

**UNITED KINGDOM**

**VOLUNTARY REPORT ON IMPLEMENTATION OF  
EXPANDED PROGRAMME OF WORK ON FOREST  
BIOLOGICAL DIVERSITY**

*Please provide the following details on the origin of this report.*

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*Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report.*

- Department for Environment, Food and Rural Affairs (DEFRA<sup>1</sup>) requested the Forestry Commission (FC) to prepare the report on the UK's implementation of the expanded Programme of Work on Forest Biological Diversity.
- The FC produced a 1<sup>st</sup> draft based on<sup>2</sup> an evaluation of the UK's implementation carried out by consultant on its behalf.
- The FC consulted key forestry and biodiversity organisations in Scotland, England, Wales and Northern Ireland as well as at the UK level. Editing the 1<sup>st</sup> draft as required.
- Forestry Commission put consultation draft out to wide consultation through a range of forestry and biodiversity organisations and the UK Clearing House Mechanism<sup>3</sup> website.
- FC and DEFRA evaluated and revised draft to reflect responses.
- DEFRA submitted report to CBD Secretariat.

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<sup>1</sup> Department for Environment Food and Rural Affairs – <http://www.defra.gov.uk>

<sup>2</sup> Forestry Commission – <http://www.forestry.gov.uk>

<sup>3</sup> UK Clearing House Mechanism – <http://www.chm.org.uk>

**VOLUNTARY REPORT ON IMPLEMENTATION OF EXPANDED PROGRAMME OF WORK ON  
FOREST BIODIVERSITY**

**Expanded Programme of Work on Forest Biological Diversity**

**Annex to Decision VI/22**

**General**

Within the UK there are a wide range of activities on forest biodiversity funded or carried out by different departments or agencies of Government. In addition within the UK, there is a long tradition of scientific study and interest groups across civil society that fund or carry out forest biodiversity work both nationally and internationally. The following report provides an indication of the range of work carried out by some of these bodies.

1. Has your country identified priority goals, objectives and activities included in the expanded programme of work for implementation at the national level?	
a) no (please specify the reasons)	X
b) yes (please provide a list of priorities identified)	
Further comments on identification of priority goals, objectives and activities	
<p>The Forestry Commission is currently undertaking an exercise to evaluate the current level of activity relevant to the expanded programme of work on forest biological diversity, which will support the identification of key priorities and future action. Although formal priorities have not yet been identified within the context of the Expanded Programme of Work, priorities have been agreed for forest biological diversity conservation within the context of the UK Biodiversity Action Plan<sup>4</sup>, which will be reviewed in 2005. In addition priorities have been identified for action for biodiversity within Country Forestry Strategies in the UK.</p> <p>The UK Department for International Development (DFID<sup>5</sup>) works with developing countries and the priorities they identify; their Forest Research Programme (FRP)<sup>6</sup> also co-funds some activities with the Forestry Commission.</p>	
2. From the list of priorities, did some or all of them produce the expected impacts after their implementation (i.e. a success)?	
a) no (please specify the reasons)	
b) yes (please specify success stories)	X
Further comments on impacts of implementation of priority activities	

<sup>4</sup> UK Biodiversity Action Plan – <http://www.ukbap.org.uk>

<sup>5</sup> Department for International Development – <http://www.dfid.gov.uk>

<sup>6</sup> DFID's Forest Research Programme – <http://www.frp.uk.com>

3. Were there any challenges/impediments to the implementation of priority activities that could have negatively affected their chance of success?	
a) yes (please specify the activities and the main challenges/impediments)	X
b) no	
Further comments on challenges/impediments to implementation of priority activities	
<p>Inadequate deer management over many areas is a threat to maintaining biodiversity in forests.</p> <p>Low timber prices provide a challenge to generating income to positively manage woodlands for biodiversity including maintaining cultural practices such as coppicing that have contributed to maintaining forest biological diversity.</p>	
4. Is your country collaborating with other Governments and regional and international organizations and processes to implement regional or international activities in the expanded programme of work?	
a) no	
b) yes, limited collaboration (please provide details)	
c) yes, significant collaboration (please provide details)	X
Further comments on collaboration with other Governments and regional and international organizations and processes to implement regional or international activities in the expanded programme of work	
<p>The UK through the Department for International Development is working with a broad range of partners to address the issue of Forest Law Enforcement and Governance. The Forestry Commission is collaborating on a number of projects related to forest biological diversity with partners in Europe, including using links created through the European Union (EU)<sup>7</sup> and the Ministerial Conference on the Protection of Forests in Europe (MCPFE)<sup>8</sup>. Also through implementation of the European Union Habitats and Species Directive<sup>9</sup> and co-operation on protected forest sites through the EU Cost programme 'Protected forest areas in Europe - analysis and harmonisation'.</p> <p>Results from the Department for International Development Forest Research Programme projects on habitat indicators and rapid biodiversity assessment have been taken up and are being promoted by the United Nations Environment Programme (UNEP) in several developing countries.</p> <p>In 1992 the Natural History Museum<sup>10</sup> (NHM) signed a Memorandum of Understanding with the Forest Department of the Ministry of Natural Resources of Belize, "To investigate, document and make known the diversity of Mayan forest habitats, particularly in the context of Mesoamerican biodiversity, and to contribute to their conservation and sustainable use." Under this agreement a research station was set up at Las Cuevas in Belize to support multidisciplinary research into the biodiversity and environment of the Chiquibul Forest. It provides a venue for conservation, scientific and other workshops and has been used for educational and training programmes designed to develop skills in the assessment, identification, monitoring and management of biodiversity. Recent projects have included baseline surveys of plants and insects, remote sensing and vegetation classification, and studies of insect predation of tree seedlings.</p>	

<sup>7</sup> European Union - [http://europa.eu.int/index\\_en.htm](http://europa.eu.int/index_en.htm)

<sup>8</sup> Ministerial Conference for the Protection of Forests in Europe <http://www.mcpfe.org>

<sup>9</sup> European Union Environment - <http://europa.eu.int/comm/environment/nature/home.htm>

**Programme Element 1: Conservation, Sustainable Use and Benefit-sharing**

5. Has your country developed practical methods, guidelines and/or indicators to apply the ecosystem approach in relation to sustainable forest management?	
a) no (please specify the reasons)	
b) relevant methods, guidelines and indicators under development	
c) some methods, guidelines and indicators developed (please provide details)	X
d) a comprehensive set of methods, guidelines and indicators developed (please provide details)	
Further comments on the practical methods, guidelines and indicators to apply the ecosystem approach in relation to sustainable forest management	
<p>The UK is working towards the adoption of an ecosystem approach to forest management. Although formal use of the terminology is in its infancy the ecosystem approach principles are incorporated to a large degree into existing sustainable forestry policies and practice. Forest design and planning systems to accommodate an ecosystem approach have been developed for both state and private forests at woodland and landscape scales. England, Scotland, Wales and Northern Ireland will be collaborating on revising guidelines for forests in the near future and it is expected that these will relate to the Ecosystem Approach as well as to the Ministerial Conference on the Protection of Forests in Europe (MCPFE) and UK indicators of Sustainable Forest Management. Forest Research has a landscape ecology programme, using a series of whole-forest scale study areas to integrate the needs of species that have widely differing dispersal abilities with the forest design planning system (utilising GIS-based tools).</p> <p>The UK is co-operating in developing the European Network for Long-term Forest Ecosystem and Landscape Research (ENFORS) EU COST<sup>11</sup> programme.</p> <p>The country conservation agencies have developed overviews of the conservation resources at a landscape scale, for example through English Nature's Natural Areas programme and Scottish Natural Heritage's Natural Heritage Futures programme.</p> <p>The UK through the Centre for Ecology and Hydrology<sup>12</sup> (CEH) leads an EU project "European Biodiversity Forum - Implementing the Ecosystem Approach" (BIOFORUM), which has a forest working group.</p> <p>There are research programmes addressing functional aspects of fragmentation and linkages between forest and other land uses, and programmes underway through targeted incentive schemes and planning systems in state forests to help reduce and reverse fragmentation of native forests.</p>	

<sup>10</sup> Natural History Museum - <http://www.nhm.ac.uk/>

<sup>11</sup> European Co-operation in the field of Scientific and Technical Research EU COST - <http://cost.cordis.lu/src/home.cfm>

<sup>12</sup> Centre for Ecology and Hydrology - <http://www.ceh.ac.uk/>

6. Has your country taken any measures to prevent the introduction of invasive alien species that threaten ecosystems, and mitigate their negative impacts on forest biodiversity in accordance with international law?	
a) no	
b) relevant measures under development	
c) yes-some measures taken (please outline the measures)	X
d) yes-comprehensive measures taken (please outline the measures)	
Further comments on the measures taken	
<p>Current measure address risk assessment (for plant health) and control of some well established invasive alien species, but the approach is not yet fully comprehensive. The UK and devolved Governments are collectively reviewing policies and legislation in this field, forestry is included and the Forestry Commission is participating. The review incorporates the CBD principles on invasive alien species agreed at COP6. The emphasis is on comprehensive risk assessment. Early detection of potential invasive species is likely to be increased. Forestry and other land uses may best be dealt with using codes of practice agreed with all stakeholders.</p> <p>Programmes for consistent and regular monitoring of the condition of protected sites will provide a more systematic assessment of the invasive species problem.</p> <p>The conservation agencies have been working on the impact of invasive species, active steps are taken to control invasive species on protected sites. The UK's Biodiversity Research Advisory Group is addressing research needs concerning non-native invasive species, and is developing a work programme to meet these. (The important socio-economic benefits of many introduced tree species when managed properly for forestry purposes need to be taken into account in reaching the right policy balance).</p> <p>Examples of practical application include, Rhododendron removal in Sunart, North West Scotland under the Oakwoods EU LIFE<sup>13</sup> project and sycamore <i>acer pseudoplatanus</i> removal in the <i>Tilio-Acerion</i> woods under the Core Forest Areas LIFE project.</p> <p>The Department for International Development (DFID) Forestry Research Programme has supported research on the impact on forest biodiversity of invasive tree species and the development of methods for its control.</p> <p>The Royal Botanic Gardens<sup>14</sup>, Kew has helped to raise awareness of the issues through running training workshops in the UK's Overseas Territories.</p>	

<sup>13</sup> EU LIFE - <http://europa.eu.int/comm/environment/life/life/nature.htm>

<sup>14</sup> Royal Botanic Gardens, Kew - <http://www.rbgekew.org.uk/>

7. Has your country taken any measures to mitigate the impact of pollution on forest biodiversity ?	
a) no	
b) under consideration	
c) relevant measures under development	
d) yes-some measures taken (please provide details)	X
e) yes-comprehensive measures taken (please provide details)	
Further comments on the measures taken to mitigate the impact of pollution on forest biodiversity	
<p>Monitoring pollution is part of the core remit of the Environment Agency<sup>15</sup> and Scottish Environment Protection Agency, including the evaluation of impacts on habitats. There has been recent work on redefining critical loads for different habitat types. The Environment Agency and the Scottish Environment Protection Agency<sup>16</sup> (SEPA) are responsible for the regulation of industrial emissions to the atmosphere, through the implementation of national and European legislation.</p> <p>A web-based information system, the Air Pollution Information System UK (APIS UK) has been produced for a funding partnership of the Scotland and Northern Ireland Forum for Environment Research (Sniffer)<sup>17</sup>, the environment agencies and the conservation agencies in the UK. The system provides advice on critical load and levels of a number of air pollutants for a range of terrestrial habitats and selected species groups. The system also provides site-relevant information on critical load and critical level exceedance. Further development is underway, including the addition of new pollutants and a link to biological monitoring protocols.</p> <p>The UK's national Air Quality Strategy provides a policy framework and priorities for improving air quality. In addition to the protection of human health, the Strategy established standards for the protection of vegetation, including standards for sulphur dioxide, nitrogen oxides and ozone. Reductions in sulphur dioxide emissions have led to reduced sulphur deposition across UK forests. Forest soils appear to be recovering from acidification more slowly than the rate of decline in deposition. Responding to the EC's proposed fourth Air Quality Daughter Directive, the Strategy will also potentially set targets for polycyclic aromatic hydrocarbons and for heavy metals. Reductions in emissions of these substances should have benefits for forest ecosystems across the UK and the rest of Europe.</p> <p>Within the UK, the environment protection agencies are required, by the regulations, which implement the European Communities Habitats Directive (92/43/EEC), to undertake a one-off review of existing permissions for industrial emissions (and other relevant licences). The aim of the review is to ensure that existing emissions are not having an adverse effect on the integrity of any Special Area of Conservation (SAC) or Special Protection Area (SPA). A collaborative modelling exercise is currently underway between the Environment Agency<sup>18</sup> for England and Wales, SEPA for Scotland and the Environment and Heritage Service for Northern Ireland<sup>19</sup>. This is undertaking an attribution of air pollutant sources affecting each SAC or SPA for which a critical load value for acidification or eutrophication is being exceeded. This will identify if any regulated industrial emission is significantly adversely affecting any forest or woodland SAC or SPA.</p> <p>Research is underway to assess the impact of pollution on protected sites through condition assessment of SSSIs.</p> <p>The Natural History Museum (NHM) has produced a hard copy and html version of a</p>	

<sup>15</sup> Environment Agency - <http://www.environment-agency.gov.uk/>

<sup>16</sup> Scottish Environment Protection Agency - <http://www.sepa.org.uk/>

<sup>17</sup> Scotland and Northern Ireland for Environment Research , <http://www.sniffer.org.uk>

<sup>18</sup> Environment Agency - <http://www.environment-agency.gov.uk/>

<sup>19</sup> Environment and Heritage Service Northern Ireland - <http://www.ehsni.gov.uk/>



databased key and recording system for lichens in the UK to test species distribution against air quality. This has enabled the use of lichens on twigs by schools and the general public to assess local environmental quality.

8. Has your country taken any measures to mitigate the negative impacts of climate change on forest biodiversity?

a) no

b) relevant research and monitoring programmes under development

c) some research and monitoring activities being undertaken but no measures taken

d) yes-some measures taken (please outline the measures)

X

e) yes-comprehensive measures taken (please outline the measures)

Further comments on the measures taken to mitigate the negative impacts of climate change on forest biodiversity

The impacts of climate change on UK forests is the subject of a Forestry Commission publication FC Bulletin 125 Climate Change: Impacts on UK Forests, Mark Broadmeadow 2002.

In November 2000 the UK Government published *Climate Change: The UK Programme* which sets out the strategic approach that the UK will take to tackling climate change, forestry is covered.

Research into modelling the impact of climate change on forest biological diversity is being carried out as part of a wider programme the MONARCH project - Modelling Natural Resource Responses to Climate Change - which is examining the potential impacts of environmental change on conservation of biodiversity.

Mitigating impacts is initially focussing on programmes aimed at reversing fragmentation of semi-natural woodlands and increasing connectivity of woodlands in general. More refined responses may be needed in response to modelling research results. For example policies for protected forest areas may need to be adjusted.

9. Has your country taken any measures to prevent and mitigate the adverse effects of forest fires and fire suppression (where fire is a natural disturbance agent)?	
a) no	
b) relevant measures being considered	
c) relevant measures under development	
d) yes-some measures undertaken (please specify)	X
e) yes-many measures being undertaken (please specify)	
Further comments on the measures to prevent and mitigate the adverse effects of forest fires and fire suppression	
<p>Although fire is not a significant threat in the UK, measures exist to monitor the risk, prevent and suppress forest fire.</p> <p>In Scotland the coverage of fire risk assessment and prevention is patchy, especially in semi-natural, small and fragmentary woodlands. A number of the most important protected areas are deficient in these elements - at least two Scottish woodland Special Area of Conservation sites have experienced uncontrolled fires in 2003.</p>	
10. Is your country mitigating effects of the loss of natural disturbances necessary to maintain biodiversity in regions where these no longer occur?	
a) no	
b) monitoring and assessment of effects ongoing	
c) potential measures identified	X
d) yes-some adopted and being implemented (please provide details)	
e) yes-comprehensive measures adopted and being implemented (please provide further details)	
Further comments on measures adopted to mitigate effects of the loss of natural disturbances necessary to maintain biodiversity in regions where these no longer occur	
<p>Felling systems in plantations are incorporating designs to mimic patch fires and windblow. Management of Sites of Special Scientific Interest often involves restructuring to encourage natural structures and processes.</p> <p>Work is underway by the conservation agencies to try to restore and monitor natural disturbance regimes through minimum intervention reserves. Research is also being undertaken into what the impact of large herbivores would have been so the appropriate level of management mimicry can be applied.</p> <p>Although this is a significant topic, in the UK most apparently 'natural' areas are cultural landscapes. Changes in agriculture and society are reducing traditional management practices and along with climate change are probably a bigger threat to current biodiversity than loss of natural disturbances, which happened thousands of years ago in most cases.</p>	

11. Is your country preventing and mitigating losses of forest biodiversity due to fragmentation and conversion to other land uses?	
a) no	
b) potential measures identified	
c) yes-some measures undertaken	X
b) yes-comprehensive measures undertaken	
12. Is your country restoring forest biological diversity in degraded secondary forests and in forests established on former forestlands and other landscapes?	
a) no	
b) potential measures identified	
c) yes-some measures implemented in some areas (please provide details)	
d) yes-comprehensive measures implemented in major areas (please provide details)	X
Further comments on the measures to restore forest biological diversity in degraded secondary forests and in forests established on former forestlands and other landscapes	
<p>In the UK there is comprehensive action being taken on the issue of restoration. The restoration of forest biological diversity in plantations on ancient woodland sites (PAWS) is being promoted. The woodland Habitat Actions Plans of the UK Biodiversity Action Plan include targets for habitat improvement and PAWS restoration. Both the UK Woodland Assurance Standard and the UK Forestry Standard contain requirements for conservation measures.</p> <p>The management planning process for Sites of Special Scientific Interest (SSSIs) and Special Areas of Conservation (SACs) identify areas for restoration to native woodland. There is also significant work underway to restore open habitats such as heathland to benefit biodiversity at a landscape scale.</p> <p>The Woodland Trust<sup>20</sup> a leading UK conservation charity dedicated to the protection of the UK's native woodland heritage commissions research, produces reports and held a major conference on restoration in 2002.</p> <p>The agencies of the Forestry Commission which are responsible for the management of the public forest estate are carrying out major restoration programmes in England, Scotland and Wales. In some cases the restoration work is being integrated with networking efforts to expand areas and reduce woodland isolation.</p> <p>The Forest Research Agency is continuing research on the restoration of native woodlands on ancient woodland sites and on the development of biodiversity in plantations of exotic and native species. A Forestry Commission Practice Guide 'Restoration of Native Woodland on Ancient Woodland Sites' was published in 2003 and new programmes of training are being developed.</p> <p>Private landowners have an important role in delivering in this area and in this context recent research by the British Association for Shooting and Conservation (BASC)<sup>21</sup> has demonstrated the contribution their members have made in this area through woodland planting and the use of traditional management techniques.</p> <p>At the country level the England Biodiversity Strategy is seeking a new policy and strategy for ancient woodland conservation, the commencement of PAWS restoration programme on Forest Enterprise (FE) land and incentives for restoration in private</p>	

<sup>20</sup> The Woodland Trust – <http://www.woodland-trust.org.uk>

<sup>21</sup> British Association for Shooting and Conservation - <http://www.basc.org.uk>

woodland through the Woodland Grant Scheme. FE plan to restore 20,000ha of plantation to native/local species woodland.

In Wales efforts are being directed at introducing 'continuous cover' forestry management of plantations to increase biodiversity through encouraging restructuring and restoration. There is currently debate on how best to target support at implementing this policy through revised woodland incentives due to be introduced in 2005.

In Scotland the Scottish Forestry Grant Scheme, introduced in 2003, includes specific incentives to encourage restoration of native woodlands on ancient woodland sites, and the restoration of forest biological diversity in degraded native woodlands. Enhanced incentives are offered to locate new native woodlands close to existing ones to encourage larger more robust core areas of native forest in the longer term and to link together remnant areas for example by establishing riparian woodland networks.

In all three countries 'continuous cover' silvicultural systems are being trialled and promoted as alternatives to patch clear felling which currently dominate due to the history of recent re-forestation in the UK.

The UK Forest Partnership for Action, a new partnership within the UK of Government, business and environmental groups to promote sustainable development in the forest sector, both at home and internationally, are committed the restoration, protection and expansion of native woodlands in the UK as well as to promoting the restoration and protection of forests and their biodiversity globally.

Recognising the UK's experience of forest loss and re-forestation the Forestry Commission has entered into a global partnership for forest landscape restoration with the WWF and IUCN. The overall goal of the partnership is to contribute to building assets and improving prospects for people and nature through restored landscapes, building momentum for restoration with decision-makers, the private sector, the general public and media. This will be undertaken through analysing experiences, highlighting opportunities, identifying obstacles and disseminating lessons learnt. At the same time the United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC) is starting a database on forest restoration (FRIS) which will contribute to the partnership.

13. Is your country promoting forest management practices that further the conservation of endemic and threatened species?

a) no

b) relevant forest management practices under development

c) yes-some practices adopted and promoted (please provide details)

d) yes-some practices being implemented (please provide details)

X

Further comments on the forest management practices that further the conservation of endemic and threatened species

The UK has very few endemics but a number of threatened species. The UK Biodiversity Action Plan (UKBAP) has created a process for this with Species Action Plans (SAPs) and Habitat Action Plans (HAPs) covering, research, management, inventory and monitoring. There are 65 priority species associated with woodland. The action plans are being implemented and progress will be apparent after a review for a report in 2005.

The UK system of protected Sites of Special Scientific Interest (SSSIs) regulated by the conservation agencies includes the locations of most of the UK's rarest species. Conservation objectives set for the sites will take the needs of these species into account.

The Forest Research Agency are developing a computer based decision support system to identify threats and opportunities from forest management to Habitats and Rare,

Priority and Protected Species.

The England Biodiversity Strategy seeks revised incentives to support work for priority species and improved guidance on habitat management based on current research. Improved guidance to woodland owners and managers on wildlife legislation and habitat management is being proposed together with increased support for Local BAPs.

There is on-going research and monitoring by the agencies for rare species on SSSIs within a woodland habitat management framework. One of the UK Sustainable Development indicators is the change in woodland bird populations.

In Scotland Species Action Plan implementation includes a Highland Red Squirrel Group, a Capercaillie EU LIFE project and Black Grouse Recovery project. In Wales the Forestry Commission are publishing a plan indicating their role in supporting woodland species conservation to implement Section 74 of the Countryside and Rights of Way Act 2000. An example of practical conservation management is the Forestry Commission Wales and the RSPB Black Grouse conservation project.

The Natural History Museum (NHM) led a project in El Salvador to generate biodiversity data on the fauna and flora of shade forests, to provide user-friendly tools for the assessment and monitoring of the biodiversity of shade forests and to train Salvadoran scientists in the acquisition, preparation and use of biodiversity data.

The Royal Botanic Gardens at Kew's ongoing work on conservation assessment (using IUCN red-list categories) and recovery planning includes, as outputs, capacity-building, guidelines and management recommendations at a habitat level to enhance the long-term survival of threatened species, e.g. in Cameroon, Kenya and Tanzania.

14. Is your country ensuring adequate and effective protected forest area networks?

a) no	
b) networks of protected areas being planned	
c) some protected areas established but networks not in place	
d) networks of protected areas taking shape	
e) major networks of protected areas established	X

15. Is your country promoting sustainable use of forest resources to enhance the conservation of forest biological diversity?

a) no	
b) relevant policy and programme under development	
c) yes-some policies and programmes in place (please provide details)	X
d) yes-comprehensive policies and programmes in place (please provide details)	

Further comments on the policies and programmes for promoting sustainable use of forest resources to enhance the conservation of forest biodiversity

The Forestry Commission's Woodland Grant Scheme, UK Forest Standard and associated guidelines and training, promote and support sustainable harvesting methods. The UK Woodland Assurance Standard (UKWAS) is now well established as a UK wide sustainable forest management accreditation standard which takes into account biodiversity and socio-economic considerations. The Forestry and Timber Association<sup>22</sup> supports certification to UKWAS standard and encourages its members to meet that standard.

Forest Enterprise sites and National Nature Reserves frequently function as

<sup>22</sup> Forestry and Timber Association - <http://www.forestryandtimber.org/>

demonstration areas. In addition FACT (Forum for Application of Conservation Techniques), funded by a consortium led by English Nature<sup>23</sup>, aims to develop simple practical ways of managing sites for biodiversity, often based on local experience.

The potential for sustainably exploiting non-timber forest products was the subject of a report produced in 2002 by the Scottish Forest Industries Cluster. Topics covered included edible goods, pharmaceuticals, cosmetics, aromatic and decorative goods.

The Countryside Council for Wales<sup>24</sup>, Welsh Development Agency and FC Wales have jointly commissioned a study in Wales on non timber forest products (NTFPs).

Coed Cymru in Wales and organisations like Highland Birchwoods, the Argyll Green Woodworkers Association and the Woodschool in Scotland aim to deliver local sustainable woodland management and research small scale sustainable timber use linking supplies with end users.

The Department for International Development (DFID) is supporting sustainable forest management that takes into account cultural and biodiversity values in a range of countries. They also support the development of certification processes and initiatives and have recently assessed the needs of small-scale enterprises in forest management in Mexico Brazil and Bolivia to participate in certification schemes. Models of forest growth and yield have been designed to support sustainable timber harvesting in Indonesia.

DFID funded projects promote indigenous knowledge and sustainable use of non timber forest products (NTFP) with projects, for example, in Central America (Correado Biome Biodiversity Project), research on reducing barriers to commercialisation of NTFFPs throughout the tropics, with field studies in Bolivia, Brazil, Grenada and South Africa and a sustainable rattan production project in West Africa. A field manual for resource mapping of non-timber forest products (primarily in Indonesia) has been prepared and a research project on seasonal variation in marketing of non-wood tree products in Kenya. Manuals have been developed for the sustainable management and use of forest fruits by tree dependent households and communities.

The Darwin Initiative<sup>25</sup> supports projects such as one conserving Kenya's indigenous forest through certification of sustainably sourced woodcarvings. The Natural History Museum (NHM), with the support of the UK's Darwin Initiative, is leading a project to develop capacity in Belize for conserving and sustainably managing xaté palms (*Chamaedorea* spp.) and improving the economic benefits to Belizeans from xaté collection. The project aims to produce a field guide to Belizean palms and to develop nursery protocols for xaté. The project then aims to permanently increase the xaté information base through the establishment of permanent, experimental and demonstration plots and databases, and to explore the feasibility of xaté eco-labelling. The project also aims to determine xaté abundance, diversity and distribution in Belize, and to produce a management plan for sustainable xaté harvest. As part of the project, training and education about xaté will be provided for the staff of the Belize Botanic Gardens, the Belize Forest Department, and for students & local people.

Kew is working with members of the herb and spice trade to establish a Herb and Spice Stewardship Council to establish standards of sustainability and quality for the herbs and spices traded around the world, including those grown as NTFP.

Many pesticides used by the timber trade are being withdrawn. As part of a building conservation project Kew has been awarded a grant by English Heritage to investigate whether some compounds in timber could provide natural protection.

Kew is working with commercial companies on the development of sustainability strategies for the supply of extracts from timber and NTFP.

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<sup>23</sup> English Nature - <http://www.english-nature.org.uk/>

<sup>24</sup> Countryside Council for Wales - <http://www.ccw.gov.uk/>

<sup>25</sup> Darwin Initiative - <http://www.darwin.gov.uk/>

16. Is your country preventing losses caused by unsustainable harvesting of timber and non-timber forest resources?	
a) no	
b) potential measures identified	
c) some measures undertaken (please provide details)	X
d) comprehensive measures undertaken (please provide details)	
Further comments on the measures to prevent losses caused by unsustainable harvesting of timber and non-timbering forest resources	
<p>The UK Government has adopted a timber procurement policy that all central government departments and agencies will actively seek to buy timber and timber products from sustainable and legal sources, for example, those identified under independent certification schemes such as that operated by the Forest Stewardship Council<sup>26</sup>.</p> <p>The Timber Trade Federation<sup>27</sup> in the UK has adopted a Conduct Assurance Scheme with associated Codes of Conduct and Codes of Practice. The Code of Conduct demonstrates the Timber Trade Federation 's commitment to delivering quality and service. Committing their Members to the highest standards of professionalism and integrity in the conduct of their business.</p> <p>The importation to the UK of non timber forest products (NTFPs) derived from threatened species listed in the Appendices to CITES (including bushmeat from endangered species such as primates, certain types of forest antelope, big cats etc), is prevented through the CITES import licensing process and the need for importing countries to make "non-detriment findings" on the species concerned.</p> <p>The Department for International Development (DFID) supports capacity building, legislation and policy reform for sustainable forest management in many countries including Brazil, Cameroon, Guyana, Nigeria etc. A project has been undertaken to develop ways of assessing the sustainable yield of timber and other resources for tropical forests based on the available local information. DfID's Forest Research Programme includes a cluster of research projects looking at non-timber forest products, especially indigenous forest fruit trees, and the benefits from management of biodiversity.</p> <p>The Darwin Initiative supports a small project on bushmeat exploitation in Central Africa. The project, capacity Building for Motivating and Managing the Bushmeat Trade in Gabon, aims to promote locally owned policy-oriented research into both the biological and socio-economic aspects of the trade.</p>	

<sup>26</sup> Forest Stewardship Council - <http://www.fscoax.org/>

<sup>27</sup> Timber Trade Federation - <http://www.ttf.co.uk/>

17. Is your country taking any measure to enable indigenous and local communities to develop and implement adaptive community-management systems to conserve and sustainably use forest biological diversity?	
a) no	
b) not applicable	
c) relevant policy and programme under development	X
d) yes-some policies and programmes in place (please specify)	
Further comments on the policies and programmes to enable indigenous and local communities to develop and implement adaptive community-management systems to conserve and sustainably use forest biological diversity	
<p>Within the UK the public and local communities are being encouraged to become more involved in all levels of forest decision making, from policy to practical site work. This is an objective in all the country forest strategies. The Forestry Commission takes advice from a Community Advisory Panel in progressing this. There is considerable involvement of volunteers in woodland management through, for example, the work of the Wildlife Trusts<sup>28</sup>, the British Trust for Conservation Volunteers<sup>29</sup> and other organisations.</p> <p>In England participation is being progressed primarily through partnership forests in cities and urban areas and with local communities. In England the Woodland Trust is establishing a Community Woodland Network with funding from the Department for Environment, Food and Rural Affairs (DEFRA). English Nature have established a new programme on People and Nature to try to improve the awareness of biodiversity and the way it links to everyday life (including, but not restricted to woodland biodiversity). An example from England is the "New Forest, New Future" initiative, in which a wide range of stakeholders were brought together in order to develop a long-term forest management plan for the New Forest (both inclosures and open forest). When a draft had been produced, a series of community consultations were undertaken, and refinements made as necessary.</p> <p>In Wales community involvement is a strategic priority. The Tir Coed Ystwyth Valley Project is an initiative by the National Assembly for Wales, its agencies and others to pioneer the idea that the full potential of woodland can be developed in conjunction with communities, businesses and local people. Forest Enterprise are reviewing their strategic plans with reference to the 'Communities First' consultations and they will build capacity for community consultation and aim to extend it to 40 communities.</p> <p>In Scotland ownership and management of woodlands is being progressed. 51 communities now have an active role in managing or owning forest resources. Scottish Natural Heritage<sup>30</sup> have a 'People and Nature' programme and the Scottish Executive is progressing legislation which will increase the level of local community input to biodiversity protection and management on sites of Special Scientific Interest.</p> <p>The Department for International Development (DFID) have supported work to increase the capacity of Indigenous Peoples Organisations to participate in the development of global forest policy through the Global Forest Coalition. Throughout the developing world considerable resources have been directed at improving participation in forest management by local and indigenous people. This includes legislative and policy development work, national level training of forest sector staff, stakeholder involvement in regional or local forest projects and local community development projects. A comparison of ethical with conventional trading systems has resulted in elements of a manual on ethical trading.</p>	

<sup>28</sup> Wildlife Trust - <http://www.wildlifetrusts.org/>

<sup>29</sup> British Trust for Conservation Volunteers <http://www.btcv.org/>

<sup>30</sup> Scottish Natural Heritage - <http://www.snh.org.uk/>



DfID has undertaken an analysis of opportunities and constraints to community involvement in forest management and recently undertook a study into the economic analysis of participatory forest management and stakeholder involvement and a manual of appropriate methodologies is being produced.

The Natural History Museum (NHM) has led a project (funded by AVINA Inc.) in the Yucatán Peninsula (Mexico), El Petén (Guatemala) and Belize, which aims to create lasting partnerships between conservation-oriented NGOs and more scientifically-oriented governmental institutions. The project created a partnership between NGOs and museums for the production of high quality field guides to the trees of the Maya Area. A CD product has been distributed which can be used to build business opportunities for local NGOs, and a library of images of trees and their characters for use by the partnership have been created. An automatic field-guide generator has been designed which uses the collected images to produce field guides for either ecotourists or conservation practitioners.

The Royal Botanic Gardens Kew is working within the Plantas do Nordeste Association (Brazil) on sustainable management (e.g. cropping techniques and charcoal production) of caatinga forest fuelwood trees, with the active participation of local communities and schools, which take part in the planning process and the research. Kew is also involved in a similar project in Zimbabwe, working in tandem with local communities and schools to investigate a range of harvesting methods for fuelwood, using three indigenous species, with respect to productivity and sustainability

DEFRA's Darwin Initiative also funds various such projects in Thailand, Guyana, Poland, Colombia, Mexico. One such example is the project conserving Kenya's forests through certification of sustainably sourced woodcarvings which aims to contribute to the conservation of critical forest habitats in Kenya. Putting in place an incentive to enable carvers to shift from traditionally preferred hardwoods to farm grown or plantation species, thereby providing for sustainable livelihoods for carvers and tree growers.

18. Has your country developed effective and equitable information systems and strategies and promoted implementation of those strategies for *in situ* and *ex situ* conservation and sustainable use of forest genetic diversity?

a) no

b) relevant information system and strategy under development

X

c) relevant information system in place

d) relevant strategies in place (please provide details)

e) relevant information system and strategies in place (please provide details)

Further comments on the strategies for *in situ* and *ex situ* conservation and sustainable use of forest genetic diversity

The Forestry Commission published a technical paper on genetic variation and conservation of British Native Trees and Shrubs. Guidelines, advice and incentive schemes promote the use of natural regeneration or local origin/provenance planting stock for native woodlands. The FC plans to initiate a UK policy development working group to develop *in situ* and *ex-situ* policies for genetic conservation.

Inventories of local origin populations of native tree species have been prepared for Scotland, England and Wales. More work is underway to stimulate collection of seed and growing stock of identified local origins. There have been some studies and subsequent conservation action based on genetic variation in threatened species - e.g. through Species Action Plans for whitebeam and black poplar. The National Trust<sup>31</sup> is involved with the genetic conservation of some of the woody plants it has in its collections

<sup>31</sup> The National Trust - <http://www.nationaltrust.org.uk/main/>

and arboreta are being managed across the UK by various organisations.

More information is being collected on the extent and condition of wood pasture and some areas have started mapping veteran trees which may in themselves represent a valuable genetic resource and also host many rare and endangered species.

A Conference on "*Genetic Conservation and Management of British Native Trees*" was held jointly by the Forest Ecology Group and Ecological Genetics Group of the British Ecological Society<sup>32</sup> in September 2003.

The statutory conservation agencies have undertaken an initial review of the implications of tree genetically modified organisms with relevant departments, agencies and other stakeholders. A paper on the genetic modification of trees and its relevance to biodiversity is to be published later in 2003.

A research programme aimed at better understanding genetic diversity in forest ecosystems is developing for UK forestry but this will be long term. A policy review has been undertaken and has identified needs - integrated programmes may develop from cross-cutting proposals of the Biodiversity Research Advisory Group.

An Oxford Forest Institute project 'FRAXIGEN', on ash (*Fraxinus*) genetic resources, which is seeking to address the question "How local is local?" funded under EU Framework V with partners in six European countries. In UK, the Oxford Forestry Institute and the Forest Research Agency are working on *Fraxinus excelsior* investigating genetic diversity and differentiation in autochthonous populations of ash in England, Wales and Scotland, as well as forces shaping these including reproductive biology, mating system and gene flow. These genetic studies complement a series of field trials being established within semi-natural woodlands, to estimate the scale at which localised adaptation occurs. Together, the project's findings will allow, for the first time, scientifically based recommendations for sourcing of ash seed for biodiversity conservation and ecological restoration objectives.

The Millennium Seed Bank Project is an international collaborative plant conservation initiative, includes forest species in its collections. This world-wide effort aims to safeguard 24,000 plant species from around the globe against extinction.

Greater liaison within international programmes such as European Forest Genetic Resources Programme<sup>33</sup> (EUFORGEN) could provide synergies in developing genetic conservation research programmes. EUFORGEN aims at providing a contribution to international collaborative initiatives on sustainable forest genetic resources programmes in Europe, facilitating the information flow among countries and raising public awareness.

The UK's commitments under the Convention on Trade in Endangered Species (CITES) contribute to the conservation of endemic forest species as these require mechanisms to be in place to control and monitor the import and (re)export of endangered species to and from the UK.

The Department for International Development (DFID) research work has improved botanical information availability on a number of species through BRAHMS an electronic data-exchange mechanism.

19. Is your country promoting the fair and equitable sharing of benefits resulting from the utilization of forest genetic resources and associated traditional knowledge?

a) no	
b) relevant policies and programmes under development	X
c) some policies and programmes in place (please specify)	
d) comprehensive policies and programmes in place (please specify)	

<sup>32</sup> British Ecological Society - <http://www.britishecologicalsociety.org/>

<sup>33</sup> European Forest Genetic Resources Programme - [http://www.ipgri.cgiar.org/networks/euforgen/euf\\_home.asp](http://www.ipgri.cgiar.org/networks/euforgen/euf_home.asp)

Further comments on the policies and programmes for promoting the fair and equitable sharing of benefits resulting from the utilization of forest genetic resources and associated traditional knowledge

The UK is carrying out a review of access to genetic resources and the equitable sharing of benefits arising from their use. This will include forest genetic resources. Policies will develop in the light of this review and making use of the Bonn Guidelines on Access and Benefits Sharing (ABS).

The Royal Botanic Gardens Kew-coordinated, DFID-funded 'Pilot Project for Botanic Gardens' involved 28 botanical institutions from 21 countries sharing ideas on best practice, and developed a set of voluntary Principles on Access to Genetic Resources and Benefit-Sharing to harmonise institutional policies. Kew recently produced 'the CBD for Botanists', a user-friendly guide to the CBD and its provisions on ABS for botanical collections managers.

*If your country wishes to provide additional information on implementation of this programme element, please do this in the following space*

**Question 11 on preventing and mitigating losses due to fragmentation...**

The Woodland Trust<sup>34</sup> is monitoring the degree to which ancient woodland is under threat of damage and loss from development, a significant contemporary cause of degradation and conversion to other land uses.

There is increasing recognition of value of ancient woodland in planning decisions (so less fragmentation) with increasing experience of mitigation measures where loss of woodland is unavoidable. With encouragement of new woodland in association with existing ancient woods to reduce fragmentation impacts.

The Royal Botanic Gardens Kew's GIS Unit reports on changes in forest cover and quality in Cameroon to the Cameroonian government and BirdLife International, and a similar project is now underway in Zambia.

**Question 14 on ensuring protected area networks**

There is an extensive network of protected sites spread across the UK set within a wide distribution of ancient and other woodlands that receive a lower level of general protection. A sub-set of this network form the UK contribution towards the European network of Special Areas of Conservation and Special Protection Areas established under the EU Habitats and Species Directive.

Kew contributes plant inventory & distribution information towards the establishment of new protected areas to ensure more effective protected area networks (e.g. a Darwin project in British Virgin Islands), and ongoing inventory work in Cameroon and Indonesia contributes to long-term management of established protected areas.

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<sup>34</sup> Woodland Trust <http://www.woodland-trust.org.uk>

**Programme Element 2: Institutional and Socio-economic Enabling Environment**

20. Is your country improving the understanding of the various causes of forest biodiversity losses?	
a) no	
b) a limited analysis being undertaken	
c) a thorough analysis being undertaken	
d) yes-some analyses completed and results available (please outline some findings from these analyses)	X
e) yes-comprehensive analysis completed and results available (please provide some findings from these analyses)	
Further comments on the analysis of the various causes of forest biodiversity losses	
<p>There has been considerable analysis of threats to forest biodiversity through the UK Biodiversity Action Plan process which also addresses the problem through a series of specific, costed habitat and species action plans. Various additional studies have looked at particular threats within Great Britain.</p> <p>Protected sites are being monitored via the conservation agencies Condition Assessment process. As part of this the causes of sites being in an unfavourable condition are identified. Many of these causes will also apply to non-protected sites. Studies are underway on the main negative impacts, including unsustainable deer populations, development pressures, agricultural impacts such as overgrazing by sheep, and pollution.</p> <p>The Land Use Policy Group (LUPG)<sup>35</sup> have undertaken work looking at the impacts of the Common Agricultural Policy on forestry and woodlands. A joint report by the LUPG and WWF makes recommendations for the mid term review of Common Agricultural Policy.</p> <p>The Department for International Development (DFID) is supporting better analysis, for example, through Centre for International Forestry Research's (CIFOR)<sup>36</sup> policy work on the underlying causes of deforestation. The Forest Land Oriented Resource Envisioning System (FLORES) modelling package has been developed to test the efficacy of policy instruments on forest land oriented resources.</p>	

<sup>35</sup> The LUPG comprises the GB statutory conservation, countryside and environment agencies, current reports are available on the LUPG website – <http://www.lupg.org.uk>

<sup>36</sup> Centre for International Forestry Research – <http://www.cifor.cgiar.org>

21. Has your country integrated biodiversity conservation and sustainable use into forest and other sector policies and programmes?	
a) no	
b) under consideration	
c) yes-integrated into policies and programmes in some sectors (please provide details)	X
d) yes-integrated into policies and programmes in major sectors (please provide details)	
Further comments on the integration of biodiversity conservation and sustainable use into forest and other sector policies and programmes	
<p>The Joint Nature Conservation Committee (JNCC)<sup>37</sup> is working on harmonising biodiversity reporting within the UK and at the European level but more could be done in relation to forests. Work is ongoing to link and relate the various forest inventories within England, Wales and Scotland to improve understanding of forest quality change. JNCC and Department for Environment, Food and Rural Affairs (DEFRA) (on behalf of the UK Biodiversity Reporting and Information Group) have established a UK biodiversity indicators forum.</p> <p>The EC Natural Resources Biodiversity Action Plan makes recommendations for the development of biodiversity indicators. JNCC has contributed to the biodiversity component of the European reporting obligations database under contract to the European Environment Agency.</p> <p>The United Nations Environment Programme - World Conservation Monitoring Centre (UNEP-WCMC) are undertaking harmonisation work on a global scale; the UK through DEFRA and JNCC have contributed to this work.</p> <p>The UK Biodiversity Action Plan (BAP) process has set targets for priority species and habitats and there is ongoing work to integrate these into forest strategies including reviews of incentives, which have been completed for each country of the UK. Funding is being accessed from agri-environment measures of the EU Rural Development Regulation (RDR), national funding in each country, other EU funding streams and from UK national lottery money. More resources will be needed to achieve targets and more needs to be done to improve public education, awareness and capacity building to address forest bio-diversity issues.</p> <p>The Land Use Policy Group has done some work on the impact of agricultural sector policies on biodiversity, including the indirect impacts of forestry. This includes a recent review of the role of forestry in the Rural Development Regulations (which has implications for conservation programmes); also a report on the potential for promoting land-use change to favour large scale development of new wild woodland.</p> <p>The Wood for Good campaign<sup>38</sup> highlights the relative credentials of wood as a sustainable material against others.</p> <p>More work is required to integrate biodiversity targets into other sectors. In the case of land-use planning a review of all planning guidance is currently in progress. This will provide opportunities to ensure that local development policies and consideration of development proposals take into account both national and local priorities for biodiversity.</p> <p>The England Forestry Strategy encourages the regional development agencies to make use of woodlands and forestry to help achieve wider development objectives. Training in sustainable forest management can be supported by funding through the EU Rural Development Regulation e.g. the Vocational Training Scheme in England.</p> <p>The England biodiversity strategy 'Working with the grain of nature', sets out a</p>	

<sup>37</sup> Joint Nature Conservation Committee – <http://www.jncc.gov.uk>

<sup>38</sup> Wood for Good - <http://www.woodforgood.com>

strategic approach to woodland and forestry management as an integral part of policy development. It proposes actions to pursue closer integration of woodland and agri-environment incentives. A policy review of woodland creation in England by Anthony Bosanquet in May 2002 set out the issues for consultation. The Government response was published in spring 2003. The strategy also proposes investigations into ways of developing the forestry-contracting sector to increase capacity and skills appropriate for native woodland.

The National Assembly for Wales has issued guidance on the protection of ancient woodlands through the planning system in 'Planning Policy Wales' (2002).

The Northern Ireland Biodiversity Strategy contains six recommendations directly related to forestry and forest management in Northern Ireland for action by the Forest Service, which will be reflected in the strategy for forests in Northern Ireland.

The Department for International Development (DFID) has provided training for capacity building with a view to supporting the development of National Forest Programmes in Africa. The DENDROGENE project in Brazil seeks to ensure that full use is made of existing scientific knowledge in managing forest biodiversity. DFID's Forest Research Programme has made considerable efforts to more effectively extend and disseminate policy and technical research results to all stakeholders through preparation of more accessible media. Examples include biodiversity field guides and the manual for their preparation.

22. Has your country developed good governance practices, reviewed and revised and implemented forest and forest-related laws, tenure and planning systems, to provide a sound basis for conservation and sustainable use of forest biodiversity?

a) no	
b) review under way	
c) review and revision completed	
d) some good governance practices and related laws developed and implemented (please provide details)	
e) a comprehensive set of practices and laws developed and implemented (please provide details)	X

Further comments on the practices and laws developed and implemented to provide a sound basis for conservation and sustainable use of forest biodiversity

Within the UK there is legislation in place to protect forested areas. Environmental Impact Assessments are now required for operations that would impact significantly on forested land. This is largely effective except in relation to gradual loss through overgrazing.

Loss through development has virtually ceased in respect of protected areas, although there remain cases where small pockets of woodland outside of designated sites are at risk of further loss and fragmentation. Better protection of ancient woodland sites is being sought. In England revision of planning policy will provide important safeguards for ancient woodland together with flexibility to clear less valuable woodland areas for public benefit e.g. for non forest biodiversity.

23. Is your country promoting forest law enforcement and addressing related trade?

a) no	
b) review under way	
c) potential measures identified	
d) yes-some measures in place to strengthen law enforcement and address related trade	X
e) yes-comprehensive measures in place to strengthen law enforcement and address related trade	

24. Is your country mitigating the economic failures and distortions that lead to decisions that result in loss of forest biodiversity?	
a) no	
b) review under way	
c) potential measures identified	
d) yes-some measures taken (please provide details)	X
e) yes-comprehensive measures taken (please provide details)	
Further comments on the measures taken to mitigate economic failures and distortions that lead to decisions that result in loss of forest biodiversity	
<p>Woodland Grant Schemes (WGS) in the countries of the UK provide funding for public benefit investment in forests including investment in biodiversity management. National forest strategies are starting to recognise the role of forests in providing environmental services and the WGS are being reviewed in this regard.</p> <p>There are recognised perverse incentives caused, for example, by the development value of land and the Common Agricultural Policy. A report on the Rural Development Regulation by the conservation agencies Land Use Policy Group highlighted some of the impacts of agricultural subsidies. The country reviews of WGS took place within this context. The European Rural Development Regulation allows for payments to maintain and improve the ecological stability of forests where costs exceed those provided through current WGS.</p> <p>The UK Woodland Assurance Standard certification process aims to provide market incentives for sustainable management. Marketing projects are being assisted in providing small scale markets for woodland projects - e.g. woodlots and eco-ads.</p> <p>Research is underway into the value of un-marketed goods and services to the public. A Department for Environment, Food and Rural Affairs (DEFRA) / Forestry Commission (FC) evaluation of the economic, social and environmental benefits of woodland creation has been completed and is available on the FC website. The reports include evaluations of biodiversity, water supply and air pollution. The costs of UK species and habitat action plans will also provide an indication of the costs of maintaining, restoring and expanding forest biological diversity and thereby some of the costs of negative impacts.</p> <p>The economics and funding work stream of the England Biodiversity Strategy will be addressing issues relating to valuation of biodiversity in general and has proposed a programme of research to quantify and value non-market benefits of woodland including flood prevention and alleviation and subsequent pilot trials and demonstrations. English Nature has produced a report on valuing ecosystem functions.</p> <p>Scottish Environment Protection Agency's (SEPA) economists have published the first assessment of the value of Scotland's ecosystems services and natural capital, including the contribution from woodland and forestry habitats.</p> <p>So far there has been no clear way forward on how to incorporate such values into planning and management. However, an accord between the Forestry Commission and the Environment Agency is proposed to help realise the environmental benefits of woodland with regard to water resources.</p> <p>The Department for International Development (DFID) supports the development of capacity to extend certification processes. Possibilities being trialled include simplification of the standard, simplification of the audit process and incentives for small-scale woodlands to increase the standard of management.</p> <p>DFID's Forest Research Programme includes clusters investigating elements of management of upper water catchments, beginning with quantifying forest vegetation-hydrology relationships, socio-economic studies on livelihoods in upper catchments, markets for forest-based environmental services, and payment schemes to compensate upstream land managers by downstream users and consumers.</p>	



25. Is your country increasing public support and understanding of the value of forest biodiversity and its goods and services at all levels?	
a) no	
b) relevant programme under development	
c) yes-some programmes in place	
d) yes-comprehensive programmes in place	X

***If your country wishes to provide additional information on implementation of this programme element, please do this in the following space***

**Question 23 on forest law enforcement and addressing related trade.**

Although Illegal logging is not a significant issue for production within the UK where there is adequate capacity for law enforcement, as a major importer of timber the UK has a key role to play in the international efforts to control illegal logging and promote sustainable timber harvesting. The first bilateral agreement to prevent trade in illegal timber was signed by the UK and Indonesia in 2002. The Department for International Development (DFID) is supporting a range of actions to promote forest law enforcement and governance in producing countries and, through the European Commission, actions in consuming countries update information can be obtained from the illegal logging website<sup>39</sup> managed by the Royal Institute for International Affairs (RIIA) and funded by DFID. HM Customs and Excise in the UK have successfully investigated several cases of imports of illegal timber.

**Question 25 on public awareness).**

The Natural History Museum (NHM) is collaborating with the Ramblers Association (RA) to get the public involved in monitoring the distribution of elm trees in the UK. The results will form ELM map - a database that will be used to guide members of specialist groups as they search for the many threatened species associated with these truly British trees. Members of the public have been provided with basic field guides which highlight the unique community of organisms including lichens, mosses, beetles and butterflies that are supported by elms.

The Royal Botanic Gardens Kew's schools programme addresses forest biodiversity issues and designs training materials for the National Curriculum at primary and secondary school levels. Informally, Kew helps to raise awareness through interpretation materials, visitor tours, festivals and the website.

Kew as a key partner in the Plantas do Nordeste (PNE) Association (Brazil) works with local communities and schools to highlight caatinga forest biodiversity and sustainable use.

Kew staff work with botanic gardens in Brazil and Argentina to develop education programmes for schools and the general public.

<sup>39</sup> [www.illegal-logging.info](http://www.illegal-logging.info)

**Programme Element 3: Knowledge, Assessment and Monitoring**

26. Has your country reviewed and adopted a minimum forest classification system, based on harmonized and accepted forest definitions and addressing key forest biodiversity elements?	
a) no	
b) review under way	
c) review completed	
d) a forest classification system adopted	X
27. Has your country developed national forest ecosystem classification systems and maps that use agreed international standards and protocols?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) yes-classification systems in place	
28. Has your country developed specific forest ecosystems surveys in priority areas for conservation and sustainable use of forest biodiversity?	
a) no	
b) under consideration	
c) relevant surveys being planned	
d) relevant surveys completed (please provide details)	X
e) results of relevant surveys available (please provide details)	
Further comments on the surveys of specific forest ecosystems in priority areas for conservation and sustainable use of forest biodiversity	
<p>Management plans based on survey work have been prepared for Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs), many ancient semi-natural woods and for publicly owned land. Forest Enterprise has surveyed all the main biodiversity priority sites on Forestry Commission (FC) land. A range of both statutory and non-statutory bodies employ specialists to carry out biological surveys and advise on appropriate management on their lands including woodland.</p> <p>Grants have been introduced for survey of privately owned woodland. The Woodland Grant Schemes require surveys at a landscape scale in strategic core areas and further survey work is required of some woodland types - floodplain woods, bog and dune woodlands and high altitude scrub.</p>	

29. Is your country advancing the development and implementation of international, regional and national criteria and indicators based on key regional, subregional and national measures within the framework of sustainable forest management?	
a) no	
b) relevant programme under development	
c) some criteria and indicators developed (please provide details)	
d) comprehensive indicators developed (please provide details)	X
Further comments on the development and implementation of criteria and indicators	
<p>A set of UK Indicators of Sustainable Forestry has been finalised including a cluster relating to forests and biodiversity. These are; populations of woodland birds, progress towards habitat and species action plan targets, condition of woodland sites of special scientific interest, trends in plant biodiversity and areas of ancient woodland under approved management schemes and open for public access.</p> <p>The UK has 'headline indicators' for sustainable development that relate to forest biodiversity (change in woodland breeding bird populations).</p> <p>Results from DFID's Forest Research Programme projects on habitat indicators and rapid biodiversity assessment have been taken up and are being promoted by United Nations Environment Programme (UNEP) in several developing countries.</p> <p>The Natural History Museum (NHM) has developed a methodology that uses Geographic Information Systems (GIS) to combine data from satellite images with data from vegetation surveys to help foresters in Central America manage and conserve tropical forests. The methodology was piloted in the Maya Mountains of Belize.</p> <p>The NHM has helped document the major epiphytic macrolichen communities of the Laguna San Rafael region, which supports some of the richest lichen biodiversity and the highest lichen biomass in Chile. This will enable interpretation of the natural fluctuations in growth and species composition to allow future environmental assessment.</p>	
30. Has your country conducted key research programmes on the role of forest biodiversity and ecosystem functioning?	
a) no	
b) research programs under development	
c) yes-some research programs conducted	X
d) yes-comprehensive research programs conducted	

31. Is your country enhancing and improving the technical capacity at the national level to monitor forest biodiversity, benefiting from the opportunities offered through the Clearing House Mechanism of CBD?	
a) no	
b) capacity building programme under development	
c) yes-some programmes in place (please provide details)	X
d) yes-comprehensive programmes in place (please provide details)	
Further comments on the programmes to enhance and improve the technical capacity at the national level to monitor forest biodiversity	
<p>The UK took part in the IBP [acronym?] ecosystem projects and subsequently has contributed to other programmes. Monitoring systems include basic condition assessment of protected sites; various sites where longer term time-series work is underway, in particular the UK Environmental Change Network programme.</p> <p>The Department for International Development (DFID) has examined the role of forest biodiversity in livelihoods and how to link policy and practice (see ISBN 1 899 825 673). DFID's Forestry Research Programme has supported research in a number of relevant areas.</p> <p>Natural History Museum (NHM) scientists, supported by the UK's Darwin Initiative, have helped produce biodiversity inventories for the Mbaracayu Forest Nature Reserve in Paraguay. The reserve is one of the last intact pieces of Atlantic rainforest in Paraguay, and is an endangered habitat world-wide. The NHM helped build local capacity for producing the inventory; trained local Guaraní and Ache people as parataxonomists to participate in and continue the inventory and to act as a conduit for the communication of information about natural history to local communities in the buffer zone; established a local reference collection in the Science Center at the Mbaracayú Forest Nature Reserve; and developed popular field guides in Spanish and Guaraní of striking organisms in the reserve for use by future ecotourists.</p>	

*If your country wishes to provide additional information on implementation of this programme element, please do this in the following space*

**Question 30 on Research programmes** The Natural History Museum (NHM) has led studies in Panama and Ecuador on the germination characteristics of tropical tree species, how long the seeds of different pioneer tree species survive in the soil, and on the spatial and temporal patterns of seed dispersal in comparison with patterns of seed germination. This information has greatly improved our understanding of the constraints on timing of reproduction in tropical forests and the impact of this on tropical forest dynamics, species diversity and the spatial distribution of tropical trees.

The NHM has produced the first ever field guide to the Smaller Moths of South East Asia following many years of collecting, research and identification work in the tropical forests of Malaysia, and Brunei.

**Question 31 on capacity building.** The Royal Botanic Gardens Kew produces, in collaboration with partners, tools for identification and monitoring (floras, field guides, conservation checklists), and is actively working to make information in its collections, databases and publications more widely available to taxonomists and conservationists internationally e.g. projects to repatriate information and images of type specimens, and to digitise floras and create web databases.

Kew has developed a suite of international diploma courses aimed at senior-level practitioners, on policy and practice within areas such as conservation techniques and herbarium techniques. Kew also offers internships in a wide range of disciplines to promote long-term capacity building.