

The background of the cover is a close-up photograph of a green parrot, likely a Red-tailed Tropicbird, with its face and eyes visible through the narrow, vertical gaps between the long, pointed fronds of a palm tree. The lighting is bright, creating a vibrant green color palette.

**JNCC Annual Report  
2007/2008**



### **Scorched Earth**

The natural habitat of the orangutan is rapidly being eradicated, as vast swathes of tropical forest in south east Asia are destroyed to make way for lucrative palm oil plantations.

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Composite image (opposite) created from:  
Orangutan © Shin Yoshino/Minden Pictures/FLPA  
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# Joint Nature Conservation Committee

## Annual Report 2007/2008

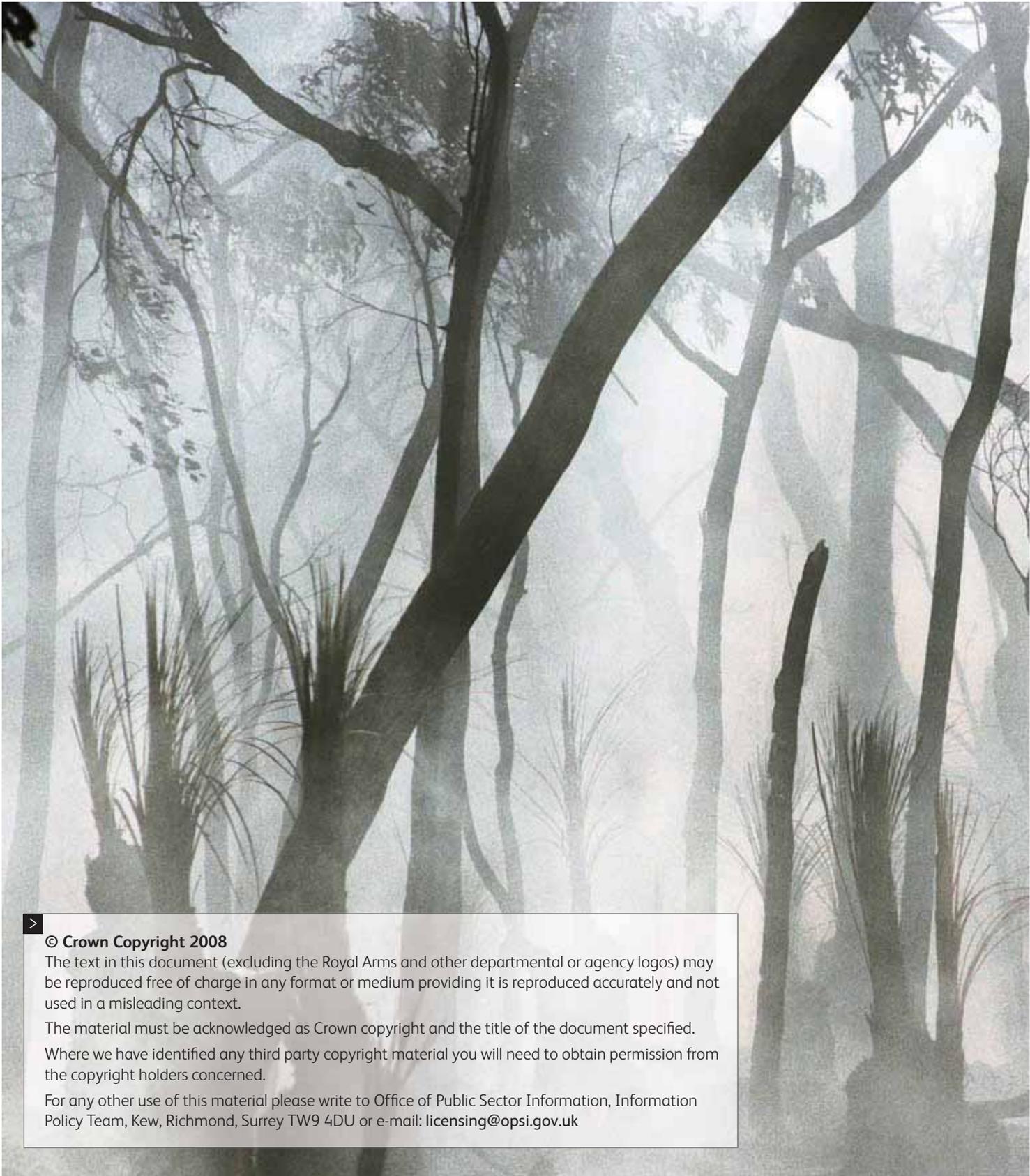
Annual Report presented to Parliament by the Secretary of State for Environment, Food and Rural Affairs in exercise of the powers conferred by paragraph 18(1) of Schedule 4 of the Natural Environment and Rural Communities Act 2006.

Ordered by the House of Commons to be printed 15 July 2008.

HC 775

London: The Stationery Office

£18.55



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## Orangutan

*Pongo* species

The world's largest arboreal mammal, the orangutan is struggling for survival. Native only to the tropical islands of Borneo and Sumatra where they exist as isolated species, populations have more than halved in the past 60 years through human activities and development. Vast areas of tropical forest habitat have been lost for agriculture, mainly driven by the international demand for palm oil. Forest fires, habitat fragmentation and degradation through illegal logging activities, in addition to hunting and the illicit international pet trade, have further contributed to declines.



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## > About JNCC

The Joint Nature Conservation Committee (JNCC) is the statutory adviser to Government on UK and international nature conservation, on behalf of the Council for Nature Conservation and the Countryside, the Countryside Council for Wales, Natural England and Scottish Natural Heritage. Its work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems



Council for  
Nature Conservation  
and the Countryside



### > Recipients

The JNCC Annual Report 2007–2008 has been presented to the following Ministers:

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Registered in England and Wales,  
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Registered office:  
Monkstone House,  
City Road, Peterborough  
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## > Chair's foreword

JNCC continues to play a vital role in setting nature conservation at the heart of the UK's sustainable development agenda. While we maintain a low profile, we are part of the "green glue" which holds together the vital efforts of the conservation bodies in the four countries of the UK, and we also work with Defra and others to ensure adequate and effective conservation in our Overseas Territories and Crown Dependencies



We act as a bridge between the work of the country bodies, as set and defined by their respective administrations, and the international arena. We have statutory responsibilities for some rare and important bits of the UK's biodiversity and we represent a key resource for the recognition of geodiversity and its conservation.

When I had the honour to assume the chairmanship of JNCC in October 2007 I recognised clearly the challenges that all this poses: working with devolved administrations to ensure compatible outcomes across the UK without comprising national enthusiasms and ambitions, yet ensuring UK conservation efforts are seen as competent, cohesive and constructive on the global stage. I am pleased to say that working with the chairs of the country conservation bodies, Defra officials and supportive ministers my perspective is that JNCC is stronger and more needed than ever, and stands ready to deliver through the work carried out by the excellent staff from the JNCC support company.

That said, I expect we will be in a period of change as the UK confronts the challenges raised by the 2010 biodiversity target, as we look to showcasing in an effective manner our joint and several efforts on geoconservation, and as we tackle the challenges of marine

conservation in a time when legislation is being prepared to make our seas productive, environmentally sound and safe places for biodiversity.

While all this is fine, we are approaching 2010 at a rapid rate, and we are aware that globally and nationally we have a way to go to ensure we meet the target set in 2002. Yet that target is just that, a target: it reminds us of the enormity of the global task of conserving, managing and wisely using our biodiversity which comes from adherence to the Convention on Biological Diversity. We must see 2010 as a point to judge our efforts, to refine them and to ensure we all do better in the coming decade.

So what are our key achievements in this last year? I think the increasing awareness that renewable energies and nature conservation, both aspects of good environmental policy, may not necessarily be totally compatible, is an important awareness moment for us all. In this respect we made an important contribution to the international debate on biofuels, and a highlight of the year was the preparation of a position statement on biofuels and biodiversity. Biofuel production has ramifications not only in the UK but also internationally, which we have been exploring through our global impacts programme.

Our startling cover (which I hope you enjoy) reflects this issue in the context of palm oil and destruction of tropical forests in south-east Asia.

We also continued to prosecute our work on the Overseas Territories, working closely with the governments of the Territories and UK government. Considerable progress was made this year, including a review of nature conservation priorities in the Overseas Territories, publication of an environmental economics toolkit for small islands, and the recruitment of a staff member to work on the Agreement on the Conservation of Albatrosses and Petrels in the south Atlantic. This shows JNCC is more than just a talking shop about the Overseas Territories – we actually invest in them, and help materially their efforts.

Our work in the marine environment has helped inform the draft Marine Bill, as well as supporting efforts in their respective marine environments by the country bodies. We have made continuing progress in identifying Natura 2000 sites in the marine environment, including consultation on seven possible offshore Special Areas of Conservation, and survey and data analysis to identify marine Special Protection Areas. This work of course is ongoing, and dovetails well with the advice and efforts of our colleagues in the country conservation bodies.

Also in the marine environment, we can satisfactorily report the conclusion of the Mapping European Seabed Habitats (MESH) project – certainly a major step forward in producing seabed habitat maps for north-west Europe, which will underpin marine spatial planning, support the development of management measures, and increase awareness of the UK's responsibility in managing a significant part of Europe's oceanic marine environment.

Other work undertaken in close collaboration with colleagues in government and the country conservation bodies included the preparation of the second six-year Habitats Directive implementation report (including assessments of the conservation status of habitats and species listed on the annexes of the Directive), the review of the UK Biodiversity Action Plan priority habitats and species, and the development of a UK biodiversity

surveillance strategy – the adoption and implementation of which will ensure we really do know what's up, what's down and what's steady in the increasingly unstable environment we and the rest of biodiversity finds itself!

In 2007, Defra published *Conserving biodiversity – a UK approach*, which summarises areas of work that need to be co-ordinated at a UK level and identifies the important role of JNCC. The role here is very much the co-operative and co-ordinating one I referred to in my opening remarks. I should also mention that we continue to produce the volumes in the *Geological Conservation Review*, which describe the important geodiversity features in Great Britain that need conservation and management. We are gradually understanding more the role of earth sciences in helping us develop a landscape approach to conservation, which recognises boundaries but also integrates them into sensible planning and management.

In the coming year we will certainly look long and hard at how we are delivering what the government asks of us, and how as a team with the country conservation bodies we are making the UK a better place for biodiversity – and that means, in the end, a better place for us!

During the year my predecessor, Adrian Darby, came to the end of his term, and I acknowledge his contribution. Also, Professor David Ingram came to the end of his term, and we sadly said farewell to him, following an excellent period as deputy Chair. Professor Lynda Warren has taken over as deputy. Finally I acknowledge the positive working relationships with Defra, the chairs and staff of the country conservation bodies, my fellow Committee members, and most importantly the staff of the JNCC support company.



**Dr Peter Bridgewater**  
Chair, Joint Nature Conservation Committee

## > Rhagair y Cadeirydd

Mae JNCC yn parhau i chwarae rhan hanfodeol yn y gwaith o osod cadwraeth natur wrth wraidd agenda datblygu cynaliadwy'r DU. Er ein bod yn anymwithiol ein dull, rydym yn rhan o'r "glud gwyrdd" sy'n dal ymdrechion hanfodol y cyrff cadwraeth ym mhedair gwlad y DU wrth ei gilydd, ac rydym hefyd yn gweithio gyda Defra ac eraill i sicrhau cadwraeth ddigonol ac effeithiol yn ein Tiriogaethau Tramor ac yn Nibynwledydd y Goron

Rydym yn gweithredu fel pont rhwng gwaith y cyrff gwladol, fel y mae'n cael ei bennu a'i ddiffinio gan eu priod weinyddiaethau, a'r byd rhyngwladol. Mae gennym gyfrifoldebau statudol am ddarnau prin a phwysig o fioamrywiaeth y DU, ac rydym yn adnodd allweddol ar gyfer adnabod geoamrywiaeth a'r gwaith o'i chadw.

Pan gefais yr anrhydedd o ymgymryd â chadeiryddiaeth JNCC yn Hydref 2007, yr oeddwn yn gweld yn glir yr her y mae hyn oll yn ei gosod: sef i weithio gyda'r gweinyddiaethau datganoledig i sicrhau deilliannau cydnaws ar draws y DU heb beryglu gweithgareddau sy'n destun brwdfrydedd ac uchelgais cenedlaethol, ond gan sicrhau serch hynny fod ymdrechion cadwraeth y DU yn cael eu hystyried yn rhai digonol, cydlynol ac adeiladol ar raddfa fyd-eang. Mae'n bleser gennyf ddweud, ar sail gweithio gyda chadeiryddion y cyrff cadwraeth gwladol, swyddogion Defra a gweinidogion cefnogol, fy mod yn teimlo bod JNCC yn gryfach nag erioed, a bod mwy o'i angen nag erioed, a'i fod yn barod ar gyfer cyflawniad llwyddiannus drwy'r gwaith sy'n cael ei wneud gan staff rhagorol cwmni ategol JNCC.

Wedi dweud hynny, rwy'n rhagweld y byddwn mewn cynfod o newid wrth i'r DU wynebu'r heriau sydd wedi eu gosod gan darged bioamrywiaeth 2010; wrth i ni ymorol am arddangos yn effeithiol ein hymdrechion cyd ac unigol mewn perthynas â geogadwraeth; ac wrth i ni ymgodymu â heriau cadwraeth forol mewn cyfnod pan mae deddfwriaeth yn cael ei pharatoi i wneud ein moroedd yn

lleoedd cynhyrchiol, amgylcheddol gadarn a diogel ar gyfer bioamrywiaeth.

Er bod hyn i gyd yn wych, rydym yn prysur nesáu at 2010, ac rydym yn ymwybodol fod gennym gryn ffordd i fynd eto, ar raddfa fyd-eang ac ar raddfa genedlaethol, er mwyn sicrhau cyrraedd y targed a osodwyd yn 2002. Eto i gyd, dim ond targed yw'r targed hwnnw: mae'n hatgoffa y dasg anferthedd fyd-eang o gadw, rheoli a defnyddio ein bioamrywiaeth yn ddoeth, ar sail ymlyniad wrth y Confensiwn ar Amrywiaeth Fiolegol. Rhaid i ni weld 2010 fel adeg i mesur ein hymdrechion, eu adlewyrchu, a sicrhau ein bod i gyd yn gwneud yn well yn y degawd sydd i ddod.

Felly, beth oedd ein llwyddiannau allweddol yn ystod y flwyddyn? Rwy'n meddwl bod yr ymwybyddiaeth gynyddol nad yw ynni adnewyddadwy a chadwraeth natur o angenrheidrwydd yn gwbl gydnaws â'i gilydd, er eu bod ill dau'n agweddau ar bolisi amgylcheddol da, yn ddatblygiad pwysig i ni i gyd. Yn hyn o beth, gwnaethom gyfraniad pwysig at y ddatblygiad gwladol ar fiodanwydd, ac un o uchelfannau'r flwyddyn oedd paratoi datganiad safbwynt ar fiodanwydd a bioamrywiaeth. Mae gan gynhyrchu biodanwydd oblygiadau nid yn unig yn y DU ond hefyd ar lefel ryngwladol, a buom yn archwilio'r rhain drwy ein rhaglen ar effeithiau rhyngwladol. Mae ein clawr trawiadol (sydd wrth eich bodd, gobeithio) yn adlewyrchu'r broblem hon yng nghydestun olew palmwydd a difrodi fforestydd trofannol yn ne-ddwyrain Asia.

Parhawyd hefyd â'n gwaith ar y Tiriogaethau Tramor, gan gydweithio'n agos â llywodraethau'r Tiriogaethau a llywodraeth y DU. Cafwyd cryn gynnydd eleni, gan gynnwys adolygu blaenoriaethau cadwraeth natur yn y Tiriogaethau Tramor, cyhoeddi pecyn cymorth ar economeg amgylcheddol ar gyfer ynysoedd bychain, a recriwtio aelod staff i weithio ar y Cytundeb ar Gadwraeth Albatrosiaid a Phedrynod yn Ne'r Iwerydd. Mae hyn yn dangos bod JNCC yn fwy na siop siarad lle mae Tiriogaethau Tramor yn y cwestiwn – mewn gwirionedd rydym yn buddsoddi ynddynt, ac yn rhoi cymorth sylweddol i'w hymdrechion.

Mae ein gwaith yn yr amgylchedd morol wedi helpu i ddylanwadu ar drafft y Mesur Morol, yn ogystal â chynorthwyo ymdrechion y cyrff gwladol yn eu priod amgylcheddau morol. Rydym wedi parhau i wneud cynnydd o ran canfod safleoedd Natura 2000 yn yr amgylchedd morol, gan gynnwys ymgynghori ynglŷn â saith o Ardaloedd Cadwraeth Arbennig posibl ar y môr, a chynnal arolwg a dadansoddiad data er mwyn canfod Ardaloedd Gwarchodaeth Arbennig morol. Wrth gwrs, mae hwn yn waith parhaus, ac mae'n ymblethu'n dda gyda chynghorion ac ymdrechion ein cydweithwyr yn y cyrff cadwraeth gwladol.

Hefyd yn yr amgylchedd morol, gallwn adrodd bod y prosiect Mapio Cynefinoedd Gwely'r Môr Ewropeaidd (MESH) wedi ei gwblhau'n foddhaol – sydd yn sicr yn gam pwysig ymlaen o ran cynhyrchu mapiau o gynefinoedd gwely'r môr ar gyfer gogledd-orllewin Ewrop, a fydd yn sail i gynllunio gofodol morol, yn cynorthwyo datblygiad mesurau rheoli, ac yn cynyddu ymwybyddiaeth gyfrifoldeb y DU wrth reoli darn sylweddol o amgylchedd morol cefnforol Ewrop.

Gwaith arall yr ymgwymerwyd mewn cydweithrediad agos â chydweithwyr mewn llywodraeth ac yn y cyrff cadwraeth gwladol wedi cynnwys paratoi'r ail adroddiad chwe blynedd ar weithrediad y Gyfarwyddeb Cynefinoedd (gan gynnwys asesiadau o statws cadwraethol y cynefinoedd a'r rhywogaethau a restrir yn yr atodiadau i'r Gyfarwyddeb); yr adolygiad o gynefinoedd a rhywogaethau blaenoriaeth Cynllun Gweithredu Bioamrywiaeth y DU; a datblygu strategaeth

gwyladwriaeth dros fioamrywiaeth yn y DU – bydd mabwysiadu a gweithredu hon yn sicrhau ein bod yn gwybod o ddirif beth sydd ar i fyny, beth sydd ar i lawr, a beth sy'n gadarn yn yr amgylchedd cynyddol ansefydlog yr ydym ni a gweddill bioamrywiaeth yn ein cael ein hunain ynddo!

Yn 2007, cyhoeddodd Defra *Conserving Biodiversity – a UK Approach*, sy'n crynhoi meysydd gwaith sydd angen eu cydlynu ar lefel y DU ac yn nodi rôl bwysig JNCC. Y rôl dan sylw yw'r un gydweithredol a chyd-drefnol y cyfeiriais ati yn fy sylwadau agoriadol. Dylwn nodi hefyd ein bod yn dal i gynhyrchu'r cyfrolau yn y *Geological Conservation Review* sy'n disgrifio'r arweddion geoamrywiaeth pwysig ym Mhrydain Fawr sydd angen eu cadw a'u rheoli. Rydym yn graddol ennill gwell dealltwriaeth o safle gwyddorau daear o ran ein helpu i ddatblygu ymagwedd dirweddol at gadwraeth, sy'n cydnabod ffiniau ond sydd hefyd yn eu hintegreiddio â chynllunio a rheoli synhwylol.

Yn y flwyddyn i ddod, byddwn yn sicr yn craffu'n hir ac yn fanwl ar sut yr ydym yn cyflawni'r hyn y mae'r llywodraeth yn ei ofyn, a sut yr ydym, fel tîm ar y cyd â'r cyrff cadwraeth gwladol, yn gwneud y DU yn well lle ar gyfer bioamrywiaeth – sydd yn golygu, yn y pen draw, greu gwell lle ar ein cyfer ni!

Yn ystod y flwyddyn daeth fy rhagflaenydd, Adrian Darby, i ddiwedd ei dymor, a hoffwn gydnabod ei gyfraniad. Hefyd, daeth yr Athro David Ingram i ddiwedd ei dymor, a ffarwelwyd ag ef â chalon drom yn dilyn ei gyfnod rhagorol fel Dirprwy Gadeirydd. Mae'r Athro Lynda Warren wedi cymryd drosodd fel dirprwy. Yn olaf, hoffwn gydnabod y gydberthynas weithredol gadarnhaol gyda Defra, cadeiryddion a staff y cyrff cadwraeth gwladol, fy nghyd-aelodau ar y pwyllgor, ac yn bwysicaf oll staff cwmni ategol JNCC.

**Dr Peter Bridgewater**  
Cadeirydd, JNCC

## > Ro-ràdh na Cathraiche

Tha prìomh àite aig JNCC ann a bhith a’ dèanamh cinnteach gu bheil glèidhteachas nàdair aig cridhe na tha a’ tachairt ann an leasachadh seasmhach san RA. Ged nach eil ar n-ìomhaigh àrd, tha sinn nar pàirt dhen “ghlaodh uaine” a tha a’ cumail ri chèile diofar oidhirpean glèidhteachais anns na ceithir dùthchannan san RA; agus tha sinn cuideachd ag obair còmhla ri Defra agus còmhla ri buidhnean eile gu dèanamh cinnteach gu bheil glèidhteachas freagarrach a’ gabhail àite ann an Dùthchannan Eisimeileach a’ Chrùin agus sna Tìrean Thall Thairis

Tha an obair againn a’ ceangal obair buidhnean nan diofar dhùthchannan, a tha a rèir nan riaghaltasan aca fhèin, agus a rèir an t-suidheachaidh eadar-nàiseanta. ’S ann an urra rinne a tha feadhainn dhe na roinnidhean gann agus cudromach de bhith-iomadachd na RA, agus tha sinn a’ riochdachadh prìomh stòras airson geo-iomadachd agus a ghlèidhteachas a thoirt fa chomhair dhaoine.

Nuair a bha an t-urram agam cathair JNCC a ghabhail san Dàmhair 2007, chaidh a dhèanamh soilleir dhomh na dùbhlain a tha san obair: ag obrachadh còmhla ri riaghaltasan sgaoilte gu dèanamh cinnteach gun robh ionannachd air feadh na RA a thaobh bhuilean, gun a bhith a’ cur casg air iarrtasan agus dealas dùthchail, ach, aig an aon àm, a’ dèanamh cinnteach gu bheil an saoghal air fad ag aithneachadh gu bheil oidhirpean glèidhteachais na RA comasach, ciallach agus cuideachail. Tha mi toilichte gun urrainn dhomh a ràdh, an dèidh a bhith a’ dèanamh obair còmhla ri cathraichean buidhnean glèidhteachais na dùthcha, còmhla ri oifigearan Defra, agus ministearan taice, gur e mo bheachd gu bheil JNCC nas làidire agus nas feumaile na bha e a-riamh, agus gu bheil e deiseil gus an obair a choileanadh tro oidhirpean sàr luchd-obrach aig companaidh taice JNCC.

A dh’aindeoin sin, tha mi a’ sùileachadh atharrachaidhean san àm a tha romhainn, leis an RA a’ cur a h-aghaidh ri na dùbhlain a nochd ri linn targaid bith-iomadachd 2010. Tha sinn airson ar diofar oidhirpean fhoillseachadh gu h-èifeachdach, nuair a tha sinn a’ dol an sàs ann an dùbhlain ann an glèidhteachas mara aig àm sa bheil riaghailtean a’ feuchainn ri ath-bheothachadh a thoirt air ar

marannan, agus an dèanamh nan àrainneachdan làidir agus sàbhailte airson bith-iomadachd. Ged a tha a h-uile càil a tha sin glè mhath, tha a’ bhliadhna 2010 gus a bhith an seo, agus tha sinn mothachail gu bheil slighe againn – gu nàiseanta agus air feadh an t-saoghail – ma tha sinn a’ dol a choileanadh na targaid a chaidh a stèidheachadh ann an 2002. Ach, ’s e sin a th’ ann an targaid: targaid. Tha e a’ cur nar cuimhne cho mòr ’s a tha obair an t-saoghail ann an gleidheadh, manaidseadh agus ann a bhith a’ dèanamh cleachdadh ciallach air ar bith-iomadachd: tha gach nì dhiubh co-cheangailte ris a’ Chùmhnant air Iomadachd Bith-eòlach. Feumaidh sinn coimhead air 2010 mar àm gus breith a thoirt air ar n-oidhirpean, gus sùil eile a thoirt orra, agus gus dèanamh cinnteach gun dèan sinn nas fheàrr sna deich bliadhna a tha romhainn.

Dè ma tha na prìomh rudan a choilean sinn sa bhliadhna ud? Chanainn gur e gu bheil tuigse dhaoine a’ meudachadh a thaobh seo: lùthan ath-nuadhachail agus glèidhteachas nàdair – dà thaobh de phoileasaidh math air an àrainneachd – gum faod e a bhith nach eil iad an còmhnaidh co-fhreagarrach, agus tha e air leth cudromach gum bi sinn mothachail air an seo. A thaobh seo, tha sinn air cur ris an deasbad eadar-nàiseanta air bith-chonnadh, agus b’ e aon dhe na rudan a bu chudromaiche a rinn sinn sa bhliadhna, aithris ullachadh a bha ag innse ar beachd air bith-chonnadh agus bith-eugshamhlachd. Bidh buaidh aig bith-chonnadh, chan ann a-mhàin san RA, ach gu h-eadar-nàiseanta, agus tha sinn air a bhith a’ rannsachadh na buaidhe seo tro ar prògram air buaidhean cruinneil. Tha ar còmhach

tarraingeach (agus tha mi an dòchas gun toigh leibh e) a' toirt sealladh air an iris seo a thaobh ola-pailme agus an sgrios air coillean tropaigeach ann an ear-dheas Àisia.

Tha sinn cuideachd a' leantainn air adhart le ar n-obair sna Tìrean Thall Thairis, a' dèanamh dlùth obair còmhla ri riaghaltasan nan dùthchannan sin agus na RA. Chaidh deagh adhartas a dhèanamh am-bliadhna – am measg na chaidh a dhèanamh, chaidh ath-shealladh a thoirt air prìomhachasan ann an glèidhteachas nàdair anns na dùthchannan Thall Thairis; chaidh fiosrachadh mu eaconamas na h-àrainneachd a chur an clò airson eileanan beaga; agus chaidh neach-obrach fhadstadh agus obrachadh air an Aonadh mu Ghlàidhteachas Albatrosan agus Luairagan ann an Ceann deas a' Chuain Shiar. Tha seo a' sealltainn gu bheil JNCC a' dèanamh barrachd air a bhith a' labhairt a-mhàin mu na Tìrean Thall Thairis – tha sinn a' cur airgead annta, agus a' toirt cuideachadh dhaibh.

Tha ar n-obair ann an àrainneachd na mara air fiosrachadh a thoirt do Bhile na Mara, agus air taic a thoirt do bhuidhnean ann an diofar dhùthchannan nan oidhirpean anns na h-àrainneachdan mara aca fhèin. Tha sinn a' leantainn leis an adhartas a tha sinn a' dèanamh ann a bhith a' dearbhadh aithneachadh làraich Natura 2000 san àrainneachd mhara, agus tha sin a' gabhail a-steach co-chomhairleachadh mu sheachd Raointean Glèidhteachais Sònraichte bhàrr tìr a dh'fhaodadh a bhith freagarrach nan Làraich Glèidhteachais, agus a' dèanamh dlùth sgrùdadh air dàta gus Làraich airson Dìon Sònraichte a lorg. Tha an obair seo leantainneach, agus tha i a' dol gu math le oidhirpean ar co-oibrichean ann am buidhnean glèidhteachais dùthchail. Cuideachd ann an àrainneachd na mara, tha sinn toilichte gum faigh sinn air co-dhùnadh a' phròiseict Mapadh Àrainneachdan Grund-mara na Roinn-Eòrpa (MESH) fhoillseachadh – gun teagamh, ceum cudromach ann a bhith a' foillseachadh mhapaichean airson àrainnean grunn na mara ann an iar-thuath na Roinn-Eòrpa. Bidh seo na bhun-stèidh ann am planadh farsaingeachd na mara, na thaic ann an leasachadh stiùiridh, agus meudaichidh e aithne na RA a thaobh a cuid uallaich ann a bhith a' cumail smachd air àrainneachd mara na Roinn-Eòrpa.

Tha sinn cuideachd air a bhith ag obair còmhla ri ar co-oibrichean san riaghaltas agus ann am buidhnean glèidhteachais dùthchail ann a bhith ag ullachadh na dara aithisg sia-bliadhna air co-chur Riaghailt nan Àrainnean (a' gabhail a-steach

mheasaidhean air inbhe glèidhteachais àrainnean agus ghnèithean a th' air an liostadh ann am pàipearan-taice na Riaghailt), agus ath-shealladh air Plana Gnìomh Bith-iomadachd na RA air prìomh àrainnean agus gnèithean, agus tha sinn air a bhith ag obair air ro-innleachd airson dlùth-choimhead air bith-iomadachd na RA – agus ma thèid an ro-innleachd seo a choileanadh, bidh fìor fhios againn air na tha a' meudachadh, a' lùghdachadh, agus na tha cunbhalach san àrainneachd mhì-chinnteach anns a bheil sinn aig an àm seo.

Ann an 2007, dh'fhoillsich Defra *Conserving biodiversity – a UK approach*, a tha a' toirt geàrr-chunntas air diofar raointean a dh'fheumte a cho-òrdanachadh san RA, agus a tha a' cur aithne air an dreuchd chudromaich a th' aig JNCC. 'S e co-obrachadh agus co-òrdanachadh as motha a th' anns an obair seo, agus rinn mi iomradh air an seo aig an toiseach. Bu chòir dhomh cuideachd iomradh a thoirt air *Geological Conservation Review*, a tha sinn fhathast a' dèanamh: tha iad seo a' mìneachadh nam feartan geo-iomadachd ann am Breatainn a tha a' cur feum air gleidheil is stiùireadh. Tha sinn, mean air mhean, a' tighinn gu tuigse air mar a tha saidheans na talmhainn gar cuideachadh ann a bhith a' leasachadh dòigh-obrach glèidhteachais, agus a tha a' dèanamh aithne air crìochan, ach a tha cuideachd gam filleadh a-steach ann am planadh rianail.

Sa bhliadhna a tha romhainn, bidh sinn a' toirt dlùth shealladh air na tha sinn a' libhrigeadh de dh'iarrtasan an riaghaltais, agus air mar a tha sinn, còmhla ri buidhnean glèidhteachais dùthchail, a' dèanamh Bhreatainn na àite nas fheàrr airson bith-iomadachd – agus tha sin a' ciallachadh àite nas fheàrr air ar son-ne cuideachd!

Thàinig Adrian Darby, a bh' anns an dreuchd romham, gu deireadh ùine sa bhliadhna ud, agus tha mi airson na rinn e aideachadh. Cuideachd, thàinig an t-Àrd-ollamh David Ingram gu deireadh ùine, agus tha sinn a' leigeil beannachd leis-san, an dèidh dèagh ùine na Iar-chathraiche. Tha an t-Oll Lynda Warren a-nise na h-Iar-chathraiche. Agus, mu dheireadh, tha mi airson iomradh a thoirt air na deagh dhàimhean obrach a th' agam le Defra, le cathraichean agus luchd-obrach nam buidhnean glèidhteachais dùthchail, le na buill eile air a' Chomataidh agam, agus gu sònraichte, le luchd-obrach companaidh taic JNCC.

**Dr Peter Bridgewater**  
Cathraiche, JNCC



### European eel

*Anguilla anguilla*

The listing of the European eel *Anguilla anguilla* on CITES Appendix II will take effect from March 2009.

Adult eels leave fresh water and migrate to the Sargasso Sea to breed. Their progeny return to European rivers as glass eels and then elvers. The population is considered to be 'outside safe biological limits'.

In the UK the eel is fished commercially. Young eels are mainly caught for export to east Asia, where they are farmed for food. From March 2009 trade in eels will be subject to export permits and before a permit is issued a non-detriment finding will have to be made.

CITES listing coincides with the adoption by the European Community of an Action Plan for the species and JNCC is currently involved in efforts to dovetail the workings of the two measures.



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## > Global nature conservation advice

# 1

### JNCC provides authoritative, science-based advice on global nature conservation issues and plays a key role in international agreements and conventions

A number of multilateral conventions and agreements govern nature conservation or have an indirect influence on nature conservation. Whilst there are a number of agreements at a global level, there is a growing number at a regional or taxon-specific level – see the web links at the end of this section for further information.

The UK is a party to several of these agreements and JNCC provides technical advice to the Government at relevant international conferences and meetings. In addition, we advise Government and the UK conservation bodies on the implications of international agreements for nature conservation within national borders, including the Crown Dependencies and Overseas Territories.

The 14th Conference of the Parties to the *Convention on International Trade in Endangered Species* (CITES) was held in June 2007 at The Hague. CITES is one of

the main agreements concerned with global biodiversity conservation. The UK – one of more than 150 governments present – was represented by a delegation led by the Department for Environment, Food and Rural Affairs (Defra) and advised by JNCC's Vin Fleming and Alison Littlewood. A key outcome was the agreement of a new strategic vision for CITES that includes three strategic goals:

- to ensure compliance with, and implementation and enforcement of, the Convention;
- to secure the resources and means for the operation and implementation of the Convention;
- to contribute to significantly reducing the rate of biodiversity loss by ensuring that CITES and other multilateral instruments and processes work in a coherent and supportive way.



#### Red kite

*Milvus milvus*

Many birds of prey migrate across long distances, including species such as red kite *Milvus milvus*, lesser kestrel *Falco naumanni* and saker falcon *Falco cherrug*. In Europe an analysis of population trends has shown that a third of species are declining rapidly – at a rate of one per cent or more of population per year. They face a wide range of threats, including habitat loss, persecution by shooting and poisoning, and inadequate protection at 'bottleneck sites' (points along migration flyways at which birds congregate). The preparation of an action plan under the Convention on Migratory Species will help to address these threats.



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### Grand Cayman parrot

*Amazona leucocephala caymanensis*

JNCC plays a role in capacity-building in the Overseas Territories. One example of this work during the year saw JNCC's Nichola Burnett taking part in workshops in the Cayman Islands for Caymans' government personnel who will be involved in enforcing new law relating to trade in endangered species. The islands are home to a number of CITES-listed species, such as the Grand Cayman parrot *Amazona leucocephala caymanensis*.



### Inset: CITES Training in the Overseas Territories

Pictured (from left) are Samuel Rose, of the Cayman Islands' Ministry of the Environment; Nichola Burnett, JNCC; Gina Ebanks-Petrie, Director, Department of Environment; John Hounslow, CITES Management Authority, Animal Health; and Charles MacKay, HM Revenue & Customs.



Grand Cayman parrot image © Mark Orr



The Hague conference also approved a pan-African compromise on elephants and ivory, which will allow southern African countries to sell stockpiled ivory, and the listing on Appendix 1 of most sawfish *pristidae*, thus restricting commercial trade in wild specimens.

A significant development for the UK saw the European eel *Anguilla anguilla* added to the agreement's Appendix II, which regulates trade to avoid detriment to wild populations. This listing means that the UK and JNCC will have to deal with the export of specimens taken from the wild, reversing our usual role of dealing with imports.

Away from The Hague, JNCC was busy with CITES-related work. We act as the UK's Scientific Authority for animals for CITES (The Royal Botanic Gardens, Kew, undertakes the complementary role for plants) and in this role we provide advice to Defra on applications for permission to import, export or use species listed under European Community CITES regulations.

A key part of this process involves JNCC making 'non-detriment findings' on imports of individual species – an assessment of whether or not imports of specimens will threaten that species' survival. During the year we advised on a total of 20,238 consultations on licenses.

Other CITES work included compiling a checklist of corals found in Fiji and surrounding islands to better inform decisions about exports, and involvement in the group that sets priorities for the National Wildlife Crime Unit (see section 6, page 32).

Under the auspices of the *Convention on Migratory Species* (CMS), JNCC's David Stroud continued to make a major contribution to the work of the African-Eurasian Waterbird Agreement (AEWA) technical committee. The main focus has been to respond to the threat of avian influenza and to undertake preparatory work for the 4th Meeting of the Parties in Madagascar in September 2008.

JNCC's Tom Blasdale was a member of the UK group that attended a meeting in December 2007 in the Seychelles that concluded that an international CMS agreement on migratory sharks should be pursued.

JNCC also made a significant contribution, with the UK conservation bodies, to a meeting at Loch Lomond in October 2007 to look at options for international co-operation to improve protection for African-Eurasian migratory birds of prey. The meeting was co-hosted by the UK and the United Arab Emirates, and involved the participation of 60 countries. Substantial progress was made towards the conclusion of a non-binding memorandum of understanding and an action plan.

Work on the Agreement on the Conservation of Albatrosses and Petrels (ACAP) is detailed in section 2 (see page 18).

We were involved in preparations for the 9th Conference of the Parties to the *Convention on Biological Diversity* (CBD) at Bonn in May 2008, notably through participation in the CBD Subsidiary Body on Scientific, Technical and Technological Advice. We also provided input to a Chinese plant conservation strategy, which was launched in June 2007 as a contribution to the CBD's Global Strategy for Plant Conservation.

David Stroud also continued to make an input to the *Convention on Wetlands of International Importance* (Ramsar Convention) Scientific and Technical Review Panel and participated in a workshop at Changwon, Korea, in November 2007 on wetlands and human health. David played a key role in preparing papers for the 10th Conference of the Parties in Korea in October/November 2008, and on issues surrounding avian influenza.

#### > Main convention websites

Convention on Biological Diversity  
[www.cbd.int](http://www.cbd.int)

Convention on International Trade  
in Endangered Species  
[www.cites.org](http://www.cites.org)

Convention on Migratory Species  
[www.cms.int](http://www.cms.int)

Convention on Wetlands of International  
Importance  
[www.ramsar.org](http://www.ramsar.org)



### One of six mangrove species found in the British Virgin Islands

*Valuing the Environment in Small Islands* makes use of practical examples to illustrate its theme that putting a monetary value on environmental and social impacts improves decision-making. For example, it draws on the experience of fisheries in Thailand during the 1980s and 1990s to show that the removal of mangrove forest can be costly to fishing communities because the forests provide fish breeding grounds and nursery habitats. The welfare losses resulting from deforestation were estimated at between US \$400 and US \$13,600 per square kilometre of forest cleared, depending on the responsiveness of demand to changes in the price of fish.



© BVI National Trust



## > Nature conservation in the Overseas Territories and Crown Dependencies

# 2

Providing advice on nature conservation issues in the UK's Overseas Territories and Crown Dependencies is an important and growing area of JNCC's work

Nature conservation in the UK's Overseas Territories and Crown Dependencies is a strategic priority for JNCC. During the year significant progress has been made in developing our programme of work in this area.

A review of costed nature conservation priorities in the Overseas Territories was undertaken during the year at the request of the Inter-Departmental Ministerial Group on Biodiversity (IDMGB). In consultation with Overseas Territories' governments the review has established that the main drivers of

biodiversity loss in the Territories are invasive alien species and the transformation of habitat, often in connection with tourism.

The review identified the main priorities for action as additional monitoring and survey, control of invasive species and the provision of new resources for nature conservation. A separate exercise in which JNCC consulted the Territories on their priorities for biodiversity research was also undertaken during the year, and resulted in a list that largely mirrors the outcome of the IDMGB review.



### Anton Wolfaardt

ACAP co-ordinator, UK south Atlantic Overseas Territories

Anton Wolfaardt has recently been appointed by JNCC as the ACAP (Agreement on the Conservation of Albatrosses and Petrels) co-ordinator for the UK south Atlantic Overseas Territories.

ACAP is a relatively recent multilateral daughter agreement of the Bonn Convention and represents a critical international mechanism seeking to conserve albatrosses and petrels by co-ordinating international activity to mitigate known threats.

The Overseas Territories of Falkland Islands, South Georgia and South Sandwich Islands, Tristan da Cunha and the British Antarctic Territory are all included in the UK's ratification of ACAP, and are globally important for albatross and petrel conservation. Of the 26 priority species covered by ACAP, 12 occur as breeding species in the UK south Atlantic Overseas Territories, three of which are endemic as breeders to one of the Territories – the Tristan da Cunha group of islands. In addition, significant proportions of the global populations of many of these species breed in the Territories.

ACAP requires that Parties take action to enhance the conservation of albatrosses and petrels, both through reduction in adverse fisheries interactions and through action on other threats. Anton is based in the Falkland Islands and is co-ordinating the work and reporting requirements of ACAP both between the relevant Overseas Territories and also between the Territories and metropolitan UK.



© JNCC



It prompted widespread interest in environmental economics as the basis of good decision-making and subsequently we provided advice for collaborative projects to support its use in Bermuda and Montserrat.

JNCC has also developed a project entitled Environmental Economics with the UK Overseas Territories in the Caribbean (EEWOC) – [www.jncc.gov.uk/page-4136](http://www.jncc.gov.uk/page-4136). Funded by the Overseas Territories Environment Programme, the project has progressed well during the reporting year. One aspect of the work has been the production of an environmental valuation 'toolkit' *Valuing the Environment in Small Islands*. The toolkit is available on-line and as a 130-page book from our publication distributors [www.nhbs.com](http://www.nhbs.com).

An aspect of JNCC's responsibilities in relation to the Overseas Territories is to provide scientific advice for international conventions and agreements that the Overseas Territories have requested the UK to ratify on their behalf. One is the Agreement on the Conservation of Albatrosses and Petrels (ACAP) and during the year we recruited Anton Wolfaardt, who is based in the Falkland Islands and works to co-ordinate ACAP-related work in the south Atlantic. The UK is a breeding range state for ACAP through its responsibilities to the Falkland Islands, South Georgia and the South Sandwich Islands and the Tristan da Cunha group, which together support breeding populations of 12 ACAP species.

Another priority during the year was to improve contacts and the sharing of knowledge between the 16 Overseas Territories and the three Crown Dependencies. Regional groups have been set up and regular teleconferences have been arranged to share experiences and ideas. In March 2008 the Isle of Man Government hosted a workshop for officials from the Crown Dependencies which was supported by JNCC staff.



> **Blue iguana**  
*Cyclura lewisi*

Action to counter the impact of invasive species in the Overseas Territories was the subject of a workshop hosted by JNCC in Peterborough in June 2007. Attended by UK and Overseas Territories stakeholders, the workshop looked at the impacts of invasive species and possible solutions.

One case study considered public awareness and the Cayman Islands' 'good iguana, bad iguana' problem. One priority for the Caymans' blue iguana conservation programme is to educate islanders about the plight of Grand Cayman's largest native land animal.

The blue iguana has suffered from pressure from introduced predators such as rats, cats and dogs and from habitat loss. There is also now a widespread common or green iguana *Iguana iguana* that is an alien species native to central and south America.



© Michael Usher





**Oil palm estate, with seedlings and mature trees, Malaysia**

Raw materials, or feedstocks, used in the production of biofuels, fall into two groups – first- and second-generation. In general, first-generation biofuels rely on food crops, such as wheat, rapeseed or palm oil, while second-generation technology uses a broader range of plant materials from agriculture and forestry.

The JNCC position statement calls for a pragmatic approach to prioritising support for particular sources of biofuels that would encourage more beneficial feedstock sources, such as used cooking oil and forestry waste.

Some biofuels have a very negative greenhouse gas balance when their full life-cycle is taken into account. One example is palm oil that is grown on drained peatlands in Indonesia. It has been calculated that oil from this source emits five times as much carbon as conventional diesel because so much is released through the destruction of the peat – drainage of peatlands in Indonesia is estimated to release 600 million tonnes of carbon each year.



© Shariffc/Dreamstime

## > The UK's global impacts on nature conservation

# 3

The UK's ecological 'footprint' extends well beyond the UK, and JNCC is developing methods to measure and where necessary mitigate that impact

Our Global Impacts programme was established in 2005 and has developed rapidly since then. The programme's aim is to assess the impact of the UK on global biodiversity (through trade, overseas investment, aid and tourism), and identify ways to minimise or avoid negative impacts.

The programme currently has two main strands of work. Firstly, it is developing a web-based system that provides non-specialists within Government and elsewhere with policy-relevant information, and secondly it is complementing this system with evidence-based policy advice on priority issues.

During the reporting year significant progress was made on a database and website that gives access to statistics on trade and business investment and links them to ecosystem impacts.

Information is presented on individual countries, and we have focussed our efforts on a number of priority countries, in particular to support Defra's Sustainable Development Dialogues with China, India, South Africa, Mexico and Brazil. Our vision for the future of the database and website is an integrated system that can quantify UK trade and investment relationships with key partner countries. The information is already being used by the Export Credits Guarantee Department as a source of country-specific biodiversity information during its screening process for major projects.

Work on the database and website offers an opportunity to develop JNCC advice on a range of policy issues. Work currently underway will allow identification of priority geographical areas and critical impacts within these areas, such as fisheries, forestry and biomass, along with evidence of impacts, relevant international instruments and policy options.

Early in the process, we identified biofuels and their potential impact on biodiversity as an urgent priority. During the year, JNCC has carried out a significant amount of work on this issue and in November 2007 we issued a position statement on *Transport Biofuels and Biodiversity*.

This recognised the positive contribution biofuels could make to reducing greenhouse gas emissions, but added: "We are concerned that without appropriate safeguards, the rapidly growing biofuel industry and trade – incentivised by the European Union's biofuels target – will add another significant pressure to the environment with damaging consequences for biodiversity, both within the UK and globally."

Tony Weighell and Jessica Magnus of JNCC gave oral evidence to the House of Commons Environmental Audit Committee during its investigation into biofuels policy. The Committee's report, *Are Biofuels Sustainable?*, was published in January 2008, and concluded that the European Union should not pursue targets to increase the use of biofuels in the absence of robust sustainability standards and mechanisms to prevent damaging land use change.

Tony Weighell told the select committee that the biofuels industry is being driven by targets around the world. He added: "The key consumers in the northern hemisphere – China, India and the European Union – cannot be self-sufficient and they are going to put a large demand on biomass supplies, which inevitably will come from the Tropics."





**Yew *Taxus baccata*,**  
Kingley Vale National Nature Reserve

The report on Habitats Directive implementation provides detailed updates on the fortunes of 167 UK species and habitats. For example, the report says that there is some 13 km square of yew *Taxus baccata* woodland in parts of England and Wales. Its conservation status is rated as 'Unfavourable – bad', but the situation is improving as appropriate conservation measures are put in place.



© Natural England



**Fen Orchid *Liparis loeselii*,**  
Ant Broad and Marshes SSSI

The fen orchid *Liparis loeselii* is rated as having an 'Unfavourable – bad' conservation status. The future prospects for the orchid, which is found at just five sites in East Anglia and south Wales, are judged to be poor unless conditions change.



© Natural England

## > European nature conservation advice

# 4

### JNCC provides advice on European policies that have an effect on UK conservation of biodiversity and geodiversity

Nature conservation in the UK is strongly influenced by European Community measures, and during the year JNCC has been involved in assisting Government with the development and implementation of policies and legislation that, either directly or indirectly, affect the environment.

We have provided advice on the implementation of the new Environmental Liability Directive, which seeks to prevent and remedy environmental damage by making operators financially liable for damage. Implementation of the new Directive will potentially overlap with other measures that have similar objectives, including the Habitats Directive, Birds Directive, Water Framework Directive and Marine Strategy Framework Directive.

The reporting year saw a major area of our work come to fruition with the second report on implementation of the Habitats Directive in the UK during the period 2001–2006. The report includes the assessment of the conservation status of all habitats and species listed by the Directive that occur in the UK.

The report covering the 167 UK habitats and species was completed by JNCC working closely with colleagues in the country conservation bodies. A further 14 habitats and species occurring in Gibraltar were also included and that part of the report was completed by the Gibraltar Ornithology and Natural History Society on behalf of the Government of Gibraltar.



#### **Ines Marin and Hugh Laxton,** UK Nature and Landscape Office, Brussels

The advice and support JNCC gives to Government about the development and implementation of European policy and legislation was enhanced in late 2007 by a move to new offices in Brussels, which provide improved facilities for meetings and more working space for visiting staff.

Since 2001, the UK Nature and Landscape Office has provided intelligence and advice to enable JNCC and the UK conservation bodies to be fully apprised of all relevant EU policy and legislative developments. During 2007, these services, which include policy briefings, urgent 'news' notices and a calendar of events, have been delivered using a new web-based delivery mechanism.

In addition, the office facilitates access for JNCC and UK conservation body colleagues to the European institutions.



In each case a judgement of conservation status was made rating a species or habitat under one of the following headings: Favourable, Unfavourable (inadequate), Unfavourable (bad) or Unknown. It is perhaps unsurprising that a relatively small proportion – just five per cent of UK habitats and 26 per cent of UK species – were rated ‘Favourable’, given that species and habitats have been listed on the Directive because they are rare or endangered. The assessments of conservation status will inform decision-making in a number of areas, including derogations under the Habitats Directive, the setting of conservation and surveillance priorities, and judgement of damage under the Environmental Liability Directive.

Elsewhere on the European agenda, three large estuaries – the Dee, the Humber and the Severn – were submitted to the European Commission for designation as Special areas of Conservation under the Habitats Directive. There has also been significant progress in collecting data and developing the scientific case for marine Special Protection Areas under the Birds Directive.



#### Climate Action:

##### Energy for a changing world

The future of biofuels was a high-profile issue during the reporting year. European Commission president **José Manuel Barroso** (middle), Energy Commissioner **Andris Piebalgs** (right) and Environment Commissioner **Stavros Dimas** are pictured at the launch of the European climate change and energy package in January 2008. Part of the package is a proposed Renewable Energy Directive that includes a target for biofuels to form a ten per cent share of fuel consumption by 2020. (See section 3, page 21).



© <http://ec.europa.eu>



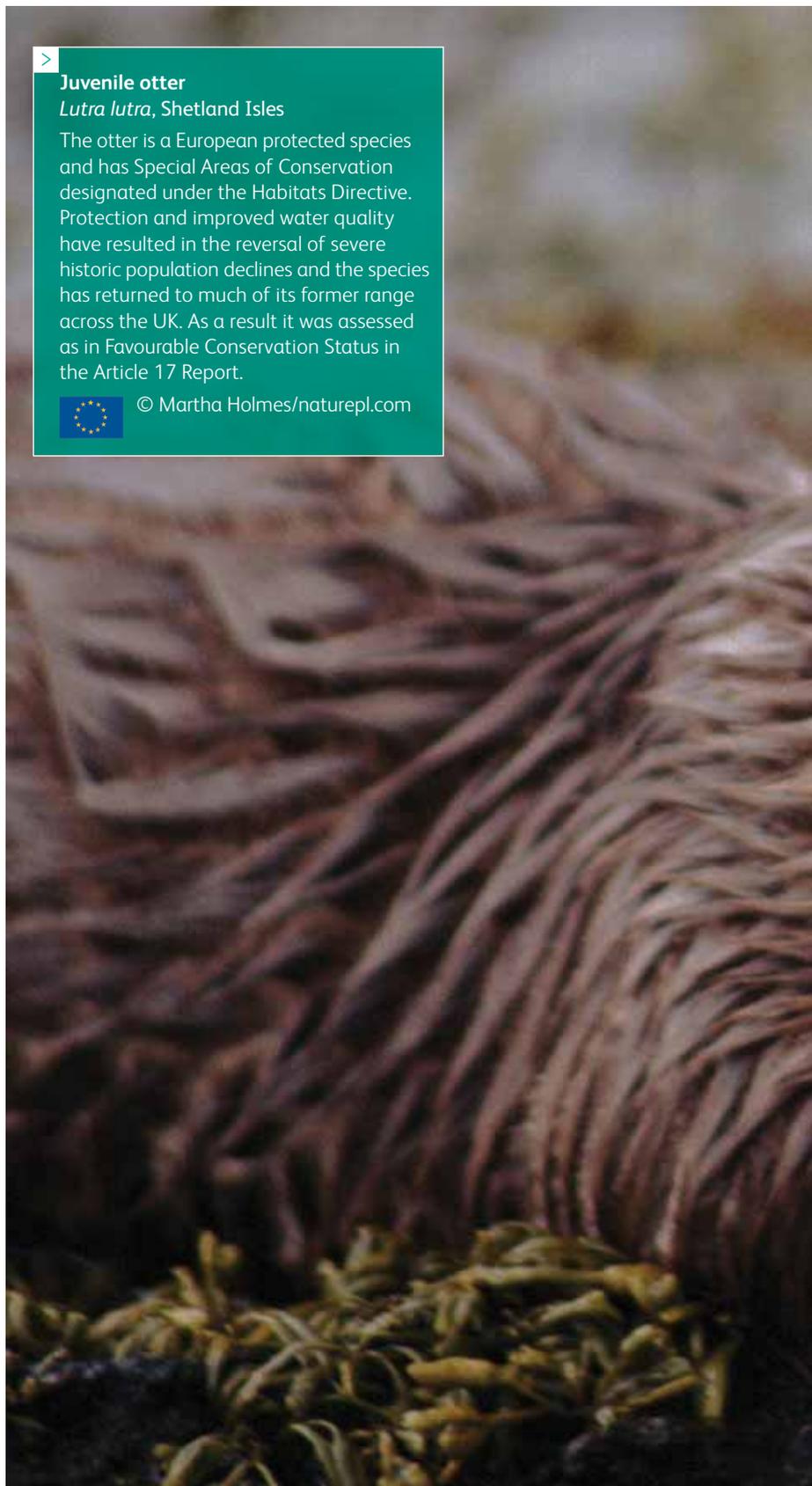
#### Juvenile otter

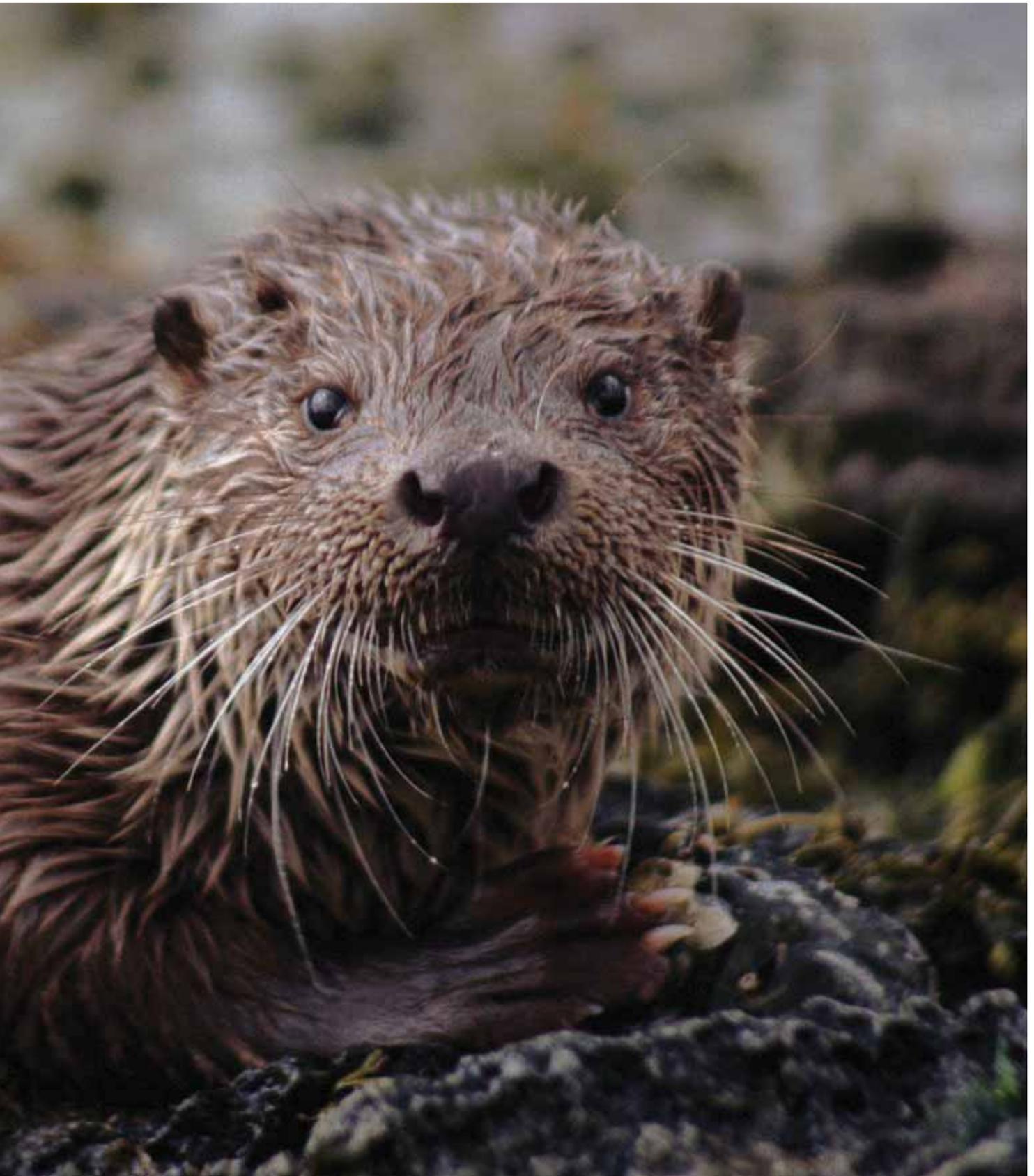
*Lutra lutra*, Shetland Isles

The otter is a European protected species and has Special Areas of Conservation designated under the Habitats Directive. Protection and improved water quality have resulted in the reversal of severe historic population declines and the species has returned to much of its former range across the UK. As a result it was assessed as in Favourable Conservation Status in the Article 17 Report.



© Martha Holmes/naturepl.com







### Lichen on decayed wood

*Cladonia polydactyla*

The Air Pollution Lead Co-ordination Network brings together specialists from the UK conservation bodies and JNCC. The Network is chaired by Simon Bareham of the Countryside Council for Wales, and provides advice on the impact of air pollution on nature conservation, develops recommendations on air pollution policy and manages research projects.

One of its recent publications was *Biomonitoring methods for assessing the impacts of nitrogen pollution: refinement and testing*, which outlines a refinement of methods for monitoring nitrogen pollution based on work at sites across the UK. The approach links chemical methods with observation of nitrogen-sensitive organisms, such as mosses and lichens.



© M Sutcliffe/www.uklichens.co.uk



## > Sustainability advice

# 5

### Providing advice on nature conservation in the wider context of sustainable development is a growing area of work for JNCC

The influence of economics in nature conservation is growing, due in part to the rise of the sustainable development agenda. It has been associated with an increased recognition of the inter-dependence of the environment, society and the economy. Our vision and strategy now place all JNCC's efforts within the context of sustainable development.

Environmental economics offers an opportunity for JNCC to influence policy areas that are beyond the core nature conservation sector but impact on biodiversity, and offers a tool for communicating the importance of the environment in economic and social terms. During the reporting year JNCC continued to build capacity in environmental economics within the organisation and with partners.

The *Environmental Economics with the Overseas Territories in the Caribbean* project is funded by the Overseas Territories Environment Programme and is intended to promote

the value of economic tools in sustainable development. JNCC plays a key role in the work and during the year a toolkit, *Valuing the Environment in Small Islands*, was published (see section 2, page 18) to encourage wider use of environmental economics in the region.

Globally, JNCC has supported follow-up work on economic elements of the Millennium Ecosystem Assessment, and contributed to the Convention on Biological Diversity's economics programme. In Europe, we supported the European Topic Centre on Biological Diversity and have been involved in the creation of a European Network of Biodiversity and Economics.

On the domestic front, JNCC supported Defra in the formulation of its Ecosystem Approach Action Plan, which was published in December 2007, and has assisted with research in support of the Marine Bill into the costs and benefits of Marine Conservation Zones (see section 7, page 34).



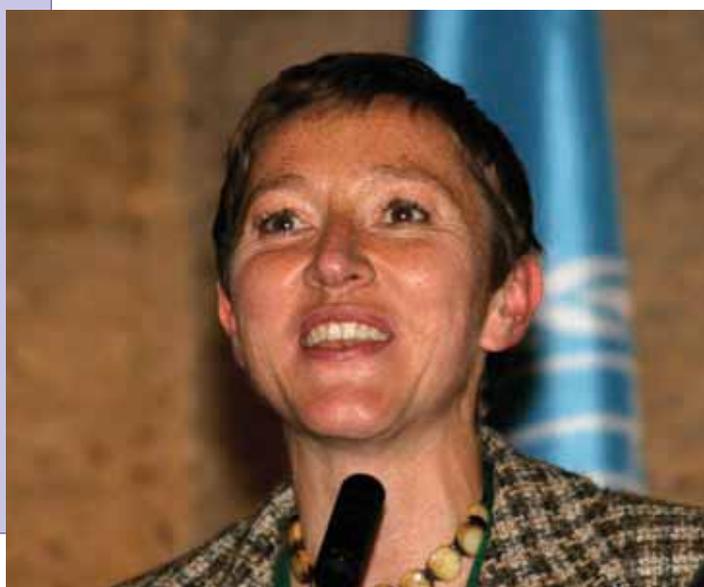
#### Diana Mortimer

SBSTTA-12, Paris, France

In July 2007, JNCC's Diana Mortimer gave a keynote speech on the Ecosystem Approach at the plenary session of the Convention on Biological Diversity's 12th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice. The session reviewed the Ecosystem Approach and looked at the problems involved in putting it into practice around the world.



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Climate change poses major challenges for the nature conservation community. During the year we continued to work closely with the UK conservation bodies through the Inter-Agency Climate Change Forum, chaired by independent Committee member Professor Michael Usher. The Forum has been developing its thinking on both adaptation and mitigation and provided an input to developing climate change policy by responding to several consultations, including the EU Green Paper on climate change adaptation.

On the international stage, JNCC staff were involved in many areas of work that have a bearing on climate change. We worked with

the Overseas Territories to provide advice on climate change adaptation and mitigation, including producing materials aimed at a non-specialist audience. We also played a key role in the Royal Society conference on biodiversity-climate interactions (see section 12, page 53).

JNCC has also been undertaking preparatory work for the creation of a position statement on energy policy and nature conservation. Impacts on biodiversity arising from the production, distribution and consumption of energy in the UK are potentially significant, and there are potential conflicts between low-carbon energy technologies and nature conservation targets.



#### **Flooding in Oundle, 2007** Northamptonshire

Defra's new Ecosystem Approach Action Plan sets out to place an ecosystem approach at the heart of conserving, managing and enhancing the natural environment in England.

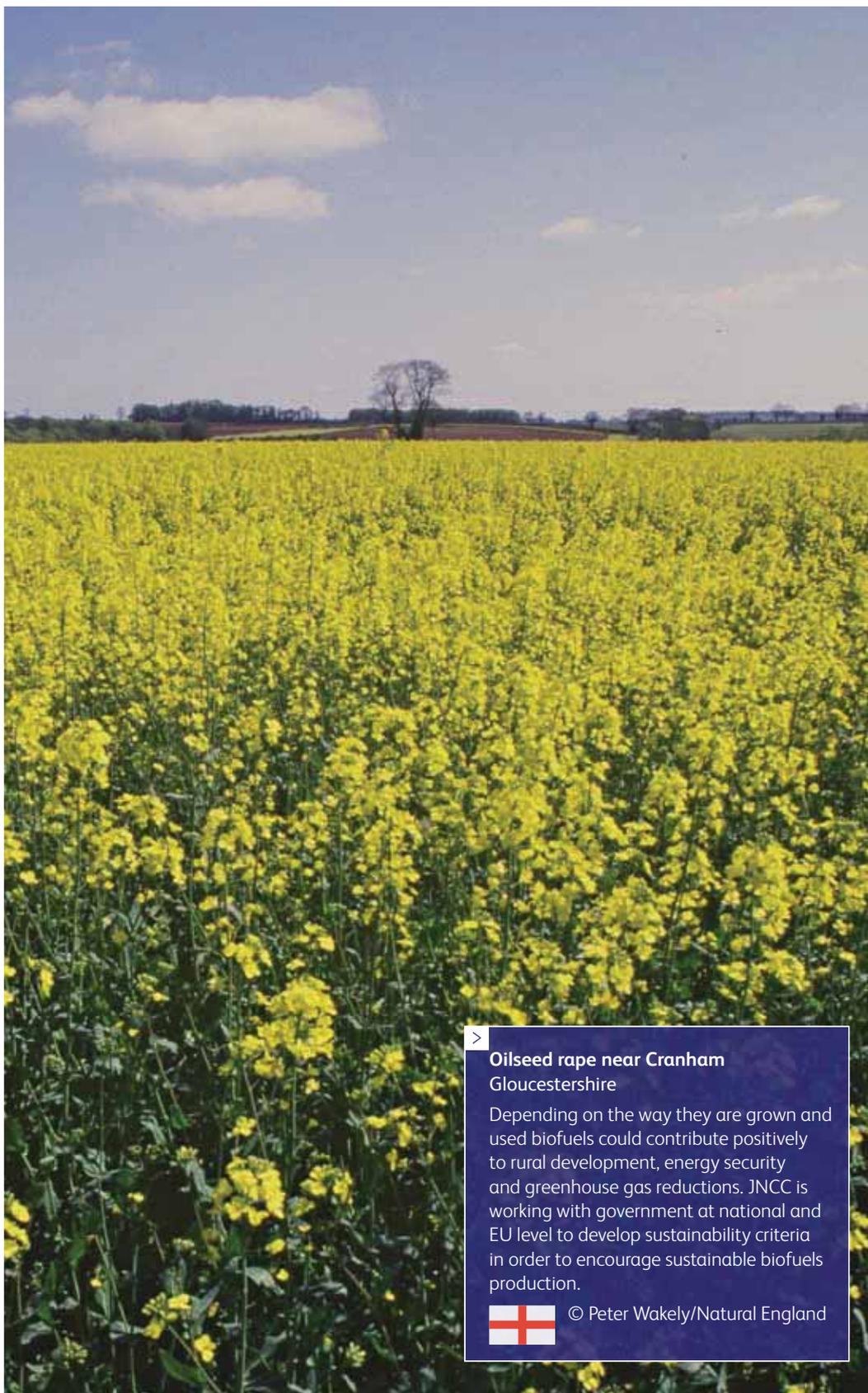
It calls for a more holistic approach to policy-making and delivery, which focuses on maintaining healthy ecosystems and delivery of ecosystem services. Human health and wellbeing relies on the services provided by ecosystems and their components – water, soil, nutrients and organisms.

Ecosystem services include products that are used by humans, such as clean air, water and food. They also include benefits that are less obvious. For example, woodland can prevent flooding by delaying run-off after rainfall; one study in Northumberland put the flood alleviation value of a hectare of woodland at £1,200.



© S Gregory





**Oilseed rape near Cranham**  
Gloucestershire

Depending on the way they are grown and used biofuels could contribute positively to rural development, energy security and greenhouse gas reductions. JNCC is working with government at national and EU level to develop sustainability criteria in order to encourage sustainable biofuels production.



© Peter Wakely/Natural England





**Adult female hen harrier bringing in prey**  
*Circus cyaneus*, Sutherland, Scotland

JNCC plays a central role in setting priorities for police and other agencies involved in the fight against wildlife crime. Current priorities include breaches of bans under the Convention on International Trade in Endangered Species, the illegal harvesting of freshwater pearls, and persecution of hen harriers and other moorland birds of prey.

The hen harrier *Circus cyaneus* is protected under both UK and European legislation, but continues to be persecuted throughout the UK. Grouse chicks are taken by hen harriers and though the species is recovering in parts of the UK, that recovery is not being seen in some areas where heather moorland is managed for shooting.



© Pete Cairns/naturepl.com



## > UK nature conservation advice

# 6

We provide advice on policies, strategies and initiatives that have an impact on nature conservation across the UK as a whole

The Wildlife and Countryside Act 1981 is at the core of nature conservation in Great Britain (Northern Ireland is covered by its own Wildlife Order (1985)) and it requires that every five years the three GB conservation bodies – Natural England, the Countryside Council for Wales and Scottish Natural Heritage – review two schedules of the Act that list protected species and recommend any changes that are thought to be necessary.

The GB conservation bodies carry out that duty working jointly through JNCC. The fourth Quinquennial Review was submitted to Government in 2002, and during this reporting year it acted upon that review's recommendations in respect of England

(Wales and Scotland are to make their own orders). Protection of the water vole *Arvicola terrestris* has been extended, while four other species – Roman snail *Helix pomatia*, spiny seahorse *Hippocampus guttulatus*, short-snouted seahorse *Hippocampus hippocampus* and angel shark *Squatina squatina* – join it on Schedule 5 of the Wildlife and Countryside Act.

The fifth Quinquennial Review is now due, but it has been delayed during the UK Biodiversity Action Plan signposting exercise (see section 9, page 43). JNCC has now begun to consult a wide range of bodies for this fifth review and expects to make recommendations to ministers later this year. The Northern Ireland Wildlife Order is to be reviewed in 2008.



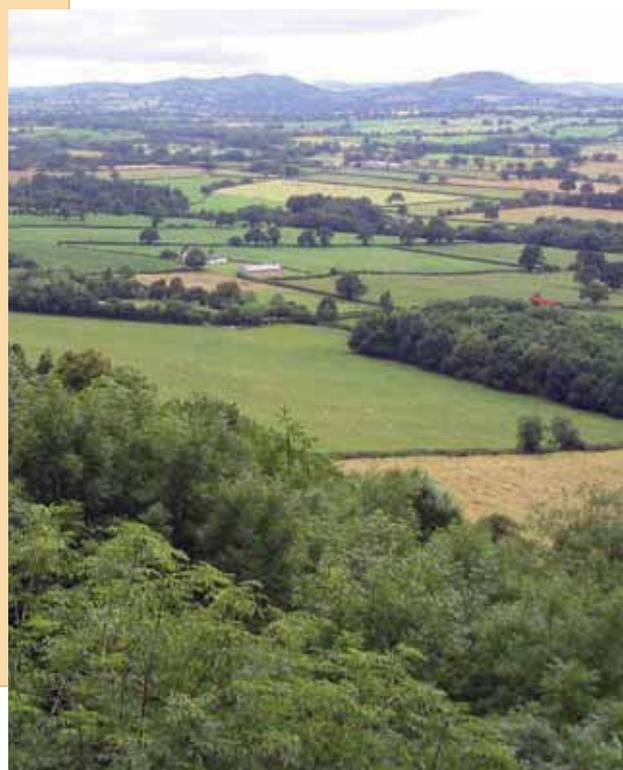
### Landscape and ecosystems Wenlock Edge, Shropshire

A growth area for JNCC is to formulate principles and advice on how nature conservation at the UK-level should be approached at the larger landscape scale. This burgeoning area is of interest to a range of partner organisations.

In bringing these together we will produce a set of guiding principles and definitions. Which species, habitats and protected sites are most at risk from landscape-scale deterioration in the face of climate change? How should we be managing landscapes to aid their conservation? Should the focus be on increasing connectivity and permeability or on improving the state and buffering of core areas? These are amongst the key questions to be addressed.



© JNCC



During the reporting year, another priority for JNCC was to finalise a report on the status of the 167 UK habitats and species of European importance listed on the annexes of the Habitats Directive (see section 4, page 23).

Much of the work JNCC does in the area of nature conservation advice is developed in close partnership with the UK conservation bodies, often through specialist working groups, and with other partners. In June we set up a review of inter-agency working to identify opportunities to enhance joint work arrangements between JNCC and our colleagues in the country bodies. The review has been carried out by Professor David Hill of the Joint Committee, Professor Des Thompson of Scottish Natural Heritage and Dr Ian McLean of JNCC. They have identified options for improving joint working, which are now under consideration by the inter-agency Chief Scientists' Group.

One area of joint working concerns the impact of non-native species on UK biodiversity, which continues to be a key area of concern for JNCC. During the year we were involved in the development of an overall approach to the problem for Great Britain (other arrangements are in place for Ireland) through our involvement in the GB Non-native Species Programme Board, which is chaired by Defra. A new non-native species strategy has been developed and was launched in May 2008.

Wildlife crime continued to be an important issue during the year, and JNCC welcomed the new three-year funding package that has been secured for the UK National Wildlife Crime Unit. The unit, which is hosted by Lothian and Borders Police, gathers intelligence on national wildlife crime and provides analytical and investigative support to police and customs officers across the UK. We work closely with the unit, and JNCC's Ian McLean chaired the Wildlife Law Enforcement Working Group, which sets priorities and direction for the unit.



### Topmouth gudgeon

*Pseudorasbora parva*

An audit published in 2005 reported more than 2,700 non-native species and hybrids present in England. Only a small minority become invasive, but those that do can pose a serious threat to both the environment and the economy. One example is the topmouth gudgeon *Pseudorasbora parva*, a small fish from south-east Asia that is thought to have been introduced to Britain through the pet trade.

The fish has been found at 32 locations in England and Wales, mainly in small lakes and ponds. Individuals mature in just a year and can reproduce several times, so in one season the gudgeon quickly establishes large populations at new sites. The species carries a parasite that is thought to pose a threat to native fish and also eats large quantities of vegetation, which upsets natural ecosystems.



© Hugo Willcox/FLPA







> **Fishing vessels in Tarbert**  
West coast of Scotland

As a key user group of the UK marine environment, the views of the fishing industry on JNCC's proposals for offshore SACs were particularly sought. Several meetings were held during 2007–2008 and their information was taken on board and responded to in the advice given to Government.

 © David Donnan

## > Marine management advice

# 7

### JNCC advises the Government on issues that impact on nature conservation in the marine environment, including fisheries, mineral extraction, and renewable energy

Issues surrounding nature conservation in the marine environment are taking an increasingly high profile position on JNCC's agenda, and have involved significant effort during the reporting year. JNCC has contributed to the preparation of the Marine Bill, which was published in draft in April 2008, and has a bearing on a number of areas that touch on JNCC responsibilities. Our involvement has included the production of an impact assessment and early work to identify possible Marine Conservation Zones. JNCC was also involved in work on UK implementation of the EU Marine Strategy Framework Directive.

One of the major pressures on the offshore marine environment is fishing, and during the year JNCC continued to work to integrate

environmental and fisheries advice through engagement with international bodies. Central to this effort is our involvement with the International Council for the Exploration of the Sea (ICES). During the year JNCC's Mark Tasker chaired the ICES Advisory Committee on Ecosystems, and his colleague Tom Blasdale chaired a working group on deep-water fish stocks. Mark Tasker also chaired a European Commission review of closed areas for fishing in the Atlantic region.

Throughout the year JNCC staff provided advice concerning offshore industries, an area of work that is partly funded by external bodies. We were involved in the Strategic Environmental Assessment for a third round of renewable energy development, with the aim



#### Black-legged kittiwake

*Rissa tridactyla*

The impact of the changing climate on the seas around the UK was highlighted in January 2008, when the Marine Climate Change Impacts Partnership (MCCIP) launched its annual report.

Ministers from the UK and Scottish Government attended the launch. MCCIP is led by the Centre for Environment, Fisheries and Aquaculture Science and is supported by JNCC. The report notes that 2006 was the second-warmest in UK coastal water since records began, that warmer weather will bring more severe storms and increased coastal erosion, and that warmer winters are strongly linked to reduced breeding success in some seabirds, such as the black-legged kittiwake.



© Matt Parsons/JNCC



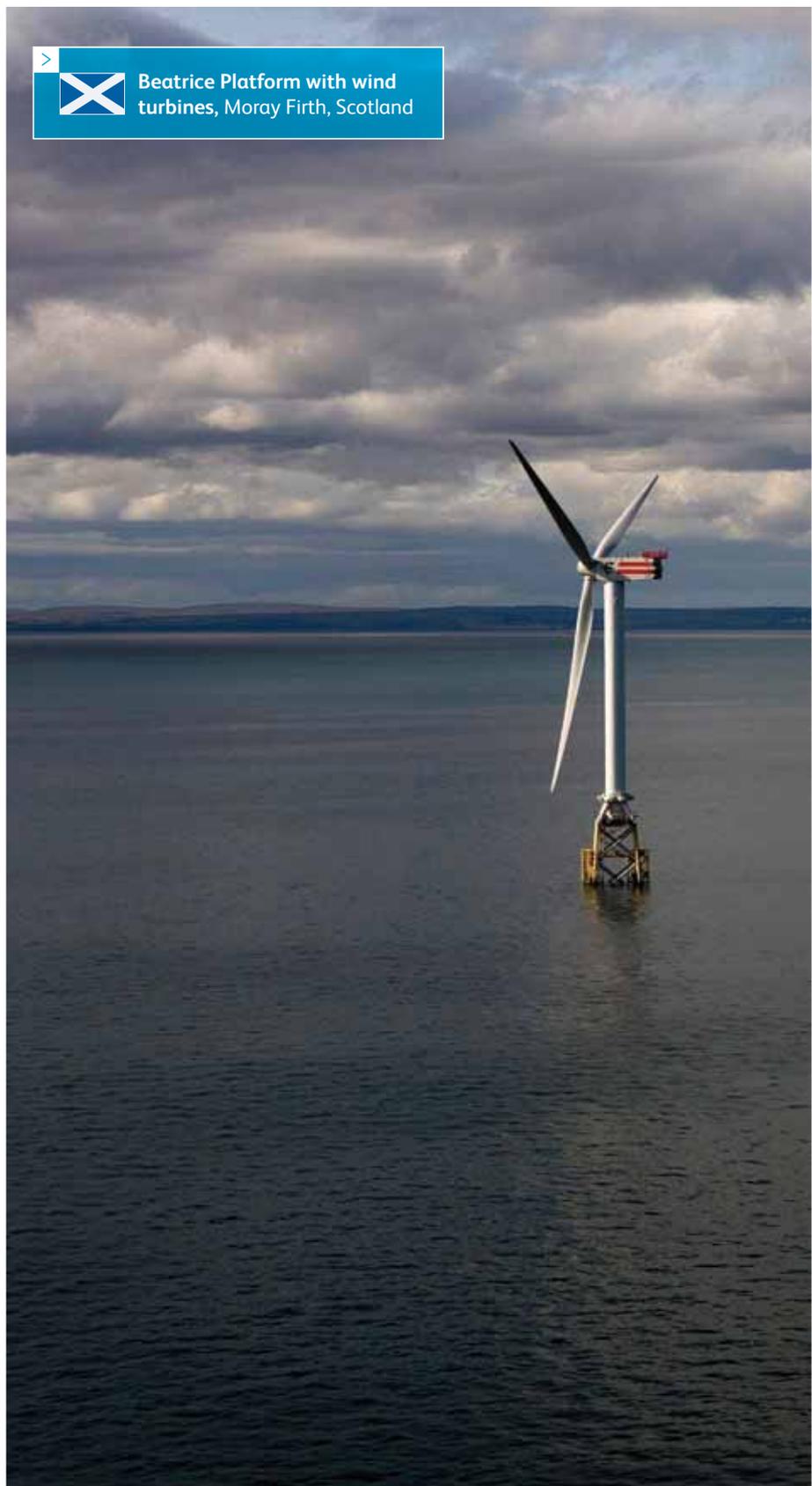
of ensuring that potential locations for windfarms and other offshore renewable energy projects do not conflict with nature conservation interests. JNCC commented on specific licences for offshore windfarms, and during the year these amounted to licences that will account for some 600 megawatts of generation, a record to date.

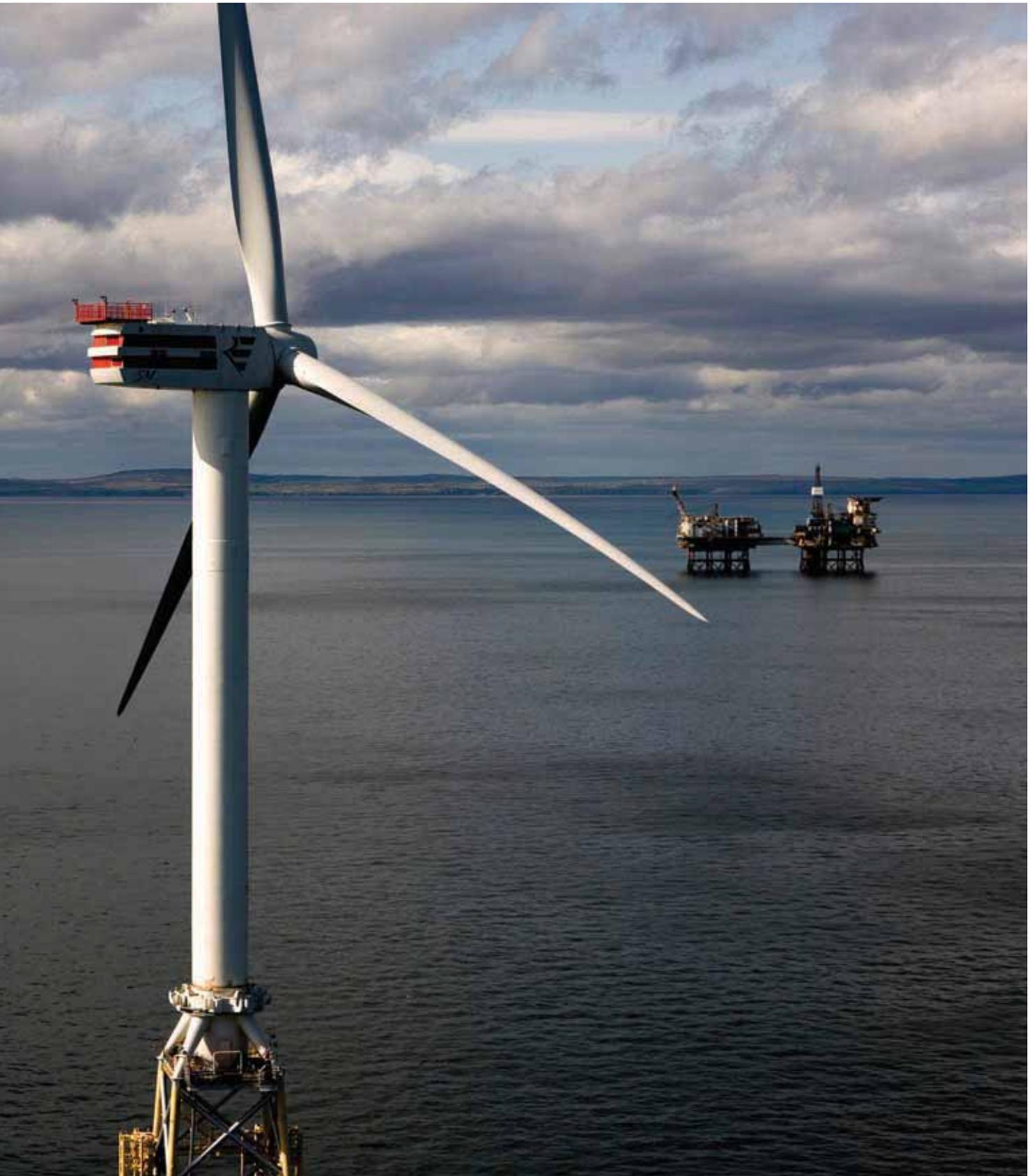
We have also played a role in identifying research priorities for the Collaborative Offshore Windfarm Research Into the Environment (COWRIE), an independent body which supports study of the potential environmental impacts of the UK offshore windfarm programme.

JNCC was also involved in 30 Environmental Impact Statements for oil and gas developments, 294 Petroleum Operations Notices, so-called 'mini-environmental impact assessments', and 154 other consents related to oil and gas activities.

Aggregates extraction is another important area of our work. JNCC plays a role in the industry-led Regional Environmental Assessment process, which has carried out an assessment of activity in the eastern Channel. During the reporting year further assessments were begun on the Thames and Isle of Wight regions, both with the involvement of JNCC. Guidance for how assessments should be carried out has been drawn up by a group that brings together JNCC with the Centre for Environment, Fisheries and Aquaculture Science, Natural England and English Heritage. This group also distributes funding from the Marine Aggregate Levy Fund to support research into the industry's impact on the environment.

During the year, regulations to implement the protected area provisions of the Habitats and Birds Directives in offshore waters came into force. Consultation undertaken on the first tranche of seven offshore Special Areas of Conservation under the Habitats Directive is reported in section 8. Before and during the consultation, JNCC met with a wide range of UK and European marine stakeholders, including fishermen's organisations, to present the proposals.







> **Sea spiders and feather stars on cobble reef, Wyville Thomson Ridge, off N Scotland**

The Wyville Thomson Ridge is an extensive area of stony reef thought to have been formed by the ploughing movement of icebergs at the end of the last ice age. The distinct hydrographic regime has led to the development of unique ecological communities. This area is being considered as a future Special Area of Conservation (SAC).

 © BERR/Defra/JNCC

## > Marine mapping and area protection

# 8

### JNCC provides advice on mapping the marine environment for nature conservation and on identifying marine protected areas

Detailed maps of marine habitats are becoming increasingly important as activities such as energy development and aggregate extraction make further demands on our marine resources. At the same time, the UK Marine Bill and the EU Marine Strategy Framework Directive are creating substantial requirements for new information on the distribution of undersea habitats.

A major step towards establishing a shared framework on marine mapping was made with the completion of the JNCC-led Mapping European Seabed Habitats (MESH) project in January 2008 ([www.searchMESH.net](http://www.searchMESH.net)). This collaboration between 12 partners, including organisations from the UK, the Netherlands, Belgium, Ireland and France has been co-funded by INTERREG and began in 2004.

Before MESH, mapping was undertaken only at a local level, with little consistency in the way maps were produced. The lack of shared standards and international co-operation presented a considerable obstacle to many aspects of marine management. MESH's aim has been to correct that situation, by creating seabed habitat maps for the whole of north-west Europe. At the same time, the project has put in place a framework for future mapping and promoted the use of habitat maps in environmental management.

The project has produced a series of outputs. An international conference to promote MESH's achievements was held in Dublin just before the reporting year began, and the proceedings of that conference were published in July 2007. In addition, JNCC has made MESH mapping information available on the web as an interactive, online system and we have also led the production of a comprehensive guide to marine habitat mapping. Completed as the reporting year came to a close, the guide is available in two versions. There is a short printed edition that provides an overview for

a lay audience, while a more detailed online version delivers the level of detail required by the practitioner.

#### > Thornback ray *Raja clavata*

JNCC continued to support government's contribution to the work of the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic, particularly focused on the work of its Biodiversity Committee. Ongoing work on the protection of threatened species and habitats led to the recommendation for a further four bird species, nine species of fish and two habitats to be added to the Initial OSPAR List. JNCC continued its role as co-ordinator for the OSPAR habitat mapping programme, which has now collated over 20,000 records on the distribution of 14 threatened habitats across the OSPAR region.

JNCC led a significant new area of work in developing a strategic framework for biodiversity assessment and monitoring. This is aimed at ensuring OSPAR's work is most effectively focused on priority areas of concern (i.e. in addressing key impacts from human activities) and complements work undertaken in other fora (e.g. EC Directives). An 'assessment matrix' has been developed to aid this process and has been adapted for reporting on the status of biodiversity (habitats, fish and birds) as part of the forthcoming OSPAR Quality Status Report.



© Mark Webster/NHPA





**Squat lobster and feather star,  
South-West Approaches, off SE England**

In June, a team of European scientists led by the JNCC explored underwater canyons deep below the Atlantic, 320 km from Land's End. Part of the MESH project, the cruise set out to test the project's standards and protocols.

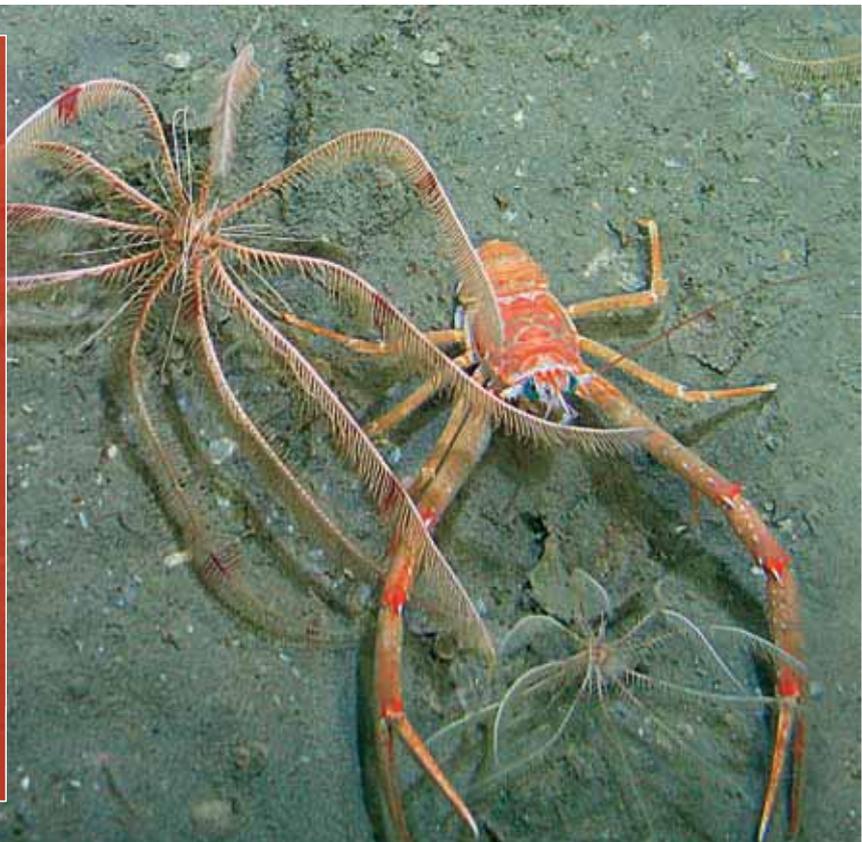
It also presented an opportunity for the scientists to collect data from an unmapped area on the edge of the Continental Shelf, and to feed vital information into the process of identifying possible candidate sites for protection under the Habitats Directive. The survey was conducted in partnership with the British Geological Survey and the Irish Marine Institute, and was an excellent example of trans-national co-operation.

The canyons reach depths of more than 4,000 m in places and almost nothing is known of the seabed communities. The team surveyed an area of 850 km square using a range of techniques including a remote camera.

Areas of bright orange cold-water coral reef were found that are home to anemones, starfish, fish and feather stars. There were also signs of reef damage, probably caused by trawling for fish.



© 2007 Defra, JNCC, Marine Institute, British Geological Survey, University of Plymouth



JNCC has also made progress on computer modelling to deliver a reliable tool for predicting the distribution of seabed habitats. This will be of use in marine spatial planning for the very extensive areas of seabed that await mapping by modern survey techniques.

In another strand of activity, JNCC's Jane Hawkrige continued to chair the biodiversity group of the Healthy and Biologically Diverse Seas Evidence Group. The group is part of the UK Marine Monitoring and Assessment Strategy and aims to deliver ecosystem-based assessments and management of the UK's marine environment.

JNCC is continuing to co-ordinate work to complete the Natura 2000 protected site series in relation to marine habitats and species. Co-ordination of the site series in inshore waters is achieved through the JNCC's Marine Natura Project Group, chaired by Committee member Professor Lynda Warren. Work to progress the offshore component of the site

series is also overseen by the Project Group and is being undertaken by JNCC staff.

During the year, JNCC continued to collate and collect data to complete the series of offshore Special Areas of Conservation (SACs) to be designated under the Habitats Directive. JNCC collaborated with, or commissioned, surveys on Rockall Bank, underwater canyons of the south-west approaches, and the Dogger Bank (the last undertaken in April 2008).

In August 2007 the Offshore Marine Conservation (Natural Habitats) Regulations 2007 came into force. These Regulations enable the designation of SACs and Special Protection Areas (SPAs, designated under the Birds Directive) in UK offshore waters. The regulations also give JNCC several formal nature conservation roles for the offshore area, including consulting on site proposals, providing advice on sites, and promoting public awareness of the need to protect habitats and species in UK offshore waters.

In December 2007, JNCC undertook formal consultation on seven possible SACs in the offshore area covering nearly 4,000 square miles of sea. Unlike previous SAC consultations for inshore waters, JNCC consulted European stakeholders as the possible sites are in offshore waters where management of fisheries is through the European Commission. At the close of this consultation in March 2008, 38 detailed responses had been received and these will be considered by JNCC prior to recommendations being made to ministers in summer 2008.

The sites proposed include the Wyville Thomson Ridge, a rocky ridge below the Atlantic Ocean 150 km north-west of Scotland. The seabed is between 600 m and 1000 m deep and has unusually fast water currents across it. Because of these currents the ridge supports thriving communities of bright orange and red feather stars, anemones, soft corals and sea spiders.

In 2005, JNCC made recommendations to extend existing seabird colony SPAs into the marine environment. The Scottish Government is now acting on this advice, and Scottish Natural Heritage is drawing up proposed extensions to some 31 SPAs.

Also during the year, JNCC continued to assist the country conservation bodies in identifying possible inshore SPAs important for their aggregations of seaduck, divers and other seabirds during the non-breeding season. This work has involved surveys from land, ships and aircraft of 10 inshore areas around Scotland, four areas in Northern Ireland and eight areas in England to determine bird numbers. Data from these surveys and other sources for five inshore areas around Scotland were analysed to assess whether birds were regularly present in sufficient numbers for the area to be considered for classification as an SPA. Additionally, new scientific methods for determining possible SPA site boundaries were developed.

JNCC also undertook analysis of the available seabird data to determine whether there are potential SPAs in offshore waters. Significant progress has been made with this work, enabling clusters of seabird species using offshore waters to be identified, and it is expected that further analysis of the data in 2009 will identify sites for consideration as possible offshore SPAs.

Data on how breeding red-throated divers use their marine environment were collected by JNCC in the Western Isles during 2007. These data, along with data from previous summers, are being used to build a computer-based habitat model to identify the location of the most suitable marine habitats for breeding red-throated divers, with a view to making SPA recommendations for this species.

#### MESH South-West Approaches Canyons Survey

The Mapping European Seabed Habitats (MESH) project made use of existing data and new survey work to create maps of the marine habitats around north-west Europe. One of the project's starting points was to locate all existing seabed habitat maps held by a wide range of organisations.

To make use of these maps, the project team had to overcome a number of problems, including the fact that they did not share a common set of terms to describe habitats, and that files were held in different formats. The maps were first translated to the European Nature Information System (EUNIS) habitat classification and then their quality was assessed before the maps were combined to form a single map layer.

It revealed that many areas of the seabed in north-west Europe had not been mapped. To fill the gaps, the JNCC project team used data on the physical environment to predict the likely distribution of habitats; for example, the dark blue areas shown here are deep-sea sands and muddy sands, the yellow areas are sandy habitats, while the pink areas are coarse gravelly-sand habitats.





**Traditional orchard and wildflower meadow, Trelissick, Cornwall**

Traditional orchards are one of the new additions to the UK Biodiversity Action Plan list of priority species and habitats. Though a man-made habitat, orchards often support threatened and endangered species, such as the lesser-spotted woodpecker *Dendrocopos minor*, mistletoe *Viscum album* and the noble chafer *Gnorimus nobilis* – a beetle whose larvae live in the rotting wood of old fruit trees.



© Michael Usher

## > Standard and target setting for nature conservation

# 9

### JNCC plays a leading role in setting the standards and targets that provide a consistent framework for UK nature conservation

An important part of JNCC's work is to advise on targets and standards for nature conservation in the UK.

The UK Biodiversity Action Plan was created to help implement the Convention on Biological Diversity, and since 1996 its focus has been on a list of 577 priority species and 45 priority habitats. In 2004, the Biodiversity Reporting and Information Group (BRIG) began a review of priorities to ensure that effort is focussed in the correct areas given new information, emerging issues, and changes in the status of habitats and species.

Selections were made by a series of nine topic groups, and more than 500 specialists contributed expertise and information to the process. In August 2007, that substantial body of work came to fruition with the publication of new priority lists for both habitats and species.

There were significant changes, with the new list including 1,149 species and 65 habitats; the scale of change is partly due to there being more information available about UK biodiversity than there was when the exercise was last carried out in the 1990s.

With so many priorities to deal with it has been necessary to move away from the previous approach, of creating an Action Plan for each species and habitat, to a new 'signposting' approach that identifies actions required for each species, and then brigades them into various categories. That process is being undertaken by specialists under the leadership of BRIG with JNCC as chair and secretariat.

A project to identify Britain's most important geological sites, to ensure they are protected and conserved, continues to be a key commitment for JNCC. The Geological Conservation Review (GCR) of Britain has resulted in a series of publications, which will run to 45 volumes when completed.



#### Neil Ellis

JNCC Geoconservation Manager

The contribution that JNCC's Neil Ellis has made to geological conservation has been recognised by the Council of the Geological Society of London, which has awarded him with one of two 2008 Distinguished Service Awards. Neil leads the GCR process as Publications Manager.



© Cathy Gardner/JNCC



Northern Ireland has its equivalent in the Earth Sciences Conservation Review.

Each GCR volume describes sites worthy of conservation and in total the series will cover more than 3,000 locations. During the reporting year, volume 33, *Mass Movement*, was published, and volume 34, *Lewisian, Torridonian and Moine Rocks of Scotland*, was prepared for publication during 2008.

Alongside the production of the print series, JNCC is also making GCR information available through the web. At the end of the year, 13 volumes had been made available to users in this way.

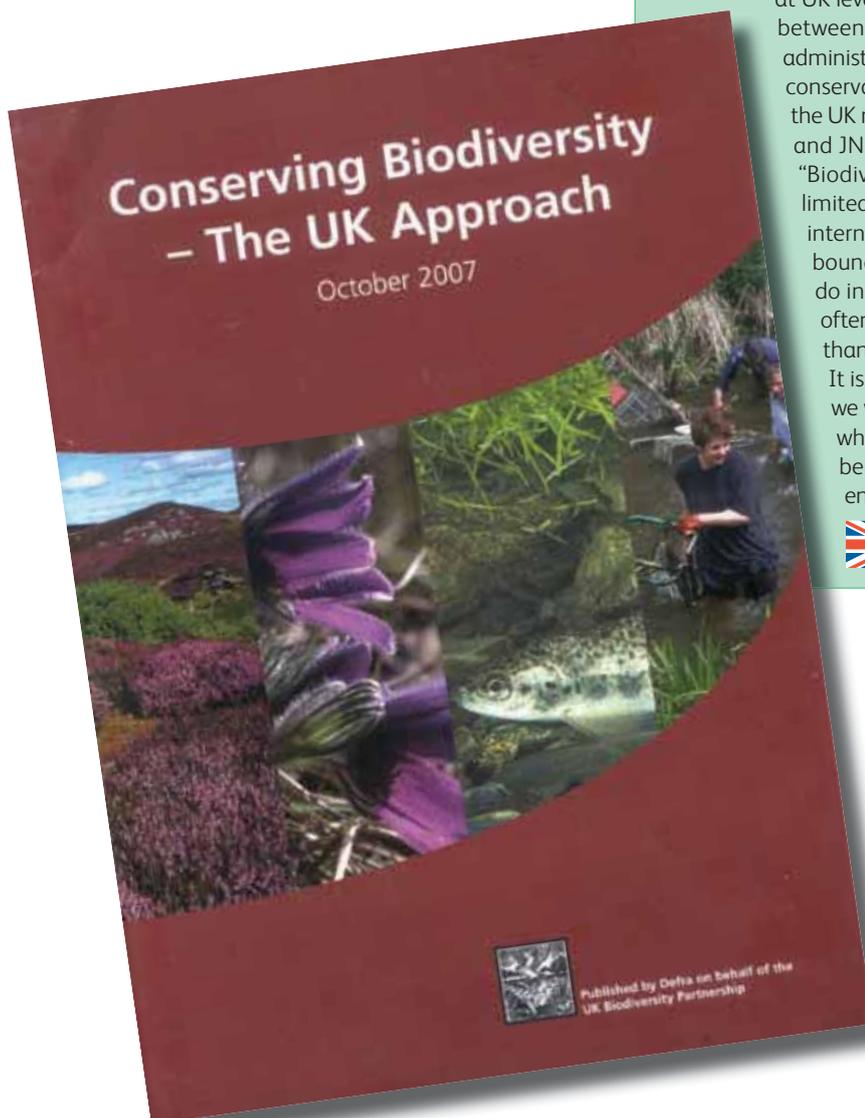


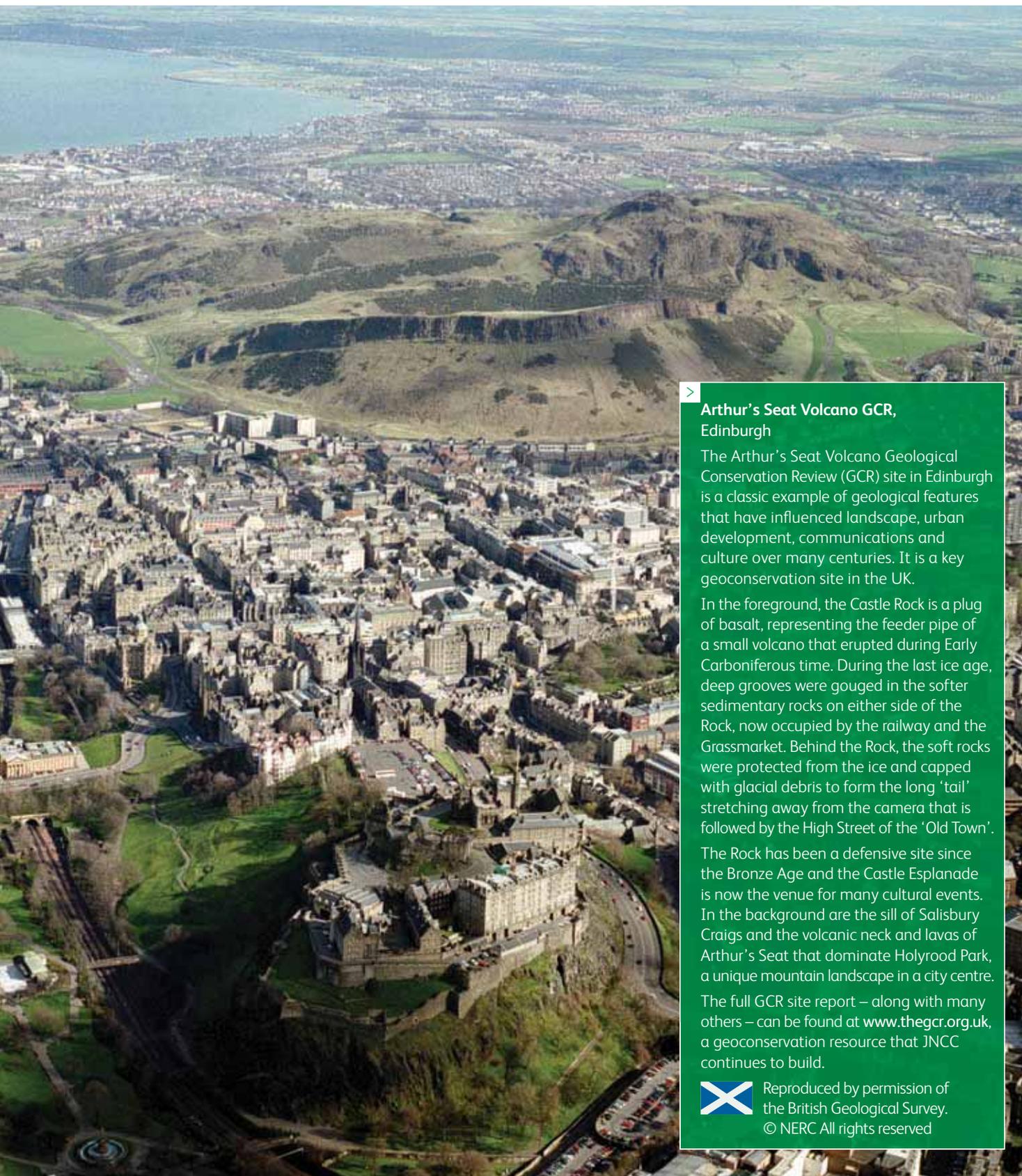
### Conserving Biodiversity

Produced by Defra in 2007

The role of the UK under the Biodiversity Action Plan (BAP) was clarified with the publication of **Conserving Biodiversity – The UK Approach** at the fifth UK Biodiversity Partnership Conference, Aviemore in October 2007. Prepared by the UK Biodiversity Standing Committee, the document sets out a vision for UK biodiversity, and explains roles within the UK BAP at UK, country and local levels.

The document notes that research and surveillance will be co-ordinated at UK level by a partnership between the four administrations, the UK conservation bodies, the UK research councils and JNCC. It adds: "Biodiversity is not limited by national or international political boundaries: what we do in one country is often relevant to more than one country. It is important that we work together where this will most benefit the natural environment."





#### > Arthur's Seat Volcano GCR, Edinburgh

The Arthur's Seat Volcano Geological Conservation Review (GCR) site in Edinburgh is a classic example of geological features that have influenced landscape, urban development, communications and culture over many centuries. It is a key geoconservation site in the UK.

In the foreground, the Castle Rock is a plug of basalt, representing the feeder pipe of a small volcano that erupted during Early Carboniferous time. During the last ice age, deep grooves were gouged in the softer sedimentary rocks on either side of the Rock, now occupied by the railway and the Grassmarket. Behind the Rock, the soft rocks were protected from the ice and capped with glacial debris to form the long 'tail' stretching away from the camera that is followed by the High Street of the 'Old Town'.

The Rock has been a defensive site since the Bronze Age and the Castle Esplanade is now the venue for many cultural events. In the background are the sill of Salisbury Craigs and the volcanic neck and lavas of Arthur's Seat that dominate Holyrood Park, a unique mountain landscape in a city centre.

The full GCR site report – along with many others – can be found at [www.thegcr.org.uk](http://www.thegcr.org.uk), a geoconservation resource that JNCC continues to build.



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### Gannet

*Morus bassanus*

The UK's seabird populations are well covered by censuses, which are carried out at 15-year intervals, and during the reporting year JNCC undertook a comprehensive review of our Seabird Monitoring Programme. The recommendations of this review will now be discussed with stakeholders.



© Michael Usher



## > Surveillance and monitoring

# 10

Working with partners, JNCC tracks trends in plant and animal populations and the condition of protected sites to identify changes in UK biodiversity and geodiversity

High-quality information on the status of wildlife and habitats is essential to UK governments' efforts to achieve their nature conservation aims. JNCC plays a key role in gathering that information by supporting UK-level surveillance and monitoring schemes, many of them operated in partnership with other organisations. In all, 70 surveillance or monitoring schemes produce data, which are put to a wide range of uses, including fulfilling international reporting obligations, gauging the state of UK nature and establishing the effectiveness of conservation measures.

During the reporting year we continued to develop a new strategy for terrestrial biodiversity surveillance to improve the

evidence base for measuring the effectiveness of nature conservation efforts, guide policy and report on priorities. Its aim is to get better coverage for the limited resources available by re-balancing the UK's surveillance effort, reducing overlap and filling gaps in coverage. Currently, surveillance is highly focussed on birds and mammals, and the new strategy would shift the emphasis to less well served areas, such as plants and habitats. Our proposals were considered by the UK Biodiversity Standing Committee in April 2008.

A strategy for marine biodiversity surveillance is being developed as an integral part of the UK Marine Monitoring and Assessment Strategy, a process that JNCC is supporting.



### Comma

*Polygonia c-album*

JNCC supports the UK Butterfly Monitoring Scheme (UKBMS). Butterflies are amongst the best indicators of the state of the environment; their short life cycles and high sensitivity to environmental conditions can be used to determine impacts of land use change or climate change and provide insight on the effectiveness of biodiversity policies. UKBMS will develop long-term trends and interpretation of change, in both protected sites and the wider countryside, providing a more robust analysis of the state of UK butterflies and the thousands of insects that share similar ecological requirements.



© Helen Baker/ JNCC



While the future strategy for surveillance and monitoring was being worked on, JNCC has continued to support the range of ongoing species surveillance schemes. We work with a wide range of partners, such as the British Trust for Ornithology and the Centre for Ecology and Hydrology, and much of this information-gathering effort on the ground is carried out by volunteers.

A good example of the benefits of well-co-ordinated surveillance and monitoring is the Tracking Mammals Partnership (TMP). The partnership is made up of 25 organisations with a variety of interests in mammals.

During the year it issued its third annual update on the first major report on mammals' status and trends, which was published in 2005. TMP reports on population changes for 35 land mammals and can now give 25-year trends for some species. The 2008 update reports that 16 of the species covered are increasing in population, 11 are stable and six are declining; for two species the trends are unclear. Unfortunately, four of the 16 increasing species – common rat, grey squirrel, sika deer and muntjac – are non-native species.

During the reporting year we began a review of the scope of goose and swan monitoring in the UK by hosting a stakeholder workshop with the Wildfowl and Wetlands Trust. We also hosted an expert workshop that looked at how vegetation sampling could be extended, which could help to improve surveillance of ecosystem functions, understanding of changes in habitat quality and detection of the impacts of environmental pressures.



**Scottish wildcat *Felis sylvestris grampia***  
Cairngorms National Park, Scotland

Monitoring the fortunes of mammals can be challenging, and the Tracking Mammals Partnership is working to improve data collection. During the year the Mammal Society, supported by JNCC, piloted a range of field techniques aimed at monitoring populations of small mammals, and Scottish Natural Heritage launched a survey of Scottish wildcat *Felis sylvestris grampia* populations, the first for 20 years.



© Pete Cairns/naturepl.com





**Small red-eyed damselfly *Erythromma viridulum***, Wicken Fen NNR, Cambridgeshire

The British Dragonfly Society (BDS) is one of the national societies that have adopted *Recorder 6* software for collecting field data. Information gathered by BDS volunteers is fed into the National Biodiversity Network and can be accessed via the NBN Gateway.

The society has just launched the National Dragonfly Atlas Project, which will update the known distribution of British dragonfly and damselfly species over the next five years.

The launch comes at a time when climate change is affecting the ranges of many dragonflies and damselflies. For example, one new species to Britain is the small red-eyed damselfly, which was first recorded only in 1999 but is now to be found around ponds and lakes in much of southern England.



© Chris Slaney/British Dragonfly Society



*Distribution map of *Erythromma viridulum* produced by the NBN Gateway using data provided by the British Dragonfly Society*



## > Access to information

# 11

### JNCC works to support nature conservation by collecting and collating biological and geological data and by making the information as accessible as possible to users

During the reporting year we continued to improve the way we collect information, hold it and make it available to as wide a range of users as possible.

Volunteers collect a huge amount of biodiversity data, and JNCC's *Recorder* software has been developed to allow their records to be entered and collated in a standard digital form.

*Recorder 6* follows on from its predecessors *Recorder 2000* and *Recorder 2002*, which are widely used by field biologists.

The package allows users to collect and collate an unlimited number of records, and includes a distribution mapping function. During the reporting year we made improvements to the stability and functionality of *Recorder 6* and we are now looking to widen the uptake of the software.

In the UK, *Recorder* is used by National Societies and Local Records Centres, and a number have adopted *Recorder 6*. They include the British Dragonfly Society, the British Lichen Society, Sussex Biodiversity Record Centre and South East Wales Biodiversity Records Centre.

The new software has also been noticed at European level, and during the year two new partners, in Ireland and Germany, have taken it up.

Data collected by *Recorder* users feeds into a network of biodiversity databases, the National Biodiversity Network (NBN), that was created in the 1990s on the recommendation of the UK Biodiversity Steering Group to provide an evidence base for nature conservation action.

[www.searchNBN.net](http://www.searchNBN.net), the NBN Gateway website, is managed by JNCC and holds species records in an accessible form. At the end of the reporting year it held 28 million records and was receiving 120,000 visits each month – users include Government agencies,

nature conservation organisations and members of the public. Increasing use is also being made of the NBN data and functionality via other websites, which were clocking up 70,000 page views per month of NBN data at the end of the reporting year.

During the year we made a series of improvements to the NBN Gateway site's infrastructure to address this growing popularity. The changes have increased the site's capacity and made it more reliable.

JNCC has continued to promote public access to information across its work programmes. For example, maps and guidance on mapping developed as part of the Mapping European Seabed Habitats (MESH) project are now available online (see section 8, page 39), as are six volumes of the Geological Conservation Review (see section 9, page 43).

We have continued to support the Marine Data and Information Partnership. Led by the British Oceanographic Data Centre, it aims to ensure that those involved in marine nature conservation have access to high-quality information by creating an easy-to-use portal.

JNCC has also worked closely with the Ordnance Survey (OS) to maximise the use of OS data in the service of nature conservation. The focus of this effort has been to change working arrangements to make them more free-flowing.





### Irish hare

*Lepus timidus hibernicus*

The current review of the UK Biodiversity Action Plan is considering new ways of working that would see conservation efforts concentrated more on over-arching habitat improvement than on actions aimed at individual species. It is a way of working that is already in place in Northern Ireland, where conservation action is focussed at changing habitats in a way that benefits a number of target species. For example, improvements to farmland habitat benefits the Irish hare *Lepus timidus hibernicus*, a flagship species, but also supports a range of other farmland species.



© John Doherty



## > Policy-relevant information and reporting

# 12

JNCC aims to encourage research and produce information products that support the development and implementation of nature conservation policy

An expanding area of JNCC's work is to identify gaps in information about nature conservation and encourage new research to address them.

JNCC supported the Royal Society's international workshop in June that considered the interconnectedness of climate, biodiversity and human well being. An outcome of that meeting has been the Royal Society's policy document, *Biodiversity-climate interactions: adaptation, mitigation and human livelihoods*.

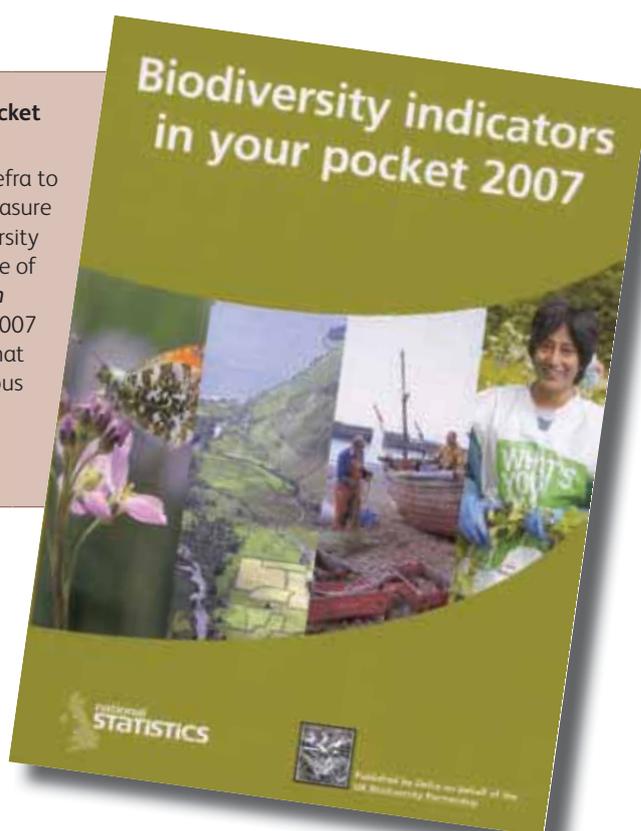
The workshop identified a series of science and policy gaps and research needs. They include improving the evidence base for the role of biodiversity in supporting human wellbeing, and creating a better understanding of how extreme climatic events impact on biodiversity.

During the year JNCC was involved in Biodiversa, a European Research Area consortium that brings together 19 research funding agencies. We also continued to contribute to the Newcastle-based Rural Economy and Land Use programme, which supports inter-disciplinary research into countryside and rural economy issues.

In addition we joined the influential Environment Research Funders' Forum, which brings together the UK's major public sector sponsors of environmental science to make best possible use of funding. It is currently developing an Environmental Observations Framework into which JNCC's surveillance strategy will fit (see section 10, page 47).

### > Biodiversity indicators in your pocket Published by Defra

JNCC contributed to work led by Defra to produce indicators that will help measure the impact of efforts to halt biodiversity loss in Europe by 2010. The outcome of this work, *Biodiversity Indicators in Your Pocket*, was published in June 2007 and is a free, pocket-sized booklet that outlines 18 indicators covering various aspects of biodiversity.





### JNCC provides secretariat function to major climate change event

Ahmed Djoghlaif, Executive Secretary of the Convention on Biological Diversity, is seen here addressing the Royal Society's international workshop in London, June 2007. His keynote speech was part of an event that brought together individuals from three very different disciplines – biodiversity scientists, climate change scientists, and experts in poverty alleviation.

JNCC provided the secretariat function for the meeting, including event logistics and issuing delegate invitations, including arranging the sponsorship of several from the least developed countries. We were also involved in organising the drafting of the report that came out from the event, *Biodiversity-climate interaction: adaptation, mitigation and human livelihoods*.

As a consequence of the workshop, JNCC was invited to assist in helping present the findings to specialist audiences across the world, including at the Conference of the Parties for the United Nations Framework Convention on Climate Change.



© Richard Ferris/JNCC



As described in section 9, JNCC devoted a great deal of effort during the year to the review of the UK Biodiversity Action Plan (UK BAP).

JNCC chairs and provides the secretariat for the Biodiversity Reporting and Information Group (BRIG), a sub-group of the UK Biodiversity Partnership Standing Committee, which plays a key role in the provision of information to support the UK BAP. The group led the development of the new list of UK BAP priority species and habitats, which was published during the year. It was also tasked with the job of identifying conservation actions necessary to prevent and reverse biodiversity loss, and is considering new ways of delivering UK BAP outcomes.

JNCC also provides the secretariat for a second sub-group, the Biodiversity Research Advisory Group (BRAG), which brings together researchers, practitioners and policy-makers to promote scientific research that answers the UK BAP's needs.

In June 2007, JNCC produced a second update of the State of Nature report, first published in 2005, which was presented to the Joint Committee. It pulls together information from a wide range of sources, including new reports from surveillance and monitoring schemes and the large body of work undertaken to report on the conservation status of species and habitats under the Habitats Directive (see section 4, page 23).

The 2005 report described how over 30–40 years about 30 per cent of habitats and species in the UK have declined, with most of the loss between 1960 and the 1980s. That loss has levelled off or was reversed in the 1990s. The 2007 update restates that conclusion, but raises concerns about other pressures on biodiversity, including climate change and the fragmentation of habitats. It says: "The evidence is becoming overwhelming that climate change is a major consideration for nature conservation now and in the future."

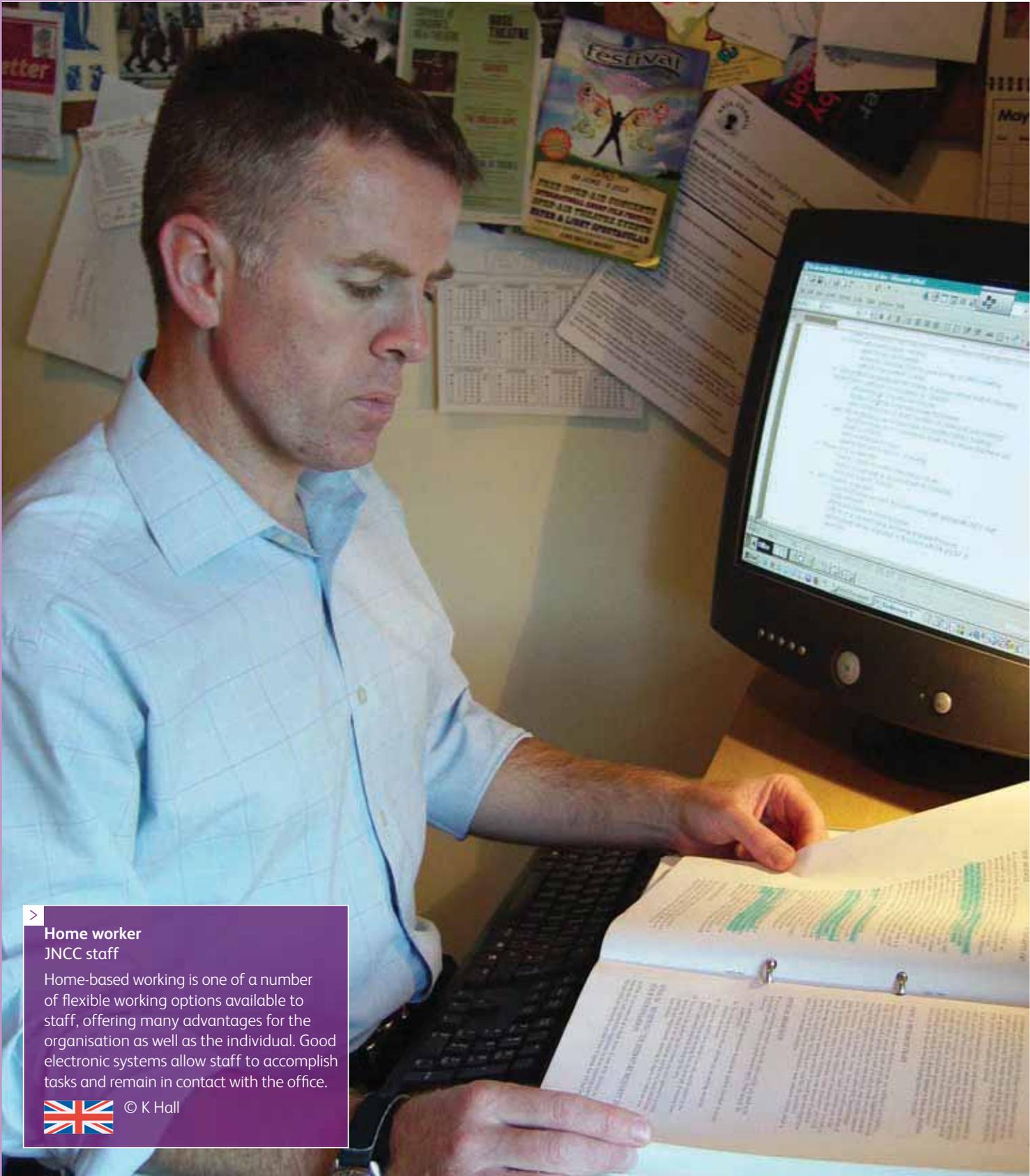
**Dusky thorn moth***Ennomos fuscantaria*

One of the many inputs into JNCC's State of Nature update was data on moth populations from a recent report by Butterfly Conservation and Rothamsted Research. It concludes that, of 337 species, 226 suffered population declines between 1968 and 2002.

Eight species declined by 95 per cent or more, including the dusky thorn *Ennomos fuscantaria*, figure of eight *Diloba caeruleocephala* and hedge rustic *Tholera cespitis* moths. The report says that declines across so many species must raise concerns about impacts on the ecosystems of which the moths are part.



© Bill Coster/NHPA Ltd



**Home worker**  
JNCC staff

Home-based working is one of a number of flexible working options available to staff, offering many advantages for the organisation as well as the individual. Good electronic systems allow staff to accomplish tasks and remain in contact with the office.



© K Hall

## > Governance and support services

# 13

The work of JNCC's specialists is supported by a suite of services that includes corporate governance, information technology, finance, human resources, communications and office facilities

The Joint Committee provides strategic leadership for the work of JNCC. An important contribution was made in 2004, when the Committee agreed a vision and high-level objectives for nature conservation.

During the reporting year we continued to develop this vision by attempting to identify long-term targets for nature conservation that would look to 2035 and beyond. Rather than focussing on individual species, long-term targets would focus on the legislative and policy changes that could deliver a robust and healthy landscape in which wildlife could thrive.

Within the support company a range of 'back-office' activities were undertaken to underpin delivery of JNCC's functions and ensure that statutory obligations were met.

During the year JNCC finalised a new external communications strategy for the organisation, which identifies priority audiences and more proactive ways of working. The strategy was just beginning to be rolled out as the reporting year came to a close.

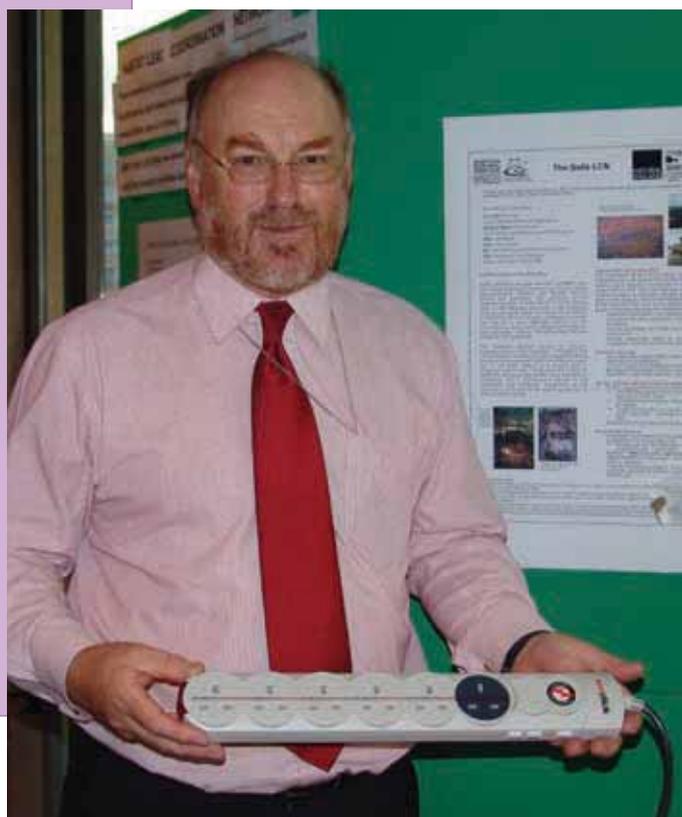
### > The Intelli plug, now used in JNCC offices

Greening the organisation is very much a team effort at JNCC. Staff contribute vigorously and highly effectively to greening the office. Many energy and waste-saving ideas adopted have come from staff members.

One example during the reporting year was the Intelli Plug, seen here with our Managing Director, Deryck Steer. This is a simple plug block that saves electricity by allowing all PC peripherals to be shut down when the computer they serve is switched off. A staff member who bought one for his home computer brought it into the office and now Intelli Plugs are fitted to JNCC desktop computers.



© Annette Lamley/  
JNCC





### Green by role – green by nature

Double award winning performance from JNCC

During the reporting year JNCC worked hard in managing its environmental performance. This year we focused on managing energy efficiency, waste reduction, recycling initiatives and working towards the Peterborough office's environmental management system. Our efforts were rewarded as JNCC received a Cambridgeshire and Peterborough workplace travel plan award.

Pictured receiving the Travel Choice Travel Plan Award from Councillor Shona Johnstone, Cambridgeshire County Council, is Amanda Gregory (right), JNCC's Environmental Manager. JNCC was also runner up in the BETI+ (Business and Environmental Training Initiative) Awards in the Best Cambridgeshire Small and Medium Enterprises category.



© PECT



> **The new Aberdeen office, Torry (Artist's impression)**

In 2009, JNCC's Aberdeen office will be on the move to new purpose-built accommodation that will be built to the highest environmental performance standards. The building on Aberdeen's harbour front, at Torry, is to be shared with staff from the Scottish Environment Protection Agency and Scottish Natural Heritage. As the year ended the building design was making its way through the planning process.



© SEPA



In the area of human resources, the key outcome for the year was the completion of a thorough updating of personnel policies, while in the finance area we consolidated the new JNCC financial management system. The new system was introduced during the previous reporting year and has been tailored to better meet our needs.

Given the nature of JNCC's work, effective information technology is vital. During the year a priority for the IT team was to improve mobile communications both for staff on the move and for home working. Offering a home working option is beneficial for the staff involved and also reduces work-related travel. The installation of a new circuit on the JNCC computer system has boosted connection times for remote computers.

During the year, JNCC put in place a Sustainable Development Action Plan, which addresses the environmental, social and economic impacts the organisation has on the wider world. As a result, environmental management continues to be a high priority.

We continued to make efforts to reduce our ecological footprint by addressing energy use, transport use and recycling. We worked towards embedding sustainability objectives into JNCC's procurement process and have explored the possibility of offsetting carbon emissions relating to our air travel.



### 'The Giant's Organ'

Co. Antrim, Northern Ireland

'The Giant's Organ', showing the regular columns of basalt (the organ's 'pipes'), is part of the Causeway Coast World Heritage Site, established in 1986 by UNESCO for its outstanding geology.

The adjacent Giant's Causeway is an iconic image for the Antrim coast, but the long-studied and much-enjoyed geology of the whole coast – tens of thousands of basalt columns, and associated rock formations – can be seen throughout the site, which also plays host to a very varied biodiversity.

In fact, not only is this a World Heritage Site, but it is also an Area of Outstanding Natural Beauty, a Special Area of Conservation, a National Nature Reserve and an Area of Special Scientific Interest, making it one of the foremost areas for nature conservation in Northern Ireland.



© Northern Ireland  
Environment Agency



## > Appendices

# 14

Details of JNCC's Committee, staff and offices during the financial year 2007/2008, audited accounts, statement on the system of internal control, operating cost statement, balance sheet and cashflow statement

### > Committee, staff and offices

#### Joint Nature Conservation Committee members April 2007–March 2008

Dr P Bridgewater	Chair (from October 2007)
Mr A Darby	Chairman (to September 2007)
Professor D Ingram	Independent, Deputy Chairman (to March 2008)
Dr L Blakiston Houston	Council for Nature Conservation and the Countryside (to February 2008)
Dr R Brown	Council for Nature Conservation and the Countryside
Mr P Casement	Council for Nature Conservation and the Countryside (from March 2008)
Mr P Christensen	Natural England
Mr D Crawley	Scottish Natural Heritage (from April 2007)
Professor P Doyle	Independent
Professor D Hill	Natural England
Dr I Joyce	Countryside Council for Wales (from January 2008)
Mr J Lloyd Jones	Countryside Council for Wales
Mr D Pritchard	Independent
Mr B Riddleston	Countryside Council for Wales (to December 2007)
Mr A Thin	Scottish National Heritage
Professor M Usher	Independent
Professor L Warren	Independent, Deputy Chair

The Committee comprises 14 members: a Chairman and five independent members appointed by the Secretary of State; the Chairman of the Council for Nature Conservation and the Countryside; the Chairmen or Deputy Chairmen of the Countryside Council for Wales, Natural England and Scottish Natural Heritage; and one other member from each of these bodies. The term of appointments for the Chairman and independent members is initially for three years and members may be considered for re-appointment for one further term.

Support is provided to the Joint Committee by a company limited by guarantee, JNCC Support Co, which was incorporated on 2 March 2005 (registration number 05380206).

The Committee has adopted the Guidance on Codes of Practice for Board Members of Public Bodies issued by the Cabinet Office, for the purposes of corporate governance. A Register of Interests is maintained for Joint Committee members and directors of JNCC Support Co which can be seen below.

#### JNCC Support Co – Members and Directors April 2007–March 2008

The members of the company are the Committee members, who are also non-executive Directors of the company. There are three executive Directors.

Mr A Darby	Chairman (to September 2007)
Dr P Bridgewater	Chairman (from October 2007)
Mr D Steer	Managing Director
Dr M Vincent	Director of Science
Mr M Yeo	Director of Resources and External Affairs
Professor D Ingram	Non-executive Director (to March 2008)
Dr L Blakiston Houston	Non-executive Director (to February 2008)
Mr P Casement	Non-executive Director (from March 2008)
Dr R Brown	Non-executive Director
Mr P Christensen	Non-executive Director
Professor P Doyle	Non-executive Director
Professor D Hill	Non-executive Director
Dr I Joyce	Non-executive Director (from January 2008)
Mr J Lloyd Jones	Non-executive Director
Mr D Pritchard	Non-executive Director
Mr B Riddleston	Non-executive Director (to December 2007)
Mr A Thin	Non-executive Director (from July 2007)
Professor M Usher	Non-executive Director
Professor L Warren	Non-executive Director

## Declaration of interests

### Dr L Blakiston Houston

- Chair, Council for Nature Conservation and the Countryside
- Director, Blakiston Houston Estate Co
- Director (non-executive), Sustrans
- Director, Malta Charities Ireland and Northern Ireland
- Director, Share Holiday Village
- Shareholder, Morton Hall Estate Private School, Heritage Building
- Member, National Trust
- Member, Royal Society for the Protection of Birds
- Member, Ulster Wildlife Trust
- Family interest in Loughs Agency, Londonderry

### Dr P Bridgewater

- Director, Global Garden Consulting
- Fellow, Linnaean Society of London
- Fellow, Institute of Ecology and Environmental Management
- Chartered Environmentalist, Institute of Environmental Management & Assessment

### Dr R Brown

- Council Member, Council for Nature Conservation and the Countryside
- Employed by the Department of the Environment Northern Ireland as Chairman of the Northern Ireland Biodiversity Group
- Self-employed in media/broadcasting work, giving talks/lectures, wildlife guiding at home and abroad, and occasional consultancy work
- Member, British Trust for Ornithology, National Trust, Ulster Wildlife Trust, Butterfly Conservation, Marine Conservation Society, Lcale Historical Society
- Ulster Wildlife Trust, wife is on Council

### Mr P Casement

- Chair, Council for Nature Conservation and the Countryside
- Self-employed farmer
- Member, Board of Trustees of the National Trust
- Chairman, National Trust Committee for Northern Ireland
- Member, Council of the National Trust

### Mr D Crawley

- Board Member, Scottish Natural Heritage
- Member, National Trust
- Member, National Trust for Scotland
- Member, John Muir Trust
- Chair of Audit Committee and Member of Management Board, Wales Office
- Her Majesty's Commissioner, Queen Victoria School, Dunblane
- Director and Chairman, Central Scotland Forest Trust

### Mr P Christensen

- Deputy Chairman, Natural England
- Board Member and Chair of Rural Committee, South East England Development Agency
- Board Member, Agricultural Central Trading
- Chair of Programme Committee, Defra Sustainable Livestock Production LINK
- Self-employed farmer, Kingston Hill Farm, Abingdon, Oxfordshire
- Member, National Farmers Union, Tenant Farmers Association, Royal Society for the Protection of Birds and Berks, Bucks and Oxon Wildlife Trust

### Mr A Darby

- Self-employed farmer, Kemerton Court, Tewkesbury, GL20 7HY
- Lloyds of London Underwriter through Nameco (No 222) Ltd. Membership No 54432Z

- Chairman, Fieldfare International Ecological Development plc
- District Councillor with Wychavon District Council
- Self-employed print dealer trading as Darby Bird Art
- Adviser to Esmee Fairbairn Charitable Trust for its UK Biodiversity Programme
- All farmed land under Countryside Stewardship: 65 acres at Upton Ham, Upton upon Severn, part of Upton Ham SSSI; 55 acres on Bredon Hill, part of Bredon Hill SSSI
- Trustee of the Kemerton Conservation Trust (KCT) in receipt of funds from Natural England under Aggregates Levy Sustainability Fund Grant Scheme for the management of the Kemerton Lake Nature Reserve which the KCT leases from son
- Governor of Howick Trustees Ltd, which owns an SSSI in Northumberland
- Life Fellow and Vice President, Royal Society for the Protection of Birds
- Life Member and President, Plantlife International
- Member and former regional committee member, National Trust
- Member, Herpetological Conservation Trust
- Member of the following Wildlife Trusts – Brecknock, Gloucestershire, and Worcestershire
- Member, Wildfowl and Wetlands Trust, the British Trust for Ornithology and BirdLife International
- Member, Country Land and Business Association
- Member, Game Conservancy and the Campaign to Protect Rural England
- Member, Farming and Wildlife Advisory Group, the Royal Agricultural Society of England, the Red Poll Cattle Society and the Rare Breeds Survival Trust
- Member, National Farmers Union
- Member, Friends of Westonbirt Arboretum

### Professor P Doyle

Self-employed:

- Geologist consultant, contracted to HM Revenue & Customs for aggregates work
- Editor for Blackwells Ltd, Oxford, editing 'Geology Today' magazine
- Freelance TV consultant, working on geological projects
- Education consultant, working for University of Greenwich and London South Bank University
- Author of books and articles
- Chairman, Geoconservation Commission, Geological Society of London
- Chair, Greater London Regionally Important Geological/geomorphological Sites Group

### Professor D Hill

- Board Member, Natural England
- Chief Executive, David Hill Ecology & Environment
- Chairman, Environment Bank
- Non-executive Director, Thomson Ecology
- Director, Yorkshire Dales Rivers Trust
- Member, British Trust for Ornithology
- Member, National Trust
- Member, Royal Society for the Protection of Birds

### Professor D Ingram

- Honorary Professor and Adviser on the Public Understanding of Science, University of Edinburgh
- Honorary Professor, Glasgow University
- Self-employed author of biological and horticultural books (Blackwell Scientific, Harper-Collins, Cambridge University Press, Kluwer, Royal Horticultural Society, etc.)
- Member, Economic and Social Research Council Genomics Forum Advisory Committee
- Visiting Professor and Chair, Research Advisory Committee, Myerscough College
- Programme Convenor, Royal Society of Edinburgh
- Chairman, Science and Society Steering Group, Royal Society of Edinburgh

- Fellow, Royal Society of Edinburgh
- Fellow, Royal College of Physicians, Edinburgh
- Honorary Fellow, Royal Scottish Geographical Society
- Honorary Fellow, Royal Botanic Garden, Edinburgh
- Honorary Fellow, Downing College, Cambridge
- Honorary Fellow, Worcester College, Oxford
- Honorary Fellow, Myerscough College, Preston
- Honorary Member, British Society of Plant Pathology
- Honorary Professor, Institute of Biomedical and Life Sciences, University of Glasgow
- Honorary Fellow, St Catherine's College, Cambridge
- Advisory Board Member and Senior-Visiting Fellow, SERC / University of Edinburgh Genomics Forum

#### **Dr I Joyce**

- Council Member, Countryside Council for Wales
- Self-employed farmer
- 70 acres of agricultural land subject to Tir Cynnal agri-environment agreement

#### **Mr J Lloyd Jones**

- Chair, Countryside Council for Wales
- Member, Strategic Advisory Committee, Rural Economy and Land Use programme
- Member, National Trust Land Use Panel
- Member, Wales Woodland Strategy Advisory Panel
- Board Member and Chair of Finance, Audit and General Purposes Committee, Institute of Grassland and Environmental Research
- Lay representative, Disciplinary Hearings Council for the Inns of Court
- Member, Royal Society for the Protection of Birds
- Farmer
- Hendy Farm in Tir Gofal Scheme
- Member, National Farmers Union

#### **Mr D Pritchard**

- Self-employed consultant in environmental policy and contemporary arts and cultural heritage
- Director, Wetlands International Association of Members
- Vice Chair, Bedford Creative Arts
- International Policy Adviser (part-time), Royal Society for the Protection of Birds
- Member, IUCN Task Force on Cultural and Spiritual Values of Protected Areas
- Member, Ramsar Convention Culture Working Group and Scientific and Technical Review Panel
- Member, Northumberland Wildlife Trust
- Member, Woodland Trust
- Member, University College Falmouth, Research in Art, Nature and Environment Group
- Member, Landscape and Arts Network
- Member, Steering Group of Chartered Institution of Water and Environmental Management Arts and Environment programme
- Member, Steering Group of Forestry Commission Grizedale Forest arts programme

#### **Mr B Riddleston**

- Council Member, Countryside Council for Wales
- Trustee, Royal Society for the Protection of Birds
- Member, Glas Cymru
- Director, RSPB Trading Co
- Member, Gwent Wildlife Trust
- Shareholder, Centrica plc

#### **Mr A Thin**

- Chair, Scottish Natural Heritage
- Vice Chair, Munlochy Parent Council

- Trustee, Munlochy Educational Trust and James Thin Charitable Trust
- Life Member, Scottish Youth Hostel Association
- Member, John Muir Trust and Scottish Wildlife Trust

#### **Professor M Usher**

- Principal Editor, "Ecology, Biodiversity and Conservation" series of books, Cambridge University Press
- International Fellow, Durrell Wildlife Conservation Trust, Jersey
- Fellow and Chartered Biologist, Institute of Biology
- Expert, Council of Europe
- Trustee, Royal Botanic Garden, Edinburgh
- Trustee, Woodland Trust
- Fellow, Royal Society of Edinburgh
- External Adviser, Irish Environmental Protection Agency
- Chairman of Programme 3 Group, Scottish Government Environment & Rural Affairs Department
- Member, Botanical Society of the British Isles
- Member, British Arachnological Society
- Member, British Ecological Society
- Fellow, Royal Entomological Society
- Member, Scottish Wildlife Trust
- Member, CADW (Heritage in Wales)
- Member, National Trust
- Honorary Professor, Universities of Aberdeen, Edinburgh and Stirling

#### **Professor L Warren**

- Member, Royal Commission on Environmental Pollution
- Board Member, British Geological Survey (NERC)
- Board Member, Environment Agency
- Member, Committee on Radioactive Waste Management
- Trustee, Field Studies Council
- Trustee, Association of River Trusts
- Trustee, West and South Wales Wildlife Trust
- Consultant on marine nature conservation
- Associate Consultant, Integrated Decision Management
- British Institute for Geological Conservation, husband is treasurer
- Part-time teaching at Aberystwyth University

## JNCC offices

#### **Headquarters**

Joint Nature Conservation Committee,  
Monkstone House, City Road, Peterborough PE1 1JY  
Tel: +44 (0)1733 562626 Fax: +44 (0)1733 555948  
Web: [www.jncc.gov.uk](http://www.jncc.gov.uk)

#### **Aberdeen office**

Joint Nature Conservation Committee, Dunnet House,  
7 Thistle Place, Aberdeen AB10 1UZ  
Tel: +44 (0)1224 655704 Fax: +44 (0)1224 621488

#### **Brussels office**

UK Nature & Landscape Office,  
Quai au Foin 55 / Hooikaai 55, B 1000 Bruxelles, Belgium  
Tel: +32 (0) 27 38 74 80/81 Fax: +32 (0) 27 38 74 87

## Staff employed by JNCC Support Co 2007/2008

The number of staff working at the JNCC Support Co at 31 March 2008 was 135. This comprised 118 permanent staff, 16 fixed-term staff and 1 casual member of staff. Included in the total of fixed-term staff are the Chairman and five independent members of the Committee who are employed by Defra and paid through JNCC payroll.

## Senior JNCC staff 2007/2008

### Executive Management Board

Managing Director	Mr D Steer
Director of Science	Dr M Vincent
Director of Resources and External Affairs	Mr M Yeo

### Programme Leaders

Global Advice	Dr V Fleming
Overseas Territories and Crown Dependencies	Mr W Jones
UK's Global Impacts	Dr A Weighell
European Advice	Dr S Gibson
Sustainability Advice	Dr D Mortimer
Conservation Advice	Dr I McLean
Marine Management Advice	Mr M Tasker
Marine Mapping and Area Protection	Mr D Connor
Standard and Target Setting	Dr I McLean
Surveillance and Monitoring	Mr L Way
Access to Information	Dr S Wilkinson
Policy-Relevant Information and Reporting	Mr P Rose
Support Services	Mr B Lawrence

## Freedom of Information Act and Environmental Information Regulations

### General

JNCC always endeavours to provide information in a timely, accurate and helpful manner. In keeping with this ethos we embrace the conventions laid down in the Freedom of Information Act 2000, the Environmental Information Regulations 2004 and the Data Protection Act 1998. This legislation has created a new system of fully enforceable rights of access to information held by public authorities. These rights apply to all information no matter how recent or old, or who the information is held by. They signal recognition of, and commitment to, the public interest in openness about government. The purpose of the Acts is to make public bodies, such as JNCC, more transparent and accountable and to show how they perform their duties.

### How we comply

JNCC aims to make information available on request unless there is a compelling reason not to. That is to say we will make every effort to comply unless doing so would involve us breaching another legal obligation, based on confidentiality or commercial prejudice. To this end JNCC is committed to:

- proactively disseminate information;
- provide advice and assistance to persons making requests for information;
- make information available to any person who requests it within 20 working days. If a request is both voluminous and complex the deadline may be extended to within 40 working days, in which case we will inform the requestor of complications; and
- refuse only in accordance with the limited exceptions available, giving reasons and details of the mechanisms available for reconsideration and appeal.

One request for information was received during the year specifically citing the Environmental Information Regulations. Two requests were answered under the Freedom of Information Act. Three requests were answered under the Data Protection Act. All requests received were responded to in accordance with our service standards (see below).

JNCC publishes a range of information as research reports, books and leaflets. A publications catalogue is available from Communications Team, JNCC, Monkstone House, City Road, Peterborough PE1 1JY, tel: 01733 562626, fax: 01733 555948, email: communications@jncc.gov.uk.

Our book distributor is NHBS Ltd, 2–3 Wills Road, Totnes, Devon TQ9 5XN, tel: 01803 865913, fax: 01803 865280, www.nhbs.com or www.nhbs.co.uk.

In addition, much information can be freely accessed on our website (www.jncc.gov.uk), and those that we host for other bodies, for example the UK Biodiversity Partnership (www.ukbap.org.uk), the Convention on Biological Diversity Clearing House Mechanism (www.chm-cbd.net.uk), Mapping European Seabed Habitats (www.searchMESH.net) and the Land Use Policy Group (www.lupg.org.uk).

### Prompt payment code

JNCC implements the CBI's 'Prompt Payers' guidelines and our policy is to ensure, as far as possible, that all payments are made by the due date. (Further details can be found under the heading "Payment of creditors" on page 65.)

## Service standards

### General

Staff will provide an efficient and friendly service. The operating language will normally be English.

### Office hours

Monkstone House and Dunnet House will be open from 9am–5pm Monday–Thursday and 9am–4.30pm on Friday. Outside these hours and on public holidays an answering machine service will operate.

### Telephone calls

Telephone calls will be answered promptly and courteously. Staff will answer with their name and endeavour to respond to the call satisfactorily or take prompt action to achieve this.

### Correspondence and information

A full reply to correspondence will be provided within requested deadlines and, otherwise, within 20 working days. If more time is needed before a full response can be made, a date for this will be agreed with the correspondent. JNCC is committed to the policy of open government, and to facilitating access to our information as required by law.

### Convention on International Trade in Endangered Species

We will provide on-line advice to Defra on approximately 20,000 licence applications per annum to agreed service standards (90% within five working days, 95% of priority applications within three working days) seeking to ensure that no species of wild fauna becomes or remains subject to unsustainable exploitation because of international trade involving the UK.

### Publications

Reports of commissioned work will be disseminated in a publicly available form within six months of acceptance of the texts from the authors. Proceedings of seminars and conferences will be published within nine months of the event. Book volumes will be published within one year of acceptance of the text. Leaflets and research reports will be despatched as soon as possible and, in any event, within ten working days of receipt of a request.

### Invoices

All invoices from suppliers of accepted goods and services will be paid within any discount period and, in any event, by the due date.

### Complaints

If you feel you have not received the promised level of service from JNCC, please raise the matter in the first instance with the person who provided the service, who will respond within ten working days. If your complaint is not resolved satisfactorily please contact the Business Unit, who will respond within ten working days. In the last resort a complainant can seek redress through their Member of Parliament and the Parliamentary Commissioner for Administration (Ombudsman).

## > Audited accounts

### Foreword

#### History and statutory background

The Joint Nature Conservation Committee (JNCC) is the statutory adviser to Government on UK and international nature conservation. Its work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems.

JNCC delivers the UK and international responsibilities of the Council for Nature Conservation and the Countryside, the Countryside Council for Wales, Natural England, and Scottish Natural Heritage.

JNCC, originally established under the Environmental Protection Act 1990, was reconstituted by the Natural Environment and Rural Communities Act 2006. Support is provided to the JNCC by a company limited by guarantee (JNCC Support Co) that the Committee established in 2005.

#### Funding

The total budget for JNCC is set each year by Ministers of the Department for Environment, Food and Rural Affairs after consultation and in agreement with their Scottish, Welsh and Northern Irish colleagues.

The budget comprises two parts: those 'reserved' matters funded by the Department for Environment, Food and Rural Affairs; and all other work funded through the Countryside Council for Wales, Natural England and Scottish Natural Heritage (the GB conservation bodies) and the Department of the Environment in Northern Ireland.

The Department for Environment, Food and Rural Affairs and devolved administrations ring-fence the relevant element of grant in aid to their respective funding bodies. Any grant in aid provided by a Department/administration for the year in question will be voted in the Department's/administration's Estimate and will be subject to Parliamentary control.

Funding from other sources, which is usually linked to specific projects, is detailed in the accounts.

#### Results and appropriations

In conducting its activities the Committee complies with the guidance laid down in its Financial Memorandum which came into effect on 1 April 2005. These financial statements relate to the year ended 31 March 2008 during which the revenue expenditure of the Committee totalled £9,641,000. For the same period income amounted to £1,667,000, resulting in an operating deficit for the year of £7,974,000. Following adjustment for interest receivable of £25,000, the deficit for the financial year transferred to the retained earnings reserve was £7,851,000. This was funded by revenue grant in aid of £7,873,000 which combined with a retained earnings reserve of £47,000 brought forward from the previous financial year, gives a retained earnings reserve carried forward of £69,000.

Included in the gross income and expenditure within the operating cost statement are transfers which were made to and from provisions and reserves. A total of £98,000 was transferred from the deferred government grant account to the operating cost account in 2007/08 to cover in-year depreciation and the release of unexpended depreciation.

#### Fixed assets

In 2007/08 the Committee spent £7,000 on improvements to leasehold premises, £10,000 on computer equipment and £23,000 on software licences.

#### Payment of creditors

JNCC follows the principles of the Better Payment Practice Code, and the policy is to ensure that all payments are made by the due date. This policy is known throughout the organisation and there is a formal complaints procedure to enable suppliers' complaints to be dealt with very quickly.

92% of invoices were paid within the due date in 2007/2008; this figure is unchanged from the previous year.

#### Review of activities

During 2007/08 the JNCC undertook a wide-ranging programme of work resulting in considerable contributions in the area of national and international conservation. The main body of the Annual Report details key achievements realised in 2007/08, whilst measures of performance against specific targets can be seen immediately following the Financial Statements.

#### Corporate governance

The governance arrangements of the JNCC Support Co are incorporated within the Statement on Internal Control.

#### Audit

The information contained within these accounts is in accordance with the statutory financial statements of the JNCC Support Company. The External Auditors of the Company (Moore Stephens) have reviewed these accounts and they confirm that they are consistent with the appropriate entries in the statutory financial statement which they have audited.

## JNCC Support Co remuneration report

#### Remuneration policy

The remuneration for the Chairman and independent members is set centrally by Defra.

The remuneration of the Managing Director is reviewed regularly against the advice issued by the Review Body on Senior Salaries. Any proposed changes are then subject to the approval of Defra.

All pay awards for staff below Grade 5 (i.e. all staff except for the Managing Director) have to conform to the annual Civil Service Pay Guidance document issued by HM Treasury. This guidance document forms part of the pay remit process, and is intended to ensure that pay awards are affordable, offer value for money, and meet the needs of individual businesses. As part of this process the JNCC has to submit its recommended pay award to Defra, who have delegated authority to approve pay remits that conform to the Treasury guidance. Pay remits that do not conform to the guidance require HM Treasury approval.

The JNCC applies a number of reward principles which aim to:

- meet business needs of the organisation;
- be affordable for the organisation in the short and long-term;
- provide a pay structure which is sustainable in the longer-term;
- reward, retain and motivate staff;
- support equal pay;
- be fair and transparent;
- ensure that appropriately skilled and experienced staff can be recruited;
- recognise and reward good performance;
- offer comparable salary levels with other relative workforce groups.

#### Contracts of employment

Appointments are made in line with the Civil Service Commissioners Recruitment Code, which requires appointment to be on merit on the basis of fair and open competition but also includes the circumstances when appointments may otherwise be made.

Unless otherwise stated below, the officials covered by this report hold appointments which are open-ended until they reach the normal retiring age of 65. Early termination, other than for misconduct, would result in the individual receiving compensation as set out in the Civil Service Compensation Scheme.

Mr A Darby was appointed on a three-year contract commencing on 1 October 2004.

Prof D Ingram was re-appointed on a three-year contract commencing on 1 April 2005.

Prof P Doyle was re-appointed on a three-year contract commencing on 1 April 2006.

Prof L Warren was appointed on a three-year contract commencing on 1 April 2006.

Mr D Pritchard was appointed on a three-year contract commencing on 1 October 2006.

Prof M Usher was appointed on a three-year contract commencing on 1 October 2006.

Dr P Bridgewater was appointed on a three-year contract commencing on 1 October 2007.

Further information about the work of the Civil Service Commissioners can be found at [www.civilservicecommissioners.gov.uk](http://www.civilservicecommissioners.gov.uk).

## Salary and pension entitlements

The following sections provide details of the remuneration and pension interests of the most senior JNCC staff, and those of the Chairman and independent members of the Committee. Members sponsored by the country conservation bodies are remunerated directly by those bodies. JNCC is advised of the salaries of the Committee members by the Department for Environment, Food and Rural Affairs.

### Salary

'Salary' includes gross salary; performance pay or bonuses, and any allowance, to the extent that it is subject to UK taxation. This report is based on payments made by the JNCC Support Co and thus recorded in these accounts.

### Benefits in kind

The monetary value of benefits in kind covers any benefits provided by the employer and treated by HM Revenue & Customs as a taxable emolument. At the present time no employees of the JNCC Support Co are in receipt of taxable benefits.

	Salary 2007-08, including performance pay	Benefits in kind 2007-08 (rounded to nearest £100)	Salary 2006-07, including performance pay	Benefits in kind 2006-07 (rounded to nearest £100)	Total accrued pension at age 60 at 31/03/07 and related lump sum	Real increase in pension and related lump sum at age 60	CETV at 31/03/08	CETV at 31/03/07*	Real increase in CETV	Time commitment (days per year)
	£000	£000	£000	£000	£000	£000	£000	£000	£000	
<b>Committee Members:</b>										
<b>Chairman</b>										
Mr A Darby 01.10.04 to 30.09.07	15-20	n/a	35-40	n/a	n/a	n/a	n/a	n/a	n/a	52
Dr P Bridgewater 01.10.07 to 30.09.10	15-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52
<b>Independent members</b>										
Prof D Ingram 01.04.02 to 31.03.08	5-10	n/a	5-10	n/a	n/a	n/a	n/a	n/a	n/a	30
Prof P Doyle 01.04.03 to 31.03.09	5-10	n/a	5-10	n/a	n/a	n/a	n/a	n/a	n/a	30
Prof L Warren 01.04.06 to 31.03.09	5-10	n/a	5-10	n/a	n/a	n/a	n/a	n/a	n/a	30
Mr D Pritchard 07.12.06 to 30.11.09	5-10	n/a	0-5	n/a	n/a	n/a	n/a	n/a	n/a	30
Prof M Usher 01.12.06 to 30.11.09	5-10	n/a	0-5	n/a	n/a	n/a	n/a	n/a	n/a	30
<b>Senior Staff:</b>										
<b>Managing Director</b>										
Mr D Steer	85-90	n/a	70-75	n/a	40-45 plus lump sum of 120-125	5-7.5 plus lump sum of 15-17.5	949	723	127	n/a
<b>Other Directors</b>										
Dr M Vincent	55-60	n/a	55-60	n/a	25-30 plus lump sum of 80-85	0-2.5 plus lump sum of 0-2.5	693	607	3	n/a
Mr M Yeo	45-50	n/a	45-50	n/a	10-15	0-2.5	181	146	9	n/a

\* Due to certain factors being incorrect in last year's CETV calculator there may be a slight difference between the final period CETV for 2006/07 and the start of period CETV for 2007/08.

### Civil service pensions

The pension benefits for the Chairman are provided broadly by analogy with the Civil Service Pension scheme. This is because the Chairman cannot be pensioned in the same scheme as staff but may have access to similar types of benefits. The independent members do not receive pension benefits.

Pension benefits for staff are provided through the Civil Service pension arrangements. From 30 July 2007, civil servants may be in one of four defined benefit schemes; either a 'final salary' scheme (classic, premium or classic plus); or a 'whole career' scheme (nuvos). These statutory arrangements are unfunded with the cost of benefits met by monies voted by Parliament each year. Pensions payable under classic, premium, classic plus and nuvos are increased annually in line with changes in the Retail Prices Index (RPI). Members joining from October 2002 may opt for either the appropriate defined benefit arrangement or a good quality 'money purchase' stakeholder pension with a significant employer contribution (partnership pension account).

Employee contributions are set at the rate of 1.5% of pensionable earnings for classic and 3.5% for premium, classic plus and nuvos. Benefits in classic accrue at the rate of 1/80th of final pensionable earnings for each year of service. In addition, a lump sum equivalent to three years' pension is payable on retirement. For premium, benefits accrue at the rate of 1/60th of final pensionable earnings for each year of service. Unlike classic, there is no automatic lump sum. Classic plus is essentially a hybrid with benefits in respect of service before 1 October 2002 calculated broadly as per classic and benefits for service from October 2002 calculated as in premium. In nuvos a member builds up a pension based on his pensionable earnings during their period of scheme membership. At the end of the scheme year (31 March) the member's earned pension account is credited with 2.3% of their pensionable earnings in that scheme year and the accrued pension is uprated in line with RPI. In all cases members may opt to give up (commute) pension for lump sum up to the limits set by the Finance Act 2004.

The partnership pension account is a stakeholder pension arrangement. The employer makes a basic contribution of between 3% and 12.5% (depending on the age of the member) into a stakeholder pension product chosen by the employee from a panel of three providers. The employee does not have to contribute but where they do make contributions, the employer will match these up to a limit of 3% of pensionable salary (in addition to the employer's basic contribution). Employers also contribute a further 0.8% of pensionable salary to cover the cost of centrally-provided risk benefit cover (death in service and ill health retirement).

The accrued pension quoted is the pension the member is entitled to receive when they reach pension age, or immediately on ceasing to be an active member of the scheme if they are already at or over pension age. Pension age is 60 for members of classic, premium and classic plus and 65 for members of nuvos.

Further details about the Civil Service pension arrangements can be found at the website [www.civilservice-pensions.gov.uk](http://www.civilservice-pensions.gov.uk).

### Cash Equivalent Transfer Values

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme.

A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies.

The figures include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the Civil Service pension arrangements. They also include any additional pension benefit accrued to the member as a result of their purchasing additional pension benefits at their own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries and do not take account of any actual or potential reduction to benefits resulting from Lifetime Allowance Tax which may be due when pension benefits are drawn.

### Real increase in CETV

This reflects the increase in CETV effectively funded by the employer. It does not include the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period.

## > Statement on Internal Control

### 1 Scope of responsibility

As Managing Director, I have responsibility for maintaining a sound system of internal control for the JNCC and its support company that supports the achievement of the JNCC's aims and objectives whilst safeguarding the public funds and assets for which I am responsible. This is in accordance with the statement of accounting responsibilities placed upon me by the Chief Executive of Natural England on her own behalf and that of the Accounting Officers of Scottish Natural Heritage, the Countryside Council for Wales and the Department of the Environment (Northern Ireland) in accordance with the responsibilities assigned to them in Managing Public Money.

### 2 Review of effectiveness

As Managing Director, I also have responsibility for reviewing the effectiveness of the system of internal control. My review of the effectiveness of the system of internal control is informed by the work of the internal auditors and the executive directors within the JNCC Support Co, all of whom have responsibility for the development and maintenance of the internal control framework, and comments made by the external auditors in their management letter and other reports. I have been advised on the implications of the result of my review of the effectiveness of the system of internal control by the Company Board and the Audit and Risk Management Committee. A plan to address weaknesses and ensure continuous improvement of the system is in place.

### 3 The purpose of the system of internal control

The system of internal control is designed to manage risk to a reasonable level rather than to eliminate all risk of failure to achieve aims and objectives; it can therefore only provide reasonable and not absolute assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify and prioritise the risks to the achievement of the JNCC's policies, aims and objectives, to evaluate the likelihood of those risks being realised and the impact should they be realised, and to manage them efficiently, effectively and economically. The system of internal control has been in place in the JNCC for the year ended 31 March 2008 and up to the date of approval of the annual report and accounts, and accords with Treasury guidance.

### 4 Capacity to handle risk

#### 4.1 Leadership

Responsibilities relate to me as analogous Accounting Officer. A risk management strategy is in place, which outlines how I and my Executive Management Board colleagues require the organisation to manage risk. The Executive Management Board is committed to the practice and principles of effective risk management throughout the organisation.

#### 4.2 Embedding risk management

The risk management strategy entails embedding the risk management process into each part of the management, planning, delivery and reporting process. New guidance relating to high-risk/high-cost projects has been produced and this together with a proposed training programme will help towards meeting the organisation's requirements on project and risk management.

#### 4.3 Strategy

JNCC's risk management strategy has been drawn up and implemented in line with Treasury guidance. Key elements of the strategy include:

- maintenance of organisation-wide risk registers, comprising high-level corporate risks, high inherent risks and medium/low risks, that is comprehensively reviewed on an annual basis;
- assignment of risk owners to each risk (members of the Executive Management Board for corporate risks, appropriate senior managers for high inherent and medium/low risks);
- quarterly reports from managers on the steps they are taking to manage risks in their areas of responsibility, including reports on the effectiveness of controls in place to manage the risks, and progress reports on implementing future controls;
- monthly discussion by the Executive Management Board to identify and keep up to date the record of risks facing the organisation;
- continual recognition of risk management in high-risk/high-cost projects, through the development of project-specific risk registers and control measures;
- consideration of risk at the project proposal stage.

The JNCC takes a balanced approach to determining its risk appetite, by accepting that major risks affecting the organisation must be controlled, but that exposure to some risks is necessary to enable the effective delivery of its objectives. The risk register specifically addresses the risk of delays to decision-making and missed opportunities through excessive caution. During 2007/08, the main risk priorities for the JNCC related to:

- a change in the functions, composition or resourcing arrangements of JNCC and/or company arising from statutory/political changes in the UK conservation bodies or sponsor bodies;
- a mismatch between Corporate Plan and funding provided by Government;
- inappropriate decisions, missed opportunities and failure to meet legal obligations through inability to retrieve information easily;
- lack of staff/stakeholder understanding, support and commitment to JNCC's strategy;
- other Government bodies taking on functions of national and international significance without agreement of the Joint Committee;
- staff number, structure and competencies do not allow JNCC to fulfil its role;
- not being aligned to existing/developing Government priorities; and
- significant loss of co-operation between JNCC and one or more partner organisations.

### 5 Financial control

The JNCC's system of internal financial control is based on a framework of regular management information, administration procedures including the segregation of duties, and a system of delegation and accountability. In particular, it includes:

- a Financial Management Information System;
- comprehensive budgeting systems with an annual budget which is reviewed each quarter and any amendments are agreed by the Executive Management Board;
- regular reviews by the Executive Management Board of periodic and annual financial reports which indicate financial performance against the forecasts;
- anti-fraud and corruption policy.

## 6 Corporate governance

Control of the process for maintaining and reviewing the effectiveness of the system of internal control is exercised by the following:

### 6.1 The Joint Nature Conservation Committee

Members of the Joint Committee have overall responsibility for fulfilling its statutory functions and promoting the efficient and effective use of resources by the JNCC. The Joint Committee reviews annual reports from the Audit and Risk Management Committee on the JNCC's and company's control and risk management. It also has responsibility for submitting to the Secretary of State and Ministers in Scotland, Wales and Northern Ireland, corporate and business plans and JNCC's annual report and accounts. All Committee papers are placed within a risk context.

The appointment and conduct of Joint Committee Members are in accordance with relevant codes of practice. The Joint Committee meets quarterly. An Accountability Framework Document, Management Statement and Financial Memorandum set out the respective roles, responsibilities, duties and powers relevant to the exercise of the functions of the JNCC, Defra, the devolved administrations, the Department of the Environment in Northern Ireland and the UK conservation bodies (Natural England, Scottish Natural Heritage, the Countryside Council for Wales and the Council for Nature Conservation and the Countryside).

### 6.2 The Company Board

The Board has overall responsibility for discharging the Joint Committee's corporate and business plans and for maintaining an effective framework of corporate governance to ensure that the Joint Committee fulfils its responsibilities for promoting the efficient and effective use of staff and other resources by the JNCC. This includes maintaining effective systems of risk management and audit, financial management and planning and monitoring.

Members of the Board comprise the members of the Joint Committee plus the three Executive Directors. The Board meets quarterly.

### 6.3 The Audit and Risk Management Committee

The Audit and Risk Management Committee is a sub-committee of the Company Board and has an exclusively non-executive membership, with two external members. The Audit and Risk Management Committee is accountable to the Board and to the Joint Committee. Its role is to support the Board in their responsibilities for issues of risk, control and governance and associated issues. The Committee meets quarterly.

### 6.4 Executive Management Board

The Executive Management Board is a sub-committee of the Company Board. It comprises the Managing Director and two executive directors, and meets monthly. The Executive Management Board has responsibility for directing and managing the affairs of the company to deliver corporate and business plans within a framework of effective controls. The Executive Management Board has responsibility for managing, reviewing and assessing the corporate risks of the organisation.

A schedule of delegations sets out the way in which the Joint Committee's responsibilities have been delegated to the above groups and, where appropriate, further delegated to other management groups and staff.

### 6.5 Internal Audit

Internal Audit of the JNCC and JNCC Support Co is carried out by Deloitte & Touche Public Sector Internal Audit Limited. They submit regular reports in accordance with the requirements of Government Internal Audit Standards. The reports include the assurance levels for each system on the adequacy and effectiveness of the JNCC Support Company's system of internal control together with recommendations for improvement.

## 7 Strategy, planning and performance management

JNCC is the statutory adviser to Government on UK and international nature conservation. Its work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems.

In 2004, the Joint Committee established a vision and strategy, comprising a mission and strategic objectives.

Biennially the JNCC produces a corporate plan covering three years ahead which sets out its targets and associated budgets (indicative for years two and three). The corporate plan is produced in consultation with Defra, the devolved administrations, the Department of the Environment (Northern Ireland) and the UK conservation bodies. For the second year of the corporate plan a business plan amplifying the relevant year of the corporate plan is developed in the same way. Corporate and business plans seek to enable the JNCC to deliver its strategy. The vision, strategy and corporate plans are published on JNCC's website.

Performance against targets and budgets is monitored throughout the organisation and by the Executive Management Board. Quarterly reports are made to the company Board.

## 8 Project management

The JNCC has had no projects of a scale requiring the Office of Government Commerce mandatory programme and project management controls to be in place. However, projects that are considered to carry significant risks in relation to JNCC's budget, objectives and wider obligations are subject to relevant project management methodology.

## 9 Change management

Each year JNCC establishes a corporate change programme to tune the amount of developmental work to JNCC's capacity for change. Risk registers and audit reports are used to inform prioritisation of potential projects and resource availability informs scheduling. The following projects were undertaken under the 2007–08 programme: high-level programme reviews, external communications strategy, Aberdeen and Brussels office relocations, review of administrative support, and environmental management. The change programme is regularly updated, approved and overseen by the Executive Management Board.

## 10 Data security

Due to the nature of JNCC's business it processes minimal personal data as defined by the Data Protection Act apart from that relating to its role as an employer. JNCC has in place an IT Security and Privacy Policy setting out the organisation's and individuals' responsibilities for the security of data and also has a range of measures in place to protect physical records. During 2007–08 there were no known breaches of the policy or losses of personal data.

### Mr Deryck Steer

Managing Director, June 2008

## > JNCC financial statements

### Operating cost statement for the year to 31 March 2008

	Notes	07/08 £000	07/08 £000	06/07 £000
<b>Gross income</b>				
European Union funds		464		722
Income from activities	3	1,203		1,219
		<b>1,667</b>		<b>1,941</b>
<b>Expenditure</b>				
Staff costs	4.1	4,591		4,196
Conservation support	5	3,338		3,190
Other operating costs	6	1,401		1,242
Information and publicity	7	213		214
Depreciation	8.1, 8.2	98		123
Impairment of asset values	8.1, 8.2	0		(10)
		<b>9,641</b>		<b>8,955</b>
<b>Surplus/(deficit) on operating activities</b>			<b>(7,974)</b>	<b>(7,014)</b>
Profit/(loss) on sale of fixed assets			0	2
Interest receivable			25	19
Notional costs	9		(15)	(15)
<b>Surplus/(deficit) on operating activities</b>			<b>(7,964)</b>	<b>(7,008)</b>
Add back notional costs	9		15	15
Transfer from government grant reserve	10		98	117
<b>Retained surplus/(deficit) for the year</b>			<b>(7,851)</b>	<b>(6,876)</b>

All income and expenditure is derived solely from continuing operations. There have been no material acquisitions or disposals in the year.

### Statement of total recognised gains and losses

	Notes	07/08 £000	06/07 £000
Operating activities			
Surplus/(deficit) for the financial year		(7,851)	(6,876)
Grant for capital assets	10	40	140
Net (loss)/gain on revaluation of assets	10	9	0
Transfer from government grant reserve	10	(98)	(117)
<b>Net cash inflow/(outflow) from operating activities (see note 1)</b>		<b>(7,900)</b>	<b>(6,853)</b>

The accounting policies and notes on pages 72–76 form part of these financial statements.

### Balance sheet as at 31 March 2008

	Notes	07/08 £000	07/08 £000	06/07 £000
<b>Fixed assets</b>				
Intangible assets	8.1		85	87
Tangible assets	8.2		249	296
			<b>334</b>	<b>383</b>
<b>Current assets</b>				
Stocks	12	62		78
Debtors	13	945		1,064
Cash at bank and in hand		272		436
		<b>1,279</b>		<b>1,578</b>
<b>Creditors</b>				
Amounts falling due within one year	14	(1,209)		(1,528)
Net current assets			70	50
<b>Total assets less current liabilities</b>			<b>404</b>	<b>433</b>
<b>Provision for liabilities</b>				
Provision for pension costs	15		(1)	(3)
<b>Total assets less all liabilities</b>			<b>403</b>	<b>430</b>
<b>Capital and reserves</b>				
Government grant reserve	10		334	383
Retained earnings	11		69	47
			<b>403</b>	<b>430</b>

## Cashflow statement for the year ended 31 March 2008

Notes	07/08	06/07
	£000	£000
<b>Operating activities</b>		
Grant in aid received	7,873	6,837
Receipts	1,784	2,642
Payments	(9,846)	(9,100)
<b>Net cash inflow/(outflow) from operating activities (see note 1)</b>	<b>(189)</b>	<b>379</b>
<b>Returns on investment</b>		
Interest received	25	19
Capital expenditure		
Payments to acquire fixed assets	(40)	(140)
Proceeds from the sale of fixed assets	0	6
<b>Net cash inflow/(outflow) before financing</b>	<b>(204)</b>	<b>264</b>
<b>Financing</b>		
Government grants received and applied to the purchase of fixed assets	40	140
<b>Increase/(decrease) in cash and cash equivalents (see note 2)</b>	<b>(164)</b>	<b>404</b>

## Note 1 to the cashflow statement

Reconciliation of operating surplus to net cash inflow/(outflow) from operating activities

	07/08	06/07
	£000	£000
Operating surplus/(deficit)	(7,974)	(7,014)
Grant in aid received	7,873	6,837
Depreciation charge	98	123
Impairment of asset values	0	(10)
(Increase)/decrease in stocks	16	11
(Increase)/decrease in debtors	119	700
Increase/(decrease) in creditors	(319)	(269)
Increase in pension provision	(2)	1
<b>Net cash inflow/(outflow) from operating activities</b>	<b>(189)</b>	<b>379</b>

## Note 2 to the cashflow statement

Reconciliation of net cashflow to movement in net funds

	At 1 April 2007	Cashflows £000	At 1 April 2008 £000
<b>Cash at bank and in hand</b>	<b>436</b>	<b>(164)</b>	<b>272</b>

# > Notes to the financial statements

## 1 Statement of accounting policies

### Basis of accounting

1.1

- i) The financial statements are intended, without limiting the information given, to meet the requirements of the Companies Act 1985 and 1989 and the Statements of Standard Accounting Practice and Financial Reporting Standards issued or approved by the Accounting Standards Board, insofar as these requirements are appropriate. These accounts have been assembled in accordance with guidance provided by the 2007/08 Government Financial Reporting Manual (FRM).
- ii) The financial statements have been prepared under the historical cost convention, modified to account for the revaluation of fixed assets. Revaluations of fixed assets are taken to a government grant reserve.

1.2 The Joint Nature Conservation Committee is not a body corporate and cannot enter into any contracts or liabilities in its own right. All such commitments are entered into by the JNCC Support Co on its behalf. Grant in aid funding is provided by the three GB conservation bodies, the Department for Environment, Food and Rural Affairs and the Department of the Environment in Northern Ireland.

### Fixed assets and depreciation

1.3 Depreciation is provided on all tangible and intangible fixed assets at rates calculated to write off the cost or valuation of each asset evenly over its expected useful life as follows:

- Improvement to leasehold properties: depreciated over life of individual leases
  - Computer equipment: 5 years
  - Other equipment: 5 to 10 years
  - Software licences: 5 years
- i) Improvements to leasehold properties have been valued at depreciated historical cost and, where material, values are updated annually using indices for buildings and works contained within the Price Index Numbers for Current Cost Accounting published by the Office for National Statistics.
  - ii) Computer equipment and furniture have been valued at depreciated historical cost and, where material, values are updated annually using Price Index Numbers for Current Cost Accounting published by the Office for National Statistics.
  - iii) Other equipment has been valued at depreciated historical cost and, where material, values are updated annually using Price Index Numbers for Current Cost Accounting published by the Office for National Statistics.
  - iv) Intangible assets in the form of software licences have been valued at depreciated historical cost and, where material, values are updated annually using Price Index Numbers for Current Cost Accounting published by the Office for National Statistics.
  - v) Fixed assets costing less than £2,000 are charged to the operating cost statement in the year of purchase.

### Stock valuation

1.4 Stocks are valued using the lower of cost or net realisable value. The stock valuation is adjusted for obsolete stock, which is considered to be those stocks with levels of over five years worth of sales remaining and where it is considered unlikely that there will be any future income flow.

### Bad debts

1.5 Bad debts are written off to the operating cost statement when they are at least 12 months old and they are considered uneconomic to recover. There were no bad debts in either 2006/07 or 2007/08.

### Value added taxation (VAT)

1.6 As from 1 April 2005 the JNCC Support Co has been registered for VAT purposes and VAT returns are completed on a quarterly basis.

### Grants receivable

1.7 Government grants received of a revenue nature are treated as financing and therefore credited to the retained earnings reserve in the year to which they relate and offset against the retained deficit for the year. Grants for depreciable capital expenditure are credited to a government grant reserve and are released to revenue over the expected useful life of a relevant asset by equal annual amounts. Funding received from the European Union is treated as income and is matched to project expenditure during the year it is incurred.

### Research and development

1.8 JNCC writes off all expenditure on research and development in the year it occurs.

### Notional costs

1.9 In line with HM Treasury guidance, the Financial Reporting Manual (FRM), JNCC recognises notional costs with respect to cost of capital.

Cost of capital – The financing structure of JNCC does not include specific interest-bearing debt, but to ensure that the operating cost statement bears an appropriate charge for the use of capital in the business in the year, a notional interest charge is included. In accordance with Treasury guidance, the calculation is based on a 3.5 per cent cost of capital on average net assets.

### Operating leases

1.10 Rentals are charged to the operating cost statement as incurred over the life of each lease.

### Treatment of foreign exchange differences

1.11 Transactions that are denominated in a foreign currency are translated into sterling at the exchange rate on the date of the transaction. Any gains or losses on exchange are taken to the operating cost statement in the year in which they are incurred.

### Pension arrangements

1.12 The Chairman is entitled to a pension scheme but is prohibited from joining the Principal Civil Service Pension Scheme (PCSPS). A personal scheme may be set up which is described as “by analogy to the PCSPS”. An evaluation of the liabilities arising under this arrangement in accordance with FRS retirement benefits has not been made and is not considered material to these accounts.

Under the arrangements of PCSPS an employer would pay Accruing Superannuation Liability Charges (ASLC) to the Cabinet Office based on the following ASLC bands and rates:

Band 1	£19,000 and under	17.1 per cent
Band 2	£19,001 to £39,000	19.5 per cent
Band 3	£39,001 to £66,500	23.2 per cent
Band 4	£66,501 and over	25.5 per cent

The scheme’s actuary reviews employer contributions every four years following a full scheme valuation by the Government Actuary.

The contribution rates reflect benefits as they are accrued, not when the costs are actually incurred, and reflect past experience of the scheme.

### Managing risk in financial instruments

1.13 As with other Non-Departmental Public Bodies, JNCC limits its drawings from the sponsor department so as to keep cash balances at a minimum level consistent with the efficient operation of the Committee. The JNCC Support Co holds all surplus funds in an interest-bearing current account. All foreign currency received is converted to sterling on receipt and therefore there is no exposure to interest rate risk.

Payment transactions that are denominated in a foreign currency are translated into sterling at the exchange rate on the date of the transaction.

## 2 Government grant in aid

	07/08	06/07
	£000	£000
Grant in aid receivable in respect of:		
Grant in aid entitled to receive in cash terms	7,913	6,977
Capital expenditure	(40)	(140)
Transferred to the retained earnings statement	<b>7,873</b>	<b>6,837</b>

## 3 Income from activities

	07/08	06/07
	£000	£000
Advice and other services	977	1,056
Other receipts	170	113
Sales of publications	56	50
Transferred to the retained earnings statement	<b>1,203</b>	<b>1,219</b>

Income from sales is stated net of VAT and trade discounts.

### 4.1 Staff costs

	07/08	06/07
	£000	£000
Direct cost of salaries excluding National Insurance:		
Staff	3,551	3,236
Accruing Superannuation Liability Charge (ASLC) payment	695	640
Social security costs	276	255
Chair	39	35
Independent Committee members	30	30
	<b>4,591</b>	<b>4,196</b>

### 4.2 Staff numbers

The average number of staff during the year was 133. These were employed as follows:

	07/08	06/07
	No	No
Permanent staff:		
Chair and independent Committee members	5	4
Management	16	15
Operational	65	57
Administration	28	28
IT	3	3
	<b>117</b>	<b>107</b>
Temporary and contract staff:		
Operational	15	15
Administration	1	1
	<b>16</b>	<b>16</b>
Total	<b>133</b>	<b>123</b>

## 5 Conservation support

	07/08	06/07
	£000	£000
Contracted out survey and research	2,563	2,528
Other costs	775	662
	<b>3,338</b>	<b>3,190</b>

## 6 Other operating costs

	07/08	06/07
	£000	£000
Accommodation costs	453	368
Staff travel and subsistence costs	355	294
Other support costs	158	130
Equipment and consumables	178	191
Postage and telephones	85	72
Staff support costs	66	100
Hospitality	17	25
Audit fee	69	50
Library	11	3
Committee members' travel and subsistence costs	9	9
	<b>1,401</b>	<b>1,242</b>

	07/08	06/07
	£000	£000
The above costs include		
Operating lease rentals	236	225
	<b>236</b>	<b>225</b>

Interest charges of £3.26 were paid in 2007/2008, no interest charges were payable in 2007/08. There were no bad debts in 2006/2007 or 2007/2008.

## 7 Information and publicity

	07/08	06/07
	£000	£000
Publications	147	149
Other publicity costs	66	65
	<b>213</b>	<b>214</b>

## 8.1 Intangible fixed assets at cost or revaluation

	Software licences £000
As at 1 April 2007	146
Additions during year	23
Revaluation	(5)
<b>As at 31 March 2008</b>	<b>164</b>
Less depreciation as at 1 April 2007	59
Charge for the year	26
Less depreciation on impairment	(6)
<b>As at 31 March 2008</b>	<b>79</b>
Written down value as at 31 March 2008	85
Written down value as at 31 March 2007	87
Cumulative provision for impairment at 31 March 2008	(18)
Cumulative provision for impairment at 31 March 2007	(19)
Historic cost at 31 March 2008	211
Accumulated historic depreciation	(119)
Net historic cost at 31 March 2008	92

### Leasing commitments

As at 31 March 2008 the company had annual commitments under non-cancellable operating leases as detailed below:

	Buildings £000
Operating leases which expire:	
Within 1 year	0
Within 2 to 5 years	236

All leasehold buildings are short-term leases as defined in accounting policy note 1.3 (Fixed assets and depreciation).

## 8.2 Tangible fixed assets at cost or revaluation

	<i>Improvements to leasehold properties</i> £000	<i>Computer equipment</i> £000	<i>Other equipment</i> £000	<i>Vehicles</i> £000	<i>Total</i> £000
As at 1 April 2007	418	192	259	1	870
Additions during year	7	10	0	0	17
Less disposals	0	(25)	0	0	(25)
Revaluation	0	9	22	0	31
Impairment	0	0	0	0	0
<b>As at 31 March 2008</b>	<b>425</b>	<b>186</b>	<b>281</b>	<b>1</b>	<b>893</b>
Less depreciation as at 1 April 2007	304	119	151	0	574
Charge for the year	18	24	30	0	72
Less depreciation on disposals	0	(25)	0	0	(25)
Depreciation on revaluation	0	8	15	0	22
Less depreciation on impairment	0	0	0	0	0
<b>As at 31 March 2008</b>	<b>322</b>	<b>126</b>	<b>196</b>	<b>0</b>	<b>643</b>
Written down value as at 31 March 2008	103	60	85	1	249
Written down value as at 31 March 2007	114	73	108	1	296
Cumulative provision for impairment					
as at 31 March 2008	0	(12)	(4)	0	(16)
as at 31 March 2007	0	(12)	(4)	0	(16)
Historic cost at 31 March 2008	325	342	260	0	927
Accumulated historic depreciation	(250)	(277)	(178)	0	(706)
Net historic cost at 31 March 2008	75	65	82	0	221

## 9 Notional costs

	07/08 £000	06/07 £000
Cost of capital	15	15

## 10 Government grant reserve

	07/08	06/07
	£000	£000
Balance brought forward at 1 April	383	360
Arising on valuations in the year	9	0
Capital grant received in the year and applied to the purchase of capital assets	40	140
	<b>432</b>	<b>500</b>
<b>Transfer to operating cost statement</b>		
Depreciation for the year	98	123
Release of unexpended depreciation on assets disposed of in year	0	4
Impairment of asset values	0	(10)
	<b>98</b>	<b>117</b>
<b>Transfer from Income and Expenditure Account</b>		
Balance carried forward at 31 March	<b>334</b>	<b>383</b>

## 11 Retained earnings

	07/08	06/07
	£000	£000
<b>Retained surplus brought forward</b>	<b>47</b>	<b>86</b>
<b>Grant in aid receivable</b>		
Grant in aid receivable from Natural England	2,937	3,843
Grant in aid receivable from Scottish Natural Heritage	1,729	1,769
Grant in aid receivable from Defra	1,910	0
Grant in aid receivable from Countryside Council for Wales	865	885
Grant in aid receivable from Department of the Environment in Northern Ireland	432	340
<b>Total grant in aid receivable</b>	<b>7,873</b>	<b>6,837</b>
(Surplus)/deficit from operating cost statement	<b>(7,851)</b>	<b>(6,876)</b>
<b>Balance as at 31 March 2008</b>	<b>69</b>	<b>47</b>

All income and expenditure is derived solely from continuing operations. There have been no material acquisitions or disposals in the year.

## 12 Stocks

	07/08	06/07
	£000	£000
Publications	62	78

## 13 Debtors

	07/08	06/07
	£000	£000
Trade debtors	821	945
Prepayments	122	109
Other debtors	2	10
	<b>945</b>	<b>1,064</b>

## 14 Creditors

	07/08	06/07
	£000	£000
Trade creditors	674	1,023
Deferred income	302	267
Other creditors	224	231
VAT creditor	9	7
	<b>1,209</b>	<b>1,528</b>

## 15 Pensions provision

	07/08	06/07
	£000	£000
Balance brought forward at 1 April	(3)	0
Provision for year	(1)	(3)
Transfers out	3	0
Balance carried forward at 31 March	<b>(1)</b>	<b>(3)</b>

This provision represents future liabilities under a separate pension scheme described as "by analogy to the main scheme" which was set up by Defra for Dr P Bridgewater, Chair of the JNCC. In accordance with Accountancy Policy note 1.12 the full requirements of FRS17 "Retirement Benefits" have not been applied to this arrangement.

## 16 Reconciliation of movements in public funds

	07/08	06/07
	£000	£000
Opening public funds	430	446
Retained surplus/(deficit) in the financial year	(7,851)	(6,876)
Grant in aid received	7,873	6,837
Movement on government grant reserve	(49)	23
Closing public funds	<b>403</b>	<b>430</b>

## 17 Grant in aid income

Breakdown of grant in aid income (excluding capital) attributable to the three GB conservation bodies, the Department of the Environment in Northern Ireland and the Department for Environment, Food and Rural Affairs (Defra):

	07/08	07/08	06/07
	%	£000	£000
Natural England	37.31	2,937	3,843
Scottish Natural Heritage	21.96	1,729	1,769
Defra	24.26	1,910	0
Countryside Council for Wales	10.98	865	885
Department for the Environment in Northern Ireland	5.48	432	340
	<b>100</b>	<b>7,873</b>	<b>6,837</b>

## 18 Net revenue expenditure

Breakdown of the net revenue expenditure incurred by the three GB conservation bodies, the Department of the Environment in Northern Ireland and the Department for Environment, Food and Rural Affairs (Defra):

	07/08 %	07/08 £000	06/07 £000
Natural England	37.31	3,597	5,042
Scottish Natural Heritage	21.96	2,117	2,320
Defra	24.26	2,339	0
Countryside Council for Wales	10.98	1,059	1,161
Department for the Environment in Northern Ireland	5.48	529	446
	<b>100</b>	<b>9,641</b>	<b>8,970</b>

## 19 Contingent liabilities

There is no requirement for a contingent liability for 2007/2008, nor was there for 2006/07.

## 20 Losses and special payments

During the year there were two losses totalling £1,783 and one special payment in the amount of £46,000. There were no losses or special payments in 2006/07.

## 21 Intra-government balances

	Debtors: amounts falling due within one year £000	Debtors: amounts falling due after more than one year £000	Creditors: amounts falling due within one year £000	Creditors: amounts falling due after more than one year £000
Balances with other central government bodies	318	0	88	0
<b>Total as at 31 March 2008</b>	<b>318</b>	<b>0</b>	<b>88</b>	<b>0</b>
Total as at 31 March 2007	494	0	109	0

There were no balances outstanding with local authorities, public corporations and trading funds or NHS trusts in 2007/08 or 2006/07.

## 22 Related party transactions

The Joint Nature Conservation Committee is the statutory adviser to the Government on UK and international nature conservation, on behalf of the Council for Nature Conservation and the Countryside, the Countryside Council for Wales, Natural England and Scottish Natural Heritage.

JNCC receives its grant in aid funding from Natural England, Scottish Natural Heritage, the Countryside Council for Wales (the GB conservation bodies), the Department of the Environment in Northern Ireland and the Department for Environment, Food and Rural Affairs (Defra). The GB conservation bodies are regarded as Non-Departmental Public Bodies respectively sponsored by Defra, the Scottish Government and the Welsh Assembly Government.

The GB conservation bodies, the Department of the Environment in Northern Ireland and Defra are related parties. During the year the company has carried out a number of material transactions with these bodies in the normal course of business.

During the year the company, in the normal course of its business, entered into of material transactions with the following organisations in which Committee members, key management staff or other related parties have a financial interest.

### Table of transactions between JNCC and related bodies

Individual staff / Committee Member	Corporate related body	Paid by JNCC 07/08 (06/07) £000	Paid to JNCC 07/08 (06/07) £000	Nature of transactions
Mr D Steer	National Biodiversity Network Trust (Trustee & Treasurer)	74 (47)	79 (63)	MoA*
Prof L Warren	British Geological Survey (NERC)	413 (21)	1 (32)	MoA*
	Environment Agency (Board Member)	10 (24)	25 (3)	MoA*

\* Memorandum of Agreement

The above information relates to contracts in excess of £25,000. Any contract for a lesser sum is not considered to be material in the context of these financial statements.

## > JNCC performance against targets for 2007/2008

>	Target achieved or exceeded
😊	Substantial progress made, with full achievement of target anticipated early in 2008/09
😐	Limited progress against target
Ⓚ	Target deferred or dropped as no longer appropriate for 2007/08
Ⓜ	Target revised in-year

Key performance indicator	Year end rating	Comments relating to performance
<b>Strategic Vision</b>		
By March 2008, develop ideas on desired long-term outcomes for biodiversity and geodiversity at each level in the UK Nature Conservation Framework.	Ⓚ	The programme was reassessed in the fourth quarter and new key performance indicators will be set for 2008/09.
By March 2008, determine whether and how the Framework can be applied to the Overseas Territories and developing countries.	Ⓚ	The programme was reassessed in the fourth quarter and new key performance indicators will be set for 2008/09.
<b>Global Advice</b>		
Contribute to achievement of the World Summit on Sustainable Development 2010 biodiversity target by providing ongoing support to the Inter-Departmental Ministerial Group on Biodiversity.	😊	JNCC has prepared a paper on Overseas Territories and has undertaken other follow-up work arising from the Inter-Departmental Ministerial Group on Biodiversity meeting held in March 2007. An officials' meeting was held in December 2007. JNCC has contributed to the process as much as we can but the outcome is determined by events beyond our influence.
Provide high-quality scientific input at key meetings of multilateral environmental agreements (MEAs), in particular Conferences of the Parties for the Convention on International Trade in Endangered Species (CITES) in 2007 and for the Convention on Biological Diversity, the Ramsar Convention and the Bonn Convention in 2008, and associated preparatory meetings.	😊	JNCC participated in the UK delegation to the 14th Conference of the Parties (CoP) to CITES in the Netherlands in June. Recently, the focus has been on the EC Scientific Review Group meeting and implementation of eel listing in UK/EC.  JNCC had significant input before and during the UK-hosted meeting to initiate a Convention on Migratory Species (CMS) agreement on the conservation of migratory raptors, contributing to a successful outcome to the meeting. JNCC also participated in a CMS meeting on the conservation of migratory sharks in the Seychelles.  JNCC staff have worked closely with Defra in preparation for the Convention on Biological Diversity CoP in May 2008, in particular through input to two meetings of the Subsidiary Body on Scientific, Technical and Technological Advice.  JNCC have led on HPAI H5N1 working groups for Ramsar, including contributing to a meeting of the Scientific and Technical Review Panel in Korea, and the African-Eurasian Waterbird Agreement (AEWA), and have supported Defra on Ramsar sites for Northern Ireland and Guernsey. We have inputted to the AEWA technical committee and prepared papers for the 4th Meeting of Parties.  JNCC contributed to a Department of Culture, Media and Sport review of World Heritage Convention sites.
Prepare thematic action plans across multilateral environmental agreements by 31 December 2007.	😐	A review of JNCC's support for multilateral environmental agreements (MEAs) has been undertaken and was discussed by the Joint Committee in June. Committee endorsed the preparation of action plans for thematic priorities to apply across MEAs. Three action plans have been completed in draft: over-exploitation, sustainable consumption and strengthening the evidence base. Action plans on climate change and invasive alien species will be prepared in 2008/09.
Provide, to agreed service standards, high-quality advice to Animal Health on the issue of approximately 25,000 CITES licences per annum.	😐	By the end of the year we had dealt with over 20,000 licence consultations, representing more than a 25% increase since 2000. Approximately 6% of all licence applications were referred to the JNCC as priority 1 – significantly in excess of the 2% agreed in the service level agreement. As a result, service standards have not always been maintained, particularly with the introduction of the fast-track service and Article 60 review, despite drawing on staff time from other areas of our core work. A bid for an additional CITES licensing assistant for next financial year has been agreed in principle and should enable us to better meet targets.

Key performance indicator	Year end rating	Comments relating to performance
<b>Overseas Territories</b>		
By September 2007, develop, through consultation with key stakeholders, a costed action plan (including sources of funding), to guide the JNCC's future support to the UK's Overseas Territories and Crown Dependencies.	☺	The scope of this work has been widened at the request of the Inter-Departmental Ministerial Group on Biodiversity (IDMGB). A report on costed priorities for nature conservation in the Overseas Territories, based on responses from Overseas Territories governments, has been produced, consulted on and considered by the IDMGB officials group. A shortened version of the paper is to be prepared for consideration by ministers. A costed JNCC action plan has been prepared.
By March 2008, in association with Defra, FCO, south Atlantic Overseas Territory governments and others, prepare an implementation plan to meet commitments under the Agreement on the Conservation of Albatrosses and Petrels.	☹	Recruitment of the new support post required to undertake this work was delayed because of delays in securing funding. However the officer has now been recruited and commenced work in the Falklands in quarter 4. The production of an implementation plan has therefore been delayed until 2008/09.
By March 2008, publish the results of the JNCC-commissioned review of the impacts of climate change on biodiversity conservation in the Overseas Territories and identify priorities for further action through a workshop.	☺	Significant progress has been made in preparing a synopsis of the JNCC-commissioned PhD on climate change impacts in the Overseas Territories. Additional work on climate change in the Overseas Territories was undertaken during the year in response to stakeholder priorities. With funding from the Overseas Territories Environment Programme work is underway to develop outreach materials for the Overseas Territories and guidance on managing ecosystem goods and services in a changing climate. Work has continued with DFID, in collaboration with the Caribbean Community Climate Change Centre, to enhance the Caribbean Territories' capacity to adapt to climate change.
<b>UK's Global Impacts</b>		
By June 2007, develop a strategy for developing the JNCC's policy advice in respect of key food and biofuel commodities.	☺	The strategy is now in place. In respect of biofuels, global analysis is in progress with the intention of developing policy advice; an initial assessment report is now available with an additional report due in late April. For forestry and fisheries, access to evidence is available on request for use by relevant JNCC staff.
By November 2007, in collaboration with the World Conservation Monitoring Centre, develop datasets based on national biodiversity profiles and the Millennium Ecosystem Assessment for dissemination through a web-based application.	☺	The work programme for 2007/08 has been completed with a wide range of material available on the website.
By November 2007, in collaboration with Defra, develop web content providing biodiversity support for the departmental strategy for sustainable consumption and production, Sustainable Development Dialogues with developing major global economies, and corporate responsibility projects.	☺	Revised web content is now in place, including information on biodiversity action plans, multilateral environmental agreements and sustainable consumption and production. This has been made available to users within Defra to support departmental priorities.
<b>European Advice</b>		
By March 2008, develop and begin to implement a system for targeting the JNCC's advice at European Commission impact assessments relevant to our goals.	☹	Progress has been severely hampered by the prolonged absence of a key member of staff. An assessment of the Commission's work programme for 2008 and of the opportunities for contributing to impact assessments has been completed. The success of the objective depends on input from JNCC and country conservation body specialists at this early stage in the policy-making process.
Over timescales that will be determined by the European Community, promote the concepts of sustainable development, the ecosystem approach and biodiversity valuation in the development of Community policies on economic growth, jobs and society, and marine and maritime issues.	☺	Good progress has been made with the inclusion of sustainable development, ecosystem approach and biodiversity valuation principles in work on European maritime, biodiversity and energy (including biofuel) policies.

Key performance indicator	Year end rating	Comments relating to performance
<b>Sustainability Advice</b>		
By March 2008, develop advice on priority issues identified by the Inter-Agency Climate Change Forum, focusing on the interdependencies between climate change and biodiversity.		The Inter-Agency Climate Change Forum is now well established. During the year, the Forum prepared a draft discussion paper on climate change adaptation, submitted a response to the European Commission's consultation on the Green Paper on adaptation to climate change, and agreed a framework for assessing the impacts of mitigation measures on biodiversity.
By March 2008, develop a strategy for using the ecosystem approach to support sustainability beyond the nature conservation sector, focusing on priorities identified in the UK Sustainable Development Strategy and other Government strategies.		The main mechanism for achieving this target in the UK is through participation in Defra's ecosystems approach project. JNCC engaged fully with this project, contributing to the development of an action plan to embed an ecosystems approach in policy-making and delivery, which was published in December. The <i>Environmental Economics with the Overseas Territories in the Caribbean</i> project has increased the use of sustainability methods across sectors, especially in small island developing states – the key output from this work was the publication <i>Valuing the Environment in Small Islands – an Environmental Economics Toolkit</i> . Further work with IUCN and the Convention on Biological Diversity is seeking to develop communication tools for using the ecosystem approach beyond the nature conservation sector.
<b>Conservation Advice</b>		
By March 2008, develop an approach for delivering strategic, proactive advice on UK nature conservation.		The ongoing review of inter-agency work undertaken for the Joint Committee has recommended a general framework for delivering statutory functions jointly, including proactive advice. Additional consultation and discussion with the country conservation bodies and others will be required before the approach is finalised.
<b>Marine Management Advice</b>		
Ensure that 95% of requests for statutory advice are responded fully to within the relevant consultation period.		All applications received during the year were responded to within the required timescales. These were Environmental Statements (30), Petroleum Operation Notices (294) and other consents (154).
By March 2008, on behalf of Defra conduct and report on the first tranche of public consultation on offshore Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), including Regulatory Impact Assessment for each site. Develop and communicate Operations Advice on offshore SACs and SPAs as they are recommended to Government.		The original target could not be met this year as the consultation was delayed by Government. Following the loss of a key staff member, staff time was reallocated internally to keep the work on track, sacrificing some lower priority work as a consequence.
<b>Marine Mapping and Area Protection</b>		
By December 2008, recommend to Government a network of SACs based on existing data for Annex I habitats in UK waters, and complete assessment of the potential for identifying SACs for marine Annex II species away from the coast.		Substantial new survey to support the identification of offshore SACs has been undertaken following Defra's boost in funding for 2007/08. One new offshore survey has been completed and one is planned to be conducted in early 2008. Data collation and interpretation from previous collaborative surveys has progressed more slowly. Various factors have affected progress on the project: recruitment and embedding of replacement and new staff; pressures to complete work in support of the Marine Bill; and difficulties resulting from annual confirmation of funding and consequent very short planning timescales resulting in surveys having to be carried out during winter. For these reasons, some of the planned work will not be completed until the next financial year.
By March 2008, conduct aerial surveys in 28 inshore SPA areas of search (weather permitting), report on the waterbird interest in five of these inshore areas, complete initial analyses of offshore seabird distribution data, and complete fieldwork aimed at identifying possible extensions to SPA breeding sites for red-throated divers.		This has progressed satisfactorily, though there were some delays due to late confirmation of funding and weather limitations. The 2007/08 component of the inshore SPA fieldwork programme (red-throated divers, terns and waterbirds) has been completed and reports of analyses on five new inshore areas produced. Initial analyses of offshore data have also been completed.

Key performance indicator	Year end rating	Comments relating to performance
<b>Marine Mapping and Area Protection (continued)</b>		
By March 2008, establish mechanisms for the update and improvement of marine habitat and landscape maps emanating from the Mapping European Seabed Habitats (MESH) and UKSeaMap projects, including their dissemination via the MESH web-GIS application.	☹️	Staff resources at JNCC have been secured to maintain and enhance the MESH systems beyond the Interreg-funding period (i.e. after January 2008). Technical mechanisms are in place to receive and upload new data as they become available (data were refreshed in April 2008). Further development is embraced within the next corporate plan, and is also tied to Defra proposals for further mapping work in support of the selection of marine protected areas.
<b>Standard and Target Setting</b>		
By March 2008, publish four Geological Conservation Review volumes.	☹️	During the year, the Mass Movements volume was published, the Lewisian volume was presented to printers for printing work, and the Arthropods volume reached the proof stage. Three further volumes are ready to go into production when staff availability permits.
Produce an annual GB Red List for all plant and animal taxa.	😊	The Red List was produced and published on JNCC's website.
<b>Surveillance and Monitoring</b>		
By March 2008, finalise the surveillance component of the JNCC's proposed strategy for surveillance, monitoring and research in the UK.	☹️	Work started late once staff returned from work on favourable conservation status. The draft surveillance strategy will be considered by the UK Biodiversity Partnership Standing Committee in April. Consultations have been carried out with Natural England and SNH/Scottish Government, and a workshop to develop the strategy rationale will be held in early April.
<b>Access to Information</b>		
By March 2008, complete the consolidation of <i>Recorder</i> version 6 and the National Biodiversity Network data validation software to streamline the mobilisation of biodiversity data.	😊	Significant progress has been made with <i>Recorder</i> with the release of version 6.10 (this represents the first stable version of <i>Recorder 6</i> ). Two additional contracts have been specified and let to rectify outstanding bugs and improve some of the associated documentation. An export tool for <i>Recorder</i> to the NBN Gateway has been released.
<b>Policy-relevant Information and Reporting</b>		
By March 2008, finalise the reporting and research components of the JNCC's proposed strategy for surveillance, monitoring and research in the UK, and develop work plans for its implementation.	☹️	The strategy for research was presented to the Joint Committee in June 2007. The reporting components will be fed in at the appropriate time. Healthy links are being developed with the Environment Research Funders' Forum-led development of an environmental monitoring strategy which includes research and reporting. Work has started to define JNCC and country conservation body research requirements.
Produce annual reports on the status and trends of UK wildlife, including the causes of these trends.	☹️	In June, the Joint Committee was presented with an information paper on the state of UK nature. Further work will be needed to raise the profile of the work and to promote its use in decision making. In particular, it will be necessary to break the results down to country level and facilitate country use of the information. The next updated state of nature report will be presented to the Joint Committee in June 2009.
<b>Support Services</b>		
By March 2008, fully implement an external communications strategy to ensure that the JNCC's work programmes are properly informed by the interests of its stakeholders and its resulting advice and information products support positive decisions for nature conservation.	☹️	The external communications strategy and associated implementation plan was endorsed by the Executive Management Board in August. Implementation has progressed very slowly owing to a lack of resources in 2007/08.
By March 2008, ensure that all of the JNCC's programmes have been reviewed against the strategy, and synergies between programmes have been identified.	☹️	The majority of reviews have been completed or will be finalised early in 2008/09. The main area requiring attention is the review of the Support Services programme, which was deliberately scheduled to be undertaken when the recommendations from the other programme reviews were available.

## &gt; Research contracts 2007/08

<b>Title</b>	<b>Contractor</b>	<b>Cost £</b>
National Biodiversity Profile Datasets	World Conservation Monitoring Centre	9,045
Development of Offshore SAC Site Impact Assessment	Economics for the Environment Consultancy Ltd	55,283
Orkney Survey	Dennis Paice	3,300
Dogger Bank Boundary Definition and Selection Assessment Document	Emu Ltd	56,597
Provision of Assistance with Seabird Survey – Outer Hebrides	David Douglas	4,365
Model Distribution and Abundance Data of Various Seabird Species	Highland Statistics Ltd	41,360
Collect Distribution and Abundance Data on Inshore Waterbirds	Wildfowl and Wetlands Trust (Consulting) Ltd	91,285
Capture and Ringing of Red Throated Divers – Outer Hebrides	David Okill	1,670
Production Of Digitized Bathymetric Data for Dogger Bank	SeaZone Solutions Ltd	4,112
Air Pollution Impacts – SSSI Condition Assessment	The Open University	19,638
Marine Assessment	University of Liverpool	18,901
Wildlife and Pollution Contract 2007/08	Centre for Ecology and Hydrology	62,000
Intertidal Sediment Habitats – Review of Indicators and Identification of Gaps	Institute of Estuarine Coastal Studies	20,856
Subtidal Sediment Habitats – Review of Indicators and Identification of Gaps	Centre for Environment, Fisheries & Aquaculture Science	20,853
Deep Sea Habitats – Review of Indicators and Identification of Gaps	Natural Environment Research Council	20,853
Rock and Biogenic Reef Habitats – Review of Indicators and Identification of Gaps	Marine Biological Society	19,998
Climate Change: Adaptation, Mitigation and Ecosystem Services in UK Overseas Territories	Caribbean Natural Resources Institute	50,000
Collect Distribution and Abundance Data on Divers, Grebes and Seaduck around Shetland	Shetland Amenities Trust	2,992
Marine Recorder Developments 2007	Exegesis Spatial Data Management Ltd	9,887
Monitoring of Environmental Conditions at Meteorological Stations, Winter 2007/08	The Meteorological Office	2,689
Monitoring of UK Goose and Swan Populations During the Non-Breeding Season 2007/08	Wildfowl and Wetlands Trust (Consulting) Ltd	38,500
Counts – Seaduck, Divers and Grebes – Inshore Waters, Outer Hebrides	S Duffield	2,743
Counts – Seaduck, Divers and Grebes – Inshore Waters, Orkney	EJ Williams	3,221
Counts – Seaduck, Divers and Grebes – Inshore Waters, Isle Of Bute	Ian Hopkins	1,550
Counts – Seaduck, Divers and Grebes – Inshore Waters, Isle Of Arran	John Rhead	170
Counts – Seaduck, Divers and Grebes – Inshore Waters, Inner Clyde	Starling Learning	1,057
Expanding the Site Relevant to Critical Loads and Source Attribution Database	Centre for Ecology and Hydrology	14,631
Tracking UK Overseas Investment According to Country and Sector	GHK Consulting Ltd	6,227
Annual Statistical Analysis of Mammal Data from BBS 2007–2010	British Trust for Ornithology	29,765
Data Collection – Inshore Waterbirds in England – Aerial Surveys	Wildfowl and Wetlands Trust (Consulting) Ltd	37,450
Collect Distribution and Abundance Data on Inshore Waterbirds in Northern Ireland	Wildfowl and Wetlands Trust (Consulting) Ltd	19,880
Offshore Natura Survey Management 2008–2009	Metoc Plc	12,690
Biofuel/Bioenergy Sustainability Indicators Project	Scott Wilson	3,701
Dogger Bank Offshore Draft SAC	Centre for Environment, Fisheries & Aquaculture Science	407,229
Identify Individual Monitoring Components Within SACs and Assess	British Oceanographic Data Centre	8,000
Data Entry for New Seabird Monitoring Programme Database	Ailsa Reid	1,700
Trend Analysis of European Breeding Seabird Data	Biomathematics and Statistics Scotland	5,817
Piloting a National Small Mammal Surveillance Programme – UK	The Mammal Society	25,000
UK Butterfly Monitoring Scheme	Centre For Ecology and Hydrology	41,000
Biological Records Centre Agreement	Centre for Ecology and Hydrology	166,464
Ornithological Services	British Trust for Ornithology	611,270
Marine Assessment and Monitoring Framework for Application by UKMMAS and OSPAR	British Trust for Ornithology	11,662
National Bat Monitoring Programme	Bat Conservation Trust	87,000
Provision of advice to the Land Use Policy Group on EC Agriculture and Environment Policies	Institute for European Environmental Policy	11,989
European Intelligence	Institute for European Environmental Policy	91,427
Monitoring of Seabirds on the Isle of May	Centre for Ecology and Hydrology	14,194
Canna Seabirds Studies	Highland Ringing Group	2,300
Population Monitoring of Seabirds on Skomer	Wildlife Trust of South and West Wales	7,520
Seabird survival monitoring on Skomer	University of Oxford	7,769
Fair Isle Seabird Studies	Fair Isle Bird Observatory Trust	8,401
Provision of Secretariat Services to the Rare Breeding Birds Panel	Mark Holling	10,000
Development and Service of the NBN Gateway During 2007/08	Centre for Ecology and Hydrology	60,145
National Gamebag Census Mammal Analysis	Game Conservancy Trust	11,807

## > Reports, papers and publications

April 2007 – March 2008

Authors who are not JNCC Support Co staff are shown in square brackets.

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RA Mavor, [M Heubeck, S Schmitt], M Parsons  
**Seabird numbers and breeding success in Britain and Ireland, 2006**  
JNCC, Peterborough. 2008.

[FA Dipper, CM Howson, D Steele], D Connor, [K Northern]  
**Marine Nature Conservation Review Sector 13.  
Sealochs in west Scotland: area summaries.**  
JNCC, Peterborough. 2008.

[P van Beukering, L Brander, E Tompkins], E McKenzie  
**Valuing the Environment in Small Islands:  
An Environmental Economic Toolkit**  
Joint publication: OTEP, JNCC. 2007.

**Annual Report 2006/2007**  
JNCC, Peterborough. 2007.

### JNCC report series

[British Trust for Ornithology]  
**Services in ornithology: annual report 2005/06**  
JNCC report 395, Peterborough. 2007. [www.jncc.gov.uk/page-4108](http://www.jncc.gov.uk/page-4108)

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**Review of the Predatory Bird Monitoring Scheme (PBMS) 2006**  
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N Dawson, I Söhle, BJ Dean, A Webb, JB Reid  
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**Defining and managing *Sabellaria spinulosa* reefs:  
Report of an inter-agency workshop 1–2 May, 2007**  
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**Survey of the occurrence and relative abundance of raptors in Guinea subject to international trade**  
JNCC Report 412, Peterborough. 2007. [www.jncc.gov.uk/page-4314](http://www.jncc.gov.uk/page-4314)

M Lewis, LJ Wilson, I Söhle, BJ Dean, A Webb, JB Reid  
**Surveillance of winter and spring aggregations of seabirds, divers and grebes in UK inshore areas: Aerial surveys and shore-based counts 2006/07**  
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### Web publications 2007–2008

**LUPG website** – Website redesigned and re-launched 14 September 2007. The website is now easily updated and managed internally using content management system.  
[www.lupg.org.uk](http://www.lupg.org.uk)

**MESH** – Redesigned and restructured site launched 25 September 2007.  
[www.searchMESH.net](http://www.searchMESH.net)

Online mapping system and metadata catalogue updated for improved performance and facility to download data layers added.  
[www.searchMESH.net/webGIS](http://www.searchMESH.net/webGIS)

MESH Guide to Marine Habitat Mapping – Innovative online guide to mapping marine habitats catering for policy-makers, planners and specialists.  
[www.searchMESH.net/mappingguide](http://www.searchMESH.net/mappingguide)  
CD-ROM version produced for MESH conference.

**Geological Conservation Review** – GCR database updated to include individual downloadable site accounts for GCR sites in the UK  
[www.jncc.gov.uk/page-2949](http://www.jncc.gov.uk/page-2949)

**Biodiversity Indicators in Your Pocket (BIYP)** – Online companion to the Defra publication on behalf of the UK Biodiversity Partnership. Provides additional in-depth information to support the trends in the UK indicators.  
[www.jncc.gov.uk/biyp](http://www.jncc.gov.uk/biyp)

**UK SeaMap** – Added GIS data download facility to the online mapping system.  
[www.jncc.gov.uk/ukseamap](http://www.jncc.gov.uk/ukseamap)

**Seabird Monitoring Programme** – Online data capture system for entering whole-colony counts of breeding seabirds in the UK and Republic of Ireland.  
[www.jncc.gov.uk/smp](http://www.jncc.gov.uk/smp)

**2nd UK Report on Implementation of the Habitats Directive (Article 17)** – Online consultation on report and publication of results post-consultation.  
[www.jncc.gov.uk/page-4060](http://www.jncc.gov.uk/page-4060)

**Species status assessments** – Updates to the lists of species status for the UK.  
[www.jncc.gov.uk/page-3408](http://www.jncc.gov.uk/page-3408)

**Avian influenza position statement** – Updated January 2008.  
[www.jncc.gov.uk/page-3519](http://www.jncc.gov.uk/page-3519)

### Other JNCC publications / publications involving JNCC staff

**Nature News**  
Issue 15 – Summer 2007 – [www.jncc.gov.uk/page-4137](http://www.jncc.gov.uk/page-4137)  
Issue 16 – Winter 2008 – [www.jncc.gov.uk/page-4189](http://www.jncc.gov.uk/page-4189)

**JNCC position statements**  
Transport Biofuels and Biodiversity.  
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**Working together for nature and landscape conservation in the UK and beyond**  
12-page booklet  
JNCC for UKNLO. 2008.

- R Ferris (ed)  
**Research needs for UK biodiversity: a summary of the important knowledge gaps, identified by the UK Biodiversity Research Advisory Group, 2003–2006**  
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- [RT Barrett, G Chapdelaine, T Anker-Nilssen, A Mosbech, WA Montevecchi], JB Reid, [RR Veit]  
**Seabird numbers and prey consumption in the North Atlantic**  
*ICES Journal of Marine Science*: 63: 1145–1158. 2006.
- J Davies, S Young (eds)  
**MESH guide to marine habitat mapping**  
JNCC Peterborough. 2008.
- J Davies, S Young (eds)  
**The MESH Blue Book: a summary of achievements of the MESH project**  
JNCC Peterborough. 2008.
- [HA Stewart, JS Davies], E Verling (eds)  
**SW Approaches MESH survey**  
IR/V Celtick Explorer Cruise CE0705, BGS Project 07/06, Operations Report.  
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- S Young  
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*Hydro International*: 11 (7): 6–8. 2007.
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*Coastline*: 16 (3/4): 16–18. 2007.
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**Differential effects of a local industrial sandlance fishery on seabird breeding performance**  
*Ecological Applications* 18: 701–710. 2008.
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**Marine climate change impacts annual report card 2007–2008**  
Summary report, MCCIP, Lowestoft. 2008.
- [M Sims, S Wanless, MP Harris], PI Mitchell, [D Elston]  
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**Plant Diversity Challenge: 3 Years – 16 Targets – 1 Challenge. Progress in the UK towards the Global Strategy for Plant Conservation**  
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**The eastern English Channel marine habitat map**  
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Cover printed on **Take 2 offset**, made  
from 100 % recycled fibres sourced only  
from consumer waste

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75 % recycled fibre sourced from pre and  
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Designed and printed by CDS,  
[www.cds.co.uk](http://www.cds.co.uk), 2M

ISBN: 978 0 10 295532 3

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Registered in England and Wales,  
company no. 05380206.

**Registered office:** Monkstone House,  
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