species protection attempted merely to stop the protected species being killed or taken,<sup>81</sup> whilst habitat protection concentrated on discouraging damaging operations.<sup>82</sup> Such measures remain integral parts of the law,<sup>83</sup> but it is recognised that more than purely defensive measures are needed if wildlife is to thrive.<sup>84</sup>

This is most obviously shown in relation to SSSIs where the emphasis in the 1981 Act on discouraging damaging operations has been replaced by a suite of measures that encourage, require and support the positive management of the land. For each SSSI a site management statement must be produced, providing guidance on how the site’s natural features can be conserved or enhanced.<sup>85</sup> Management agreements can be used to secure

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<sup>79</sup> ENTEC (FOR DEFRA: CTX 0811), FINAL REPORT OF REVIEW OF THE BIODIVERSITY DUTY CONTAINED IN SECTION 40 OF THE NERC ACT 2006 (2010) at 89.

<sup>80</sup> The same report suggested that the fact that the biodiversity duty in Scotland was introduced two years earlier than the equivalent in England and Wales was a likely cause of more activities of relevance to conservation being expressly attributed to the duty by authorities in Scotland; *id.*, at 87

<sup>81</sup> E.g. Protection of Birds Act 1954, 2 & 3 Eliz. 2, c.30.

<sup>82</sup> Wildlife and Countryside Act 1981, c.69, s.28 (as originally enacted).

<sup>83</sup> E.g. Conservation (Natural Habitats, etc.) Regulations 1994, S.I. 1994/2716, regs 39, 43; Nature Conservation (Scotland) Act 2004 (A.S.P. 6), s.16.

<sup>84</sup> The simple change in language from the “preservation” of natural beauty to its “conservation” in the legislation on National Parks in England and Wales reflects this awareness of the need for more than purely defensive measures; National Parks and Access to the Countryside Act 1949, 12, 13 & 14 Geo. 6, c.97, s.5(1), as originally enacted and as amended by the Environment Act 1995, c.25, s.61.

<sup>85</sup> Nature Conservation (Scotland) Act 2004 (A.S.P. 6), s.4.

(and pay for) active conservation.<sup>86</sup> There is also power to secure the conservation, restoration or enhancement of the natural features of the site by seeking a land management order where a management agreement cannot be reached or has not been complied with.<sup>87</sup> Such orders require the owner or occupier of land to undertake or stop specified operations within the time specified. The addition of these features in contrast to the purely preventive scheme for SSSIs in the 1981 Act shows the focus of the law changing to enable and require the positive action needed for effective conservation.

Positive action to maintain biodiversity and the valuable features of the land is now a fundamental element of the rural support mechanisms noted above, representing a major change from the days when the emphasis of agricultural policy was purely on increased production and rural development policy focussed only on economic returns. In terms of making up for past damage, the Water Framework Directive calls for the restoration of degraded aquatic environments with objectives based primarily on ecological criteria.<sup>88</sup> Similarly, as well as the enhancement of existing wildlife populations and habitats, the Birds Directive requires the “re-establishment of biotypes and habitats”<sup>89</sup> and the Habitats and Species Directive calls for studies of the re-introduction of species native to the territory in question.<sup>90</sup> More generally the duty on public authorities to further the conservation of biodiversity again shows an emphasis on more than just preventing harm occurring. The natural environment is dynamic and healthy biodiversity cannot be secured into the future simply by preventing harm. The more positive outlook needed to serve the goal of conserving biodiversity is now reflected in the law, although it is too early to tell how effective such comparatively recent changes have been in changing attitudes and securing action to enhance biodiversity in the long-term.

## **Prioritised**

For biodiversity laws to be effective, they must also be given suitable priority, carrying substantial weight in the inevitable conflicts with other interests. In the real world a concern for nature must battle against a host of other considerations and conserving wildlife almost inevitably comes at a cost, either directly or in terms of lost opportunities to exploit resources, improve infrastructure, etc. It is one thing to establish that biodiversity concerns must be taken into account by public bodies and others, but another to ensure that such concerns are regarded as truly important and capable of outweighing economic or social

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<sup>86</sup> There are several provisions authorising such agreements and enabling them to bind successive owners of the land, including the Countryside (Scotland) Act 1967, c.28, s.49A. Whereas previously the financial provisions in management agreements compensated for the profits foregone by not proceeding with damaging operations, now they are used to support positive activities: "Ministers expect that management agreements on SSSIs will be used to facilitate their positive management ... Ministers are not prepared for public money to be paid out simply to prevent new operations which could destroy or damage these national assets." DEPARTMENT OF THE ENVIRONMENT, TRANSPORT AND THE REGIONS, GUIDELINES ON MANAGEMENT AGREEMENT PAYMENTS AND OTHER RELATED MATTERS, 2001, para.1.2.

<sup>87</sup> Nature Conservation (Scotland) Act 2004 (A.S.P. 6), ss.29-37.

<sup>88</sup> Council Directive 2000/60 2000 O.J. (L 327) 1 (EC), Annex V.

<sup>89</sup> Directive of the Parliament and Council 2009/147 2010 O.J. (L 20) 7 (EC), art.3.

<sup>90</sup> Council Directive 1992/43 1992 O.J. (L 206) 7 (EC), art.22.

gains which may seem to meet more obvious public needs. There is also the question of how far the law should go to interfere with private rights and interests in the pursuit of conservation, an issue where the starting point is quite different in different parts of the world.<sup>91</sup>

Again there are many positive elements to note in Scotland, with the balance in the law shifting clearly towards higher priority for conservation. The points mentioned in the discussion of the pervasiveness of conservation law show that concern for biodiversity is at least now recognised as having a place on the list of priorities, even though it may not always be near the pinnacle of the hierarchy. As one example, public bodies must seek advice in relation to operations that might adversely affect SSSIs, must show how they have responded to the advice and must act so as to give rise to as a little damage as possible, but they are ultimately free to proceed with damaging activities in accordance with the proper exercise of their functions.<sup>92</sup> Very occasionally, though, conservation is identified as the overriding concern, as is the case for the National Parks, where it is expressly stated that conservation is to have priority in the event of conflict between the park aims.<sup>93</sup>

More widely, various aspects of wildlife law have developed to show that biodiversity is to be taken more seriously. The laws on species protection now prohibit killing and taking not only when this is done intentionally but also when done recklessly.<sup>94</sup> The sanctions for breaching conservation laws have become more substantial, including imprisonment,<sup>95</sup> penalties that can accumulate for each specimen involved<sup>96</sup> and forfeiture.<sup>97</sup> The authorities have been given wider enforcement powers,<sup>98</sup> and vicarious liability has been introduced for landowners in relation to certain wildlife offences committed by their employees and

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<sup>91</sup> This issue is affected both by the legal and constitutional background that establishes the extent and strength of individuals' rights and by the factual background which dictates whether conservation effort is to be focussed on state-owned land and state enterprises or on the land and activities of private individuals and companies.

<sup>92</sup> Nature Conservation (Scotland) Act 2004 (A.S.P. 6), ss.12-14; a broadly similar position applies in relation to a range of regulatory authorities in reaching decisions that authorise activities affecting SSSIs (*id.*, s.15).

<sup>93</sup> National Parks (Scotland) Act 2000 (A.S.P. 3), s.9(6). The other aims are promoting sustainable use of the area's natural resources, promoting public understanding and enjoyment of its special qualities and promoting sustainable economic and social development of its communities (National Parks (Scotland) Act 2000 (A.S.P. 3), s.1).

<sup>94</sup> A change introduced by the Nature Conservation (Scotland) Act 2004 (A.S.P. 6), e.g. Sched.6 paras 1(2), 8(2), 11(2).

<sup>95</sup> When the only penalty available was a fine, the Scottish courts were frustrated when dealing with those who had committed serious offences but had only limited resources; *Seiga v. Walkingshaw*, 1994 S.C.C.R. 146, *Forsyth v. Cardle*, 1994 S.C.C.R. 769.

<sup>96</sup> Wildlife and Countryside Act 1981, c.69, s.21(5).

<sup>97</sup> *Id.*, s.21(6).

<sup>98</sup> For example the powers of entry and inspection enjoyed by wildlife inspectors (Wildlife and Countryside Act 1981, c.69, ss.19ZC, added by Nature Conservation (Scotland) Act 2004 (A.S.P. 6), Sched.6 para.17), supplementing those of the police (Wildlife and Countryside Act 1981, c.69, s.19).

agents.<sup>99</sup> Agricultural grants can be taken away if conservation requirements are not complied with.<sup>100</sup>

The increased priority for conservation is particularly clearly shown in the law on habitat protection where private property rights no longer dominate. When first created in 1949, SSSIs existed merely as a means of providing information to the planning authority, without the landowner even being notified of their existence.<sup>101</sup> The Wildlife and Countryside Act 1981 introduced a system that could delay but could not normally prevent the occupiers from carrying out damaging operations unless they were willing to enter a management agreement.<sup>102</sup> Now the law has moved to the position where the owners and occupiers, and others present on the land, can be ordered to avoid or to undertake specific acts,<sup>103</sup> giving the authorities intervening in the interests of biodiversity priority over the wishes of the landowner.

Further examples show both the increasing prominence given to conservation concerns, but again the limits to this development. One is the position of Special Protection Areas under the Birds Directive<sup>104</sup> and Special Areas of Conservation under the Habitats and Species Directive.<sup>105</sup> An ecocentric approach is demonstrated by the fact that the designation of such sites is to be undertaken on the basis of the scientific criteria alone, with no regard for economic or social considerations, a point emphasised in the strongest terms by the European Court of Justice.<sup>106</sup> In the same vein, the basic legal obligation on Member States is to ensure that these sites are protected from any significant deterioration in their habitats or disturbance of the species that they host, applying a precautionary approach in assessing the likelihood of harm.<sup>107</sup> Nevertheless, a more anthropocentric approach intrudes since it is possible for this

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<sup>99</sup> Wildlife and Countryside Act 1981, c.69, ss.18A-18B.

<sup>100</sup> Rural Development Contracts (Land Managers Options) (Scotland) Regulations 2008, S.S.I. 2008/159, regs 10, 14-16 and Part 2 of Sched.3; see (2008) 405 ENDS REPORT 53 – note 62, above.

<sup>101</sup> National Parks and Access to the Countryside Act 1949, 12, 13 & 14 Geo. 6, c.97, s.23.

<sup>102</sup> Wildlife and Countryside Act 1981, c.69, s.28; this scheme was described as “toothless” by Lord Mustill in the House of Lords (*Southern Water Authority v. Nature Conservancy Council*, [1992] 1 W.L.R. 775 at 778 (Eng.)). For a full account see COLIN T. REID, *NATURE CONSERVATION LAW* (1st ed.) (1994), chap.5.4.

<sup>103</sup> Nature Conservation (Scotland) Act 2004 (A.S.P. 6), ss.13-19, 29-37. The earlier provisions were so weak that it was thought unnecessary to provide rights of appeal to those affected by the intervention of the conservation authorities, but as their powers have increased, rights of appeal have been introduced (2004 Act, s.18).

<sup>104</sup> *Supra*, note 22, art.4, as partly replaced by the provisions in the Habitats and Species Directive noted in the next note.

<sup>105</sup> *Supra*, note 26, arts 4-7. The relevant parts of both Directives are implemented in Scotland primarily by the Conservation (Natural Habitats, etc.) Regulations 1994, S.I. 1994 No.2716.

<sup>106</sup> Case C-44/95, *R v. Secretary of State for the Environment, ex parte R.S.P.B.*, 1996 ECR I-3805; Case C-371/98, *R v. Secretary of State for the Environment, Transport and the Regions, ex parte First Corporation Shipping Ltd.*, 2000 E.C.R. I-9253; Case C-209/04, *Comm’n v Austria*, 2004 E.C.R. I-1211.

<sup>107</sup> Case C-127/02, *Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse Vereniging tot Bescherming van Vogels v. Staatssecretaris van Landbouw, Natuurbeheer en Visserij*, 2004 E.C.R. I-7405.

protection to be overridden where there are “imperative reasons of overriding public interest, including those of a social or economic nature.”<sup>108</sup> Even in such circumstances biodiversity is not forgotten since there is an obligation on the state permitting activities damaging the site to ensure that any necessary compensatory measures are taken to protect the overall coherence of the network of sites protected under EU law. There is concern that in practice other considerations are too easily accepted as taking priority over the interests of conservation,<sup>109</sup> but on the other hand examples do exist of major projects, supported by strong interests and in line with other aspects of government policy, being prevented in order to protect designated sites.<sup>110</sup> The message is thus a mixed one, with biodiversity being given priority, but only up to a point.

A similarly mixed picture is presented by the introduction of the biodiversity duty discussed above.<sup>111</sup> The establishment of this as a legal duty rather than just a policy objective is a clear sign of the importance attached to it and should lead to at least some readjustment of the priorities of the bodies affected. Yet it must be remembered that the duty is for bodies to “further the conservation of biodiversity *so far as is consistent with the proper exercise of [their] functions*” (italics added), and an initial study does not suggest that any dramatic reordering of priorities has taken place.<sup>112</sup> The desirability of furthering biodiversity, therefore, is given clear legal status, but remains a secondary rather than the paramount concern even in the context of this duty.

## Participative

Biodiversity is something that affects everyone and, therefore, its conservation should be the concern of many parties. Not only does the pervasive nature required for an effective

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<sup>108</sup> Habitats and Species Directive, art.6(4). The inclusion of this provision was a response to the Member States’ dissatisfaction with the more absolute protection for Special Protection Areas under the Birds Directive as made clear in the Court’s decisions in Case C-57/95, *Comm’n v. Germany*, 1991 E.C.R. I-883, Case C-355/90, *Comm’n v. Spain*, 1993 E.C.R. I-4223 and Case C-44/95, *R v. Secretary of State for the Environment, ex parte R.S.P.B.*, 1996 E.C.R. I-3805.

<sup>109</sup> Ludwig Krämer, *The European Commission’s Opinions under Article 6(4) of the Habitats Directive*, (2009) 21 J.ENV.L. 59.

<sup>110</sup> In April 2008, plans for a windfarm of over 230 turbines in the north of Lewis, largely on one Special Protection Area and affecting others, were rejected on this basis (decision letter available at <http://www.scotland.gov.uk/Resource/Doc/917/0059358.doc>), and other renewable energy projects have also fallen foul of these rules; see, for example Aylwin Pillai, Colin T. Reid & Andrew L. Black, *Reconciling Renewable Energy and the Local Impacts of Hydro-electric Development* (2005) 7 Env. L. Rev 110. In England, a major port development at Dibden Bay on the Solent was refused in 2004; Graham Machin, *Balancing Major Development Proposals against International Nature Conservation Interests: The Dibden Terminal decision* (2005) 2 LAW, SCIENCE & POLICY 285.

<sup>111</sup> Nature Conservation (Scotland) Act 2004 (A.S.P. 6), s.1; see text at note 67 above.

<sup>112</sup> *Supra*, note 79. There is a clear contrast with the unusually unequivocal duties on Ministers to ensure that certain reductions in greenhouse gas emissions are achieved by certain dates; Climate Change Act 2008, c.27, s.1, Climate Change (Scotland) Act 2009 (A.S.P. 12), ss.1-2.



conservation law entail direct engagement with a widening range of parties but the public is entitled to be involved in the policy choices that have to be made as conservation is given greater priority,<sup>113</sup> Conservation must not be the closed domain of expert scientific bodies but something that everyone appreciates,<sup>114</sup> and that is not imposed from outside<sup>115</sup> but accepted as part of society's shared goals. On the other hand, the development of law and policy must be guided by the scientific principles and knowledge<sup>116</sup> and not unduly distorted by popular prejudices<sup>117</sup> or favourites.<sup>118</sup>

The increasing number of parties involved in the delivery of conservation is shown in the measures discussed above, such as the biodiversity duty on all public bodies,<sup>119</sup> the obligations on public and regulatory authorities in relation to SSSIs,<sup>120</sup> and the conservation elements within the various rural support programmes.<sup>121</sup> In terms of delivering conservation policy in practice, it is a partnership of private and public bodies, some with a clear conservation focus and others with different primary concerns, that will often be an effective way to deliver long-term benefits, and this is the approach being taken through the establishment of Biodiversity Partnerships.<sup>122</sup>

There are other mechanisms, though, by which a more participative approach is being fostered. Public participation is an essential element of environmental impact assessment

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<sup>113</sup> "Environmental issues are best handled with participation of all concerned citizens, at the relevant level." Rio Declaration on Environment and Development, June 14, 1992, A/CONF.151/26 (1992), Principle 10.

<sup>114</sup> Cf. art.13 of the Convention on Biological Diversity, *supra*, note 2 on public education and awareness.

<sup>115</sup> This was a significant issue in Scotland in the 1980s during the process of re-notifying SSSIs to enjoy the enhanced protection under the Wildlife and Countryside Act 1981, c.69, with considerable resentment caused by the role and approach of what were perceived as "outsiders" (often fairly young and with purely scientific as opposed to practical expertise) who arrived suddenly in an area and on the basis of supposed scientific data but no local or practical knowledge started telling established land managers what they could and could not do on land which had maintained its value for biodiversity precisely because of the way that local people had been and were continuing to manage it.

<sup>116</sup> This is stated as a fundamental aspect of the ecosystem approach: "2. An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organisms and their environment." (Convention on Biological Diversity COP 5 (2000), Decision V/6).

<sup>117</sup> See note 38, above.

<sup>118</sup> On the balance between technical expertise and popular concerns in setting environmental policy, see ROYAL COMMISSION ON ENVIRONMENTAL POLICY, SETTING ENVIRONMENTAL STANDARDS (21st Report; Cm 4053) (1998).

<sup>119</sup> Nature Conservation (Scotland) Act 2004 (A.S.P. 6), s.1.

<sup>120</sup> *Id.*, ss.12-15.

<sup>121</sup> See note 63, above.

<sup>122</sup> There is a network of national and local partnerships involved in the Scottish Biodiversity Strategy and the Local Biodiversity Action Plans; see <http://www.biodiversityscotland.gov.uk/>

wherever it is required.<sup>123</sup> In relation to SSSIs the designation procedure used to be simply a matter of the conservation body notifying the owners and occupiers of the land and the relevant planning authority,<sup>124</sup> excluding the potential involvement of other interested parties. Now the process includes notification to a much wider range of bodies and individuals in the local area and advertisement in the press, together with a clear route for them to make representations on the proposed designation;<sup>125</sup> moreover the notifications themselves, and especially the site management statement offering guidance on future management, are more informative. Within National Parks, at least a fifth of the members of the Park Authority must be directly elected, with many of the other members having an indirect accountability to the public as nominees of the relevant local authorities and there is a further requirement that a proportion of the members nominated by the local authorities or Scottish Ministers must be “local” in that their main residence is within the park or they are elected representatives for the area.<sup>126</sup> Information about biodiversity matters is also widely available, through both specific mechanisms such as the public register of SSSIs<sup>127</sup> and the general right of access to environmental information.<sup>128</sup>

One continuing weakness in Scotland, though, is in the rules of standing which make it hard for environmental groups and others with strong concerns but no direct legal, property or financial interest in a particular site or activity to invoke the law to support conservation interests.<sup>129</sup> Statutory rights of appeal are usually limited to the directly aggrieved parties<sup>130</sup> and judicial review requires proof of title and interest to sue.<sup>131</sup> Even here some progress is

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<sup>123</sup> As emphasised by Lord Hoffman in *Berkeley v. Secretary of State for the Environment* [2001] 2 A.C. 603 (Eng.) at 615-616. To assist the public, a requirement of the environmental impact assessment procedure is the production of a “non-technical summary of the information provided” under the various detailed headings specified; Council Directive 85/337 1985 O.J. (L 175) 40 (EC), Annex III, para.6.

<sup>124</sup> *Wildlife and Countryside Act 1981*, c.69, s.28(1).

<sup>125</sup> *Nature Conservation (Scotland) Act 2004* (A.S.P. 6), ss.3, 48(2), Sched.1. Those to be notified include a wide range of regulatory bodies and statutory undertakers (e.g. infrastructure providers), the community councils (elected bodies for small areas that advise local authorities but have no executive functions), community bodies registered under the laws giving them the right to buy local land when it comes on the market and others appearing to have an interest in the land or any others who are thought appropriate by Scottish Natural Heritage

<sup>126</sup> *National Parks (Scotland) Act 2000* (A.S.P. 10), Sched.1.

<sup>127</sup> *Nature Conservation (Scotland) Act 2004* (A.S.P. 6), s.22; see <http://www.ros.gov.uk/sssi>

<sup>128</sup> *Environmental Information (Scotland) Regulations 2004*, S.S.I. 2004/520, implementing Directive of the European Parliament and Council 2003/4 2003 O.J. (L 41) 26 (EC). One of the exceptions allows the withholding of information for “the protection of the environment to which the information relates” (reg.10(5)(g)), enabling the location of particularly vulnerable species or habitats to be kept secret.

<sup>129</sup> See REID, *supra*, note 12, section 1.4.

<sup>130</sup> E.g. under the planning system and in relation to controls imposed on SSSIs.

<sup>131</sup> LORD CLYDE & DENIS J. EDWARDS, *JUDICIAL REVIEW*, (2000), chap.10. It has been argued that the restrictive rules on standing are in breach of the UK’s obligations under the Aarhus Convention to provide access to justice on environmental matters for members of the public and environmental organisations (Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, June 25, 1998, 2161 U.N.T.S. 447, art.9; see SCOTTISH COURTS ADMINISTRATION, *REPORT OF THE SCOTTISH CIVIL*

being made with the rules implementing the Environmental Liability Directive granting “a non governmental organisation promoting environmental protection” the right to seek a response from a relevant authority which it considers is not acting as it should to ensure that harm is prevented or remedied.<sup>132</sup> The difficulties can in part be overcome by ensuring that the opportunities are taken to make representations and otherwise participate in the decision-making processes when permits of various sorts are being granted or designations made, thereby creating standing to ensure that a legally proper conclusion is reached.<sup>133</sup> Yet there is little that can be done to establish standing where the complaint is that an authority is not properly monitoring or enforcing the law.

### **Precautionary and Proactive**

The natural environment is dynamic, not static, and it may change in ways that we cannot predict, even as we continue to improve our present partial understanding of the complex interactions between species and the world in which they live.<sup>134</sup> Effective conservation of biodiversity must take account of these facts. It must look forward and be ready to cope with unexpected changes. This is a dimension which has not yet become a significant feature of the law.

In terms of coping with change and uncertainty, the one area where a clear legal position has been adopted is in relation to sites protected under EU law. The European Court of Justice has made it very clear that a precautionary approach must be taken in assessing the risks presented by proposed activities, requiring states to operate on the basis that there will be adverse effects unless there is no reasonable scientific doubt that such effects can be ruled out.<sup>135</sup> Yet this approach is limited to the context of the risks arising from the particular project being considered, not any of the other risks, anthropogenic or “natural”, that the site faces. The positive management features noted above can be viewed as examples of trying to provide for the future, as can the provisions for compensatory measures where approval is given for projects harming sites protected under EU law.<sup>136</sup> Also looking forward is the

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COURTS REVIEW (“GILL REPORT”) (2009) chap.12 para.19 (vol.2 p.28). A less restrictive approach to standing is suggested by the Supreme Court in *AXA General Insurance Ltd v. Lord Advocate* [2011] U.K.S.C. 46.

<sup>132</sup> Environmental Liability (Scotland) Regulations 2009, S.S.I. 2009/266, reg.14.

<sup>133</sup> Cf. *Patmor v. Edinburgh District Licensing Board*, 1988 S.L.T. 850 where a party’s standing to challenge the grant of a gaming licence arose not from their strong interest in the matter but only from their participation when the statutory procedure allowed for representation to be made when the licence application was advertised.

<sup>134</sup> Even recent historical records show dramatic changes in the distribution of species which are at most only very indirectly connected to anthropogenic changes. For example both the fulmar and the collared dove, now widespread in Scotland, were either localised or absent until last century; fulmars were found only on St. Kilda until the 1900s (<http://blx1.bto.org/birdfacts/results/bob220.htm>) and collared doves spread from Turkey and the Middle East only in the 1930s and first bred in Britain in Norfolk in 1955 (<http://blx1.bto.org/birdfacts/results/bob6840.htm>).

<sup>135</sup> Case C-127/02, *Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse Vereniging tot Bescherming van Vogels v. Staatssecretaris van Landbouw, Natuurbeheer en Visserij*, 2004 E.C.R. I-7405.

<sup>136</sup> Habitats and Species Directive, art.6(4).

requirement for complementary and compensatory remediation under the Environmental Liability Directive,<sup>137</sup> that is establishing habitat of equivalent value if the habitat harmed cannot be fully restored and taking appropriate interim measures to secure habitat while the restoration or alternative provision is being achieved.<sup>138</sup> Yet such measures can only be really effective if there are alternative habitats available to be dedicated to this purpose. Although, on the surface, nature may appear to respond fairly quickly, the complex web of micro-organisms on which healthy and diverse habitats rely can be established only over a long period, so that if there are not sites in good condition ready to be “promoted” to make up for the designated sites that are lost, the legal requirements will achieve little in practice.

A precautionary approach is also evident in the new law in Scotland on non-native species.<sup>139</sup> Under the new provisions it is an offence to release, or allow to escape, any animal in a place outwith its native range so that the law applies to animals that may be well-established in the UK, and even in Scotland, but whose native range is found elsewhere. For plants the same pattern is followed, with it being an offence to plant, or cause to grow, any plant in the wild outwith its native range. This formulation now means that the offences extend to include introducing species to areas, especially islands or lochs, where they are not naturally present, even though they may be native to Scotland.<sup>140</sup> The offences also cover all non-native species, whereas previously those species established in or regular visitors to the country were covered only if expressly included in a Schedule to the Act.<sup>141</sup> The list there inevitably lagged behind the facts, creating a loop-hole at what is a vital stage in trying to tackle problem species, between a species first settling here and becoming so well established that its control or eradication becomes difficult. The law is thus taking a no-risks approach rather than waiting for a problem to be apparent before intervening.

These provisions also reflect other trends in the development of the law. A stricter approach to protection is shown by making it an offence (subject to certain defences) simply to keep or possess specimens of certain invasive non-native species, a measure designed to reduce the risk of particularly harmful species getting into the wild. Likewise strong measures can be taken to control non-native species likely to have a significant adverse impact on biodiversity or on environmental, social or economic interests, including a power to order landowners to take steps to control or eradicate the species if initial attempts to achieve this result by agreement are unsuccessful. Such measures also involve the participation of wider sections of the community, albeit not necessarily voluntarily, as does the power to require certain people to report the presence of specified non-native species when encountered on their land or in the course of their work.

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<sup>137</sup> Directive of the European Parliament and Council 2004/35 2004 O.J. (L 143) 56 (EC), implemented by the Environmental Liability (Scotland) Regulations 2009, S.S.I. 2009/266.

<sup>138</sup> Annex II of the Directive and 2009 Regulations, Sched.3 para.2.

<sup>139</sup> Wildlife and Countryside Act 1981, c.69, ss.14-14P, added by Wildlife and Natural Environment (Scotland) Act 2011 (A.S.P.6), ss.14-17; as at May 2012 these provisions are not yet in force.

<sup>140</sup> For example, the release hedgehogs in the Western Isles has caused serious damage to populations of ground-nesting birds; see the Uist Wader Research Project at <http://www.snh.gov.uk/land-and-sea/managing-wildlife/uist-wader-research/aims-of-the-project/>.

<sup>141</sup> Wildlife and Countryside Act 1981, c.69, s.14, Sched.9 (as originally enacted).

Overall, though, the bulk of the law still does not look forward to any great extent. The fundamental structure of the present mechanisms, based largely on protecting the sites currently of most value, may not be well-suited to some of the challenges that are being faced. The whole basis of the law in protecting existing species and sites of value may be undermined by the impact of climate change. A site may be given complete protection from direct interference, but may still lose all its value for wildlife if changing temperatures alter the plants that can grow there or changing sea-levels or flooding patterns inundate the site so that conditions become hostile to the species for which the site was being treasured.<sup>142</sup> Sea-level rises which result in the flooding of salt-marshes are not in themselves a problem for biodiversity; the problem arises where coastal defences prevent the natural process of new salt-marshes developing along the new shoreline. Creating the scope for nature to adapt to changing circumstances is a major challenge and requires protection to be given not only to the sites that are valuable today but also to those that may become the essential refuges or pathways as species are forced to move inland from the current shoreline or to cooler areas or higher altitudes as weather conditions change.<sup>143</sup>

## The Future

This paper has shown the attributes needed by a set of wildlife laws that is going to respond seriously to the challenge of conserving and enhancing biodiversity. The law in Scotland has evolved considerably towards meeting this challenge, but it must be noted that it has done so whilst operating within a fairly narrow range of legal techniques. The law today takes a more holistic approach and offers much more protection to wildlife than it did 60 years ago, but it is still based largely on a framework of traditional “command-and-control” regulation,<sup>144</sup> making use of criminal prohibitions, permitting and licensing schemes and other direct controls applied through a statutory conservation body which identifies and designates sites and species of particular value or under particular threat. The extent to which things have changed, broadening the scope of the law and increasing the weight given to biodiversity, demonstrate the flexibility of this approach, and the potential for further development along the same lines.

Yet the fact remains that the goal of halting biodiversity loss is not being achieved. It may still be too early to judge the long-term effectiveness of the changes during the last decade that have made the law more pervasive and given conservation greater priority, and the position is undoubtedly better than it was, but too many indicators still show a decline in biodiversity. In 2004, the Scottish Government set out its 25-year vision in this area:

It’s 2030: Scotland is recognised as a world leader in biodiversity conservation.  
Everyone is involved; everyone benefits. The nation is enriched.<sup>145</sup>

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<sup>142</sup> There are also difficulties for the laws dealing with non-native species, since changing conditions will lead to new species by themselves colonising areas previously outwith their range or being able to thrive in areas where hostile conditions have previously stifled any deliberate or accidental introductions.

<sup>143</sup> Arie Trouwborst, *International Nature Conservation Law and the Adaptation of Biodiversity to Climate Change: A Mismatch?* (2009) 21 J.ENV.L. 419.

<sup>144</sup> Carolyn Abbott, *Environmental Command Regulation*, in ENVIRONMENTAL LAW FOR SUSTAINABILITY (Benjamin J. Richardson & Stepan Wood, eds, 2006).

<sup>145</sup> SCOTTISH GOVERNMENT, SCOTLAND’S BIODIVERSITY: IT’S IN YOUR HANDS (2004) at 10.

The question must be asked whether the legal support necessary to deliver this vision can be achieved through a continuation of the incremental development that has been described here, or demands a more or less radical rethinking of the mechanisms being used.

There are many possible ways forward for Scotland, and for other countries which have followed the same pattern of developing and strengthening their laws but still face an erosion of biodiversity. Each possibility will have its own strengths and weaknesses and this is not the place for a full examination of their potential, nor of the best ways in which a range of approaches and mechanisms might be combined to achieve effective but proportionate regulation. In particular any thorough investigation must look at experience in other countries, bearing in mind the importance of the contexts that differ in many ways – conservation of large areas of pristine habitat on state land requires a very different approach and range of mechanisms from those needed to conserve biodiversity in a densely packed, privately owned and heavily managed landscape created by human intervention over many centuries. Moreover, making any radical change may be difficult in Scotland where the law is the product of three distinct legislators who may not all share the same enthusiasm for new departures: the EU, whose rules in the Birds and Habitats and Species Directives are unlikely to change rapidly, and the UK and the Scottish Parliaments, where the division between devolved and reserved matters does not always provide a smooth path for dealing with environmental issues.<sup>146</sup> Nevertheless, in addition to continuing along the same path with a strengthening and expansion of measures similar to those already in place, there is potential at least to consider change<sup>147</sup> and three distinct new directions that might be explored can be mentioned.

The first is to utilise a wider range of legal techniques, moving away from the view of wildlife as something primarily to be nurtured by the state through direct regulatory powers and creating more scope for private initiative.<sup>148</sup> Non-governmental organisations and ecologically-minded individual landowners already play a major role in conserving biodiversity, but in Scotland there are no dedicated legal tools available to support them. Some aspects of enhancing their role would involve very minor innovations, such as allowing wider scope for individuals to arrange enduring protection for sites along the lines of conservation servitudes (easements).<sup>149</sup> Others would, entail a more major change both in the law and in people's relationship with nature, such as creating conservation banking and offsetting schemes,<sup>150</sup> or tradable development rights.<sup>151</sup> Not only would such measures

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<sup>146</sup> See generally Gavin Little, *Scottish Devolution and Environmental Law*, (2000) 12 J.ENV.L. 155; Colin T. Reid, *Devolution and the Environment*, in ENVIRONMENT AND REGULATION (HUME PAPERS ON PUBLIC POLICY) (Andrea Ross, ed., 2000).

<sup>147</sup> William J. Sutherland *et al.*, *The identification of priority policy options for UK nature conservation* (2010) 47 JOURNAL OF APPLIED ECOLOGY 955.

<sup>148</sup> Colin T. Reid, *The Privatisation of Biodiversity? Possible New Approaches to Nature Conservation Law in the UK* (2011) 23 J. ENV. L. 203

<sup>149</sup> ELIZABETH BYERS & KARIN MARICHETTI PONTE, THE CONSERVATION EASEMENT HANDBOOK (2nd ed., 2005). In limited circumstances something similar can apply for a number of listed bodies, as “conservation burdens” under the Title Conditions (Scotland) Act 2003 (A.S.P. 9), ss.38-42.

<sup>150</sup> NATHANIEL CARROLL, JESSICA FOX & RICARDO. BAYON (EDS), CONSERVATION AND BIODIVERSITY BANKING: A GUIDE TO SETTING UP AND RUNNING BIODIVERSITY CREDIT TRADING SYSTEMS (2008). In England a pilot scheme for biodiversity offsetting has been introduced; <http://www.defra.gov.uk/environment/natural/biodiversity/uk/offsetting/>

require significant effort to ensure that they worked smoothly and delivered conservation gains as expected,<sup>152</sup> but they can also be viewed as a privatisation of conservation, converting wildlife from a common heritage into a commodity and raising similar practical and ethical issues to those that have been discussed as economic and market instruments have developed as a means of pollution control.<sup>153</sup>

A second new direction is to build on the growing effort to assess the value of ecosystem services and to design ways of recovering these from those who benefit.<sup>154</sup> This work shows the huge contribution that “natural” environments make to the health and wealth of even the most developed societies, including water purification and storage, flood and coastal protection, carbon sinks and leisure facilities. Again, viewing biodiversity in primarily economic terms raises moral and ethical issues, but it does open the door to using established techniques, e.g. contracts, market creation, taxation, to recover the costs of conservation and enhancement from those who are enjoying its very substantial benefits and to make them at least share responsibility for caring for the environments on which they depend.<sup>155</sup> As with the innovations mentioned above, there would still be a place for direct regulation to provide a clear background against which such techniques might operate, but the weight of moving beyond the current levels of protection could be carried in new ways.

The third option is to contemplate a much more radical restructuring of the law reflecting a fundamentally different vision of our relationship with nature. The current approach and the ideas just discussed still take a fairly traditional approach to the law, developing from established concepts of and approaches to nature conservation, operating within standard legal frameworks, and if anything moving towards a more economic and commercial, rather than a spiritual, valuation of nature. The opposite would be the case if one were to embrace the more far-reaching reconfiguration proposed by “Earth Jurisprudence” or “Wild Law” as developed in the works of those such as Thomas Berry<sup>156</sup> and Cormac Cullinan.<sup>157</sup> That approach aims to reshape the whole law and its values on the basis of seeking to maintain the integrity and functioning of the whole Earth community in the long term, rather than serving the narrow interests of the human species. As explained by Cullinan:

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<sup>151</sup> Jens Müller, *A Field Experiment with Tradable Development Rights in Germany* (2010) at [http://www.ceem.unsw.edu.au/content/userDocs/Spiel\\_Raum\\_2.pdf](http://www.ceem.unsw.edu.au/content/userDocs/Spiel_Raum_2.pdf)

<sup>152</sup> Cf. The problems over the early operation of the EU Emissions Trading Scheme; HOUSE OF LORDS COMMITTEE ON THE EUROPEAN UNION, REVISION OF THE EU’S EMISSIONS TRADING SYSTEM, 2007-8 H.L. 197, chap.1.

<sup>153</sup> As examples see Mark Sagoff, *Economics and Environmental Law* (1980-81) 79 MICH. L. REV. 1393, Gerd Winter, *The Climate is No Commodity: Taking Stock of the Emissions Trading System*, (2010) 22 J. ENV. L. 1.

<sup>154</sup> For example the work of The Economics of Ecosystems and Biodiversity project, available at <http://www.teebweb.org/>.

<sup>155</sup> Thomas Greiber (ed.), *Payments for Ecosystem Services: Legal and Institutional Frameworks* IUCN ENVIRONMENTAL POLICY AND LAW PAPER NO. 78 (2009); TEEB REPORT THE ECONOMICS OF ECOSYSTEMS AND BIODIVERSITY: TEEB FOR NATIONAL AND INTERNATIONAL POLICY MAKERS, (2009), Part III, available at <http://www.teebweb.org/ForPolicymakers/tabid/1019/language/en-US/Default.aspx>.

<sup>156</sup> THOMAS BERRY, *THE GREAT WORK* (2000) and THOMAS BERRY (MARY EVELYN TUCKER, ED.) *EVENING THOUGHTS: REFLECTING ON EARTH AS SACRED COMMUNITY* (2006).

<sup>157</sup> CORMAC CULLINAN, *WILD LAW: A MANIFESTO FOR EARTH JUSTICE* (2003).

‘Earth jurisprudence’ is a philosophy of law and human governance based on the idea that humans are only one part of a wider community of beings and that the welfare of each member of that community is dependent on the welfare of Earth as a whole. It is premised on the belief that human societies will only be viable and flourish if they regulate themselves as part of this wider Earth community and do so in a way that is consistent with the fundamental laws or principles that govern how the universe functions (which I have termed the ‘Great Jurisprudence’).

The term ‘wild law’, on the other hand, refers to human laws that are consistent with Earth jurisprudence. A wild law is a law made by people to regulate human behaviour which prioritises maintaining the integrity and functioning of the whole Earth community in the long term, over the interests of any species (including humans) at a particular time. Wild laws are designed to regulate human participation within this wider community. They seek to balance the rights and responsibilities of humans against those of other members of the community of beings that constitutes Earth (e.g. plants, animals, rivers and ecosystems) in order to safeguard the rights of all the members of the Earth community.”<sup>158</sup>

Such an approach would offer the maximum pervasiveness and priority for biodiversity concerns. Giving full effect to such values would require a major reworking of much of the legal system, for example creating structures that emphasise the responsibilities of landowners to the wider community, human and non-human, rather than their rights.<sup>159</sup> Even if considered desirable, such a transformation is something that any country would struggle to achieve alone, far less one like Scotland with its interplay of different layers of law.

In the near future, any developments in Scotland are likely to be conservative, continuing the process of developing the existing legislation,<sup>160</sup> and time will tell whether this is enough for the vision for biodiversity conservation to become reality. A lot has been achieved as the law has evolved from preventing a few particular damaging activities to the position where it supports a more positive and holistic view and this evolution must continue if biodiversity is to be maintained and restored. Biodiversity law that is increasingly pervasive, that takes a positive approach, that is given increased priority and that stimulates the participation of an increasing number of people, can do a lot to establish both strongly supported bio-citadels and a generally bio-friendly countryside and townscape. It may still be too early to judge the cumulative effects of the many changes made in recent years, but the challenges of an environment that may become increasingly dynamic call on us to think further about how the law should continue to develop.

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<sup>158</sup> Cormac Cullinan, *Sowing Wild Law* (2007) 19 ENV. L. & MANAGEMENT 71 at 73.

<sup>159</sup> For a historical perspective on property rights see SEAN COYLE & KAREN MORROW, *THE PHILOSOPHICAL FOUNDATIONS OF ENVIRONMENTAL LAW: PROPERTY, RIGHTS AND NATURE* (2004).

<sup>160</sup> As in the Wildlife and Natural Environment (Scotland) Act 2011 (A.S.P.6), which the Minister or the Environment described as being “concerned with regulation and management and [being] very much about the practicalities involved in managing the countryside rather than providing an overall vision”; RURAL AFFAIRS AND ENVIRONMENT COMMITTEE, *STAGE 1 REPORT ON THE WILDLIFE AND NATURAL ENVIRONMENT (SCOTLAND) BILL* (8<sup>th</sup> Report of 2010), paras.155-158.