

PART III – ANALYSIS OF UK ECONOMIC SECTORS

17 INTRODUCTION

17.1 Background

17.1.1 This part of the report provides an analysis of the impacts of a shortlist of UK **economic sectors** on international biodiversity.

17.1.2 In undertaking the shortlisting and investigating the selected sectors we sought to focus our attention on impacts on biodiversity in the *less* developed world. For this reason, the analysis presented here does not as a rule include reference to impacts on biodiversity within OECD / EU countries.

17.2 UK economic sectors

17.2.1 In order to identify economic sectors for screening against the drivers of biodiversity loss, we firstly identified a series of sector classification schemes which seek to categorise UK business activity. Following an initial examination of these, we settled on using the sector classification employed by UK Trade & Investment¹⁴⁷ as the basis for the screening exercise. The screening exercise is documented in Volume 3.

17.2.2 In light of the screening exercise the following six sectors were shortlisted for investigation into their impacts on international biodiversity:

- Energy
- Food supply
- Forestry
- Mining
- Tourism
- Transport

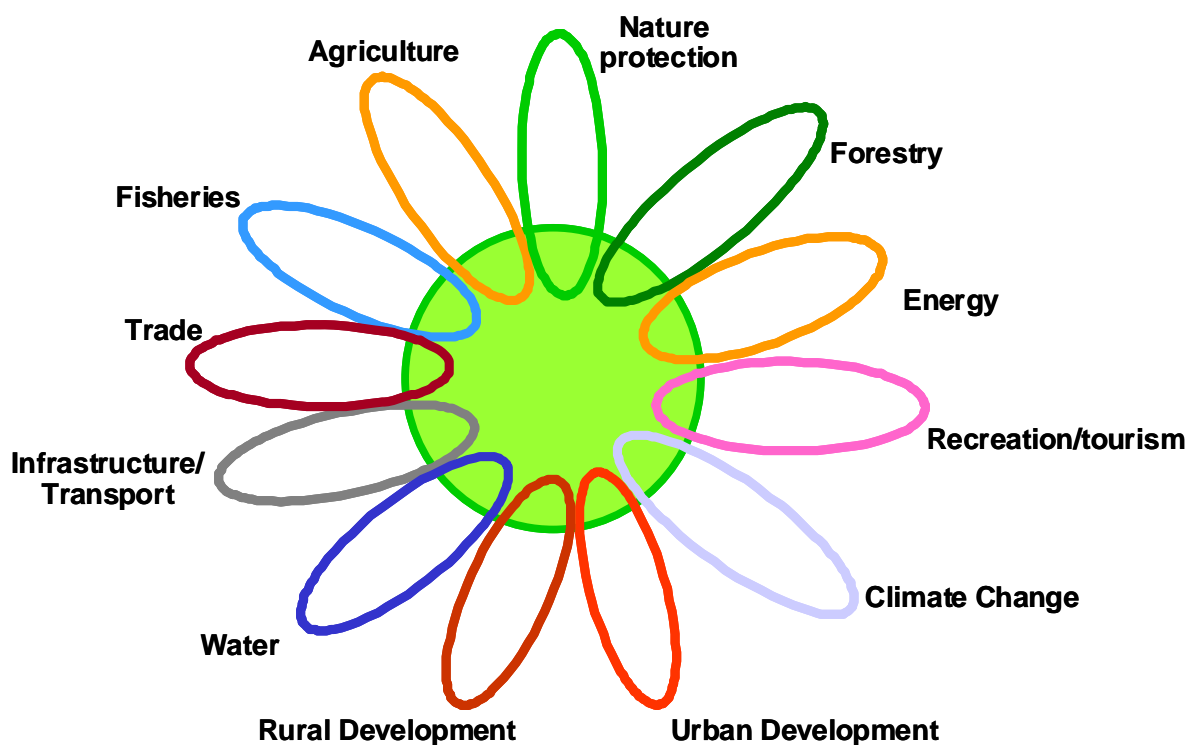
17.2.3 These sectors encompass many of the key activities that impact on biodiversity as identified by the European Environment Agency – see Figure 10. The shortlisted sectors are broad in their scope and encompass several ‘sub-sectors’. For example, energy encompasses oil and gas, nuclear power and renewables. Those sectors not shortlisted for consideration may also have impacts on international biodiversity; however, these were considered to be too localised (e.g. in the case of impacts arising from the UK construction sector), marginal (e.g. in the case of impacts arising through the biotechnology and pharmaceutical sector) or tangential (e.g. in the case of the creative and media sector facilitating increased trade and consumption through advertising).

17.2.4 It should be noted that all the sectors identified by UK Trade & Investment will impact on the climate change driver through energy use and the majority will also impact on the pollution driver through waste generation. It is also important to distinguish between producers or manufacturers (e.g. oil and gas companies) and

¹⁴⁷ UK Trade & Investment is a Government organisation that seeks to support companies in the UK doing business internationally and overseas enterprises seeking to set up or expand in the UK. For further information please see www.uktradeinvest.gov.uk.

users (e.g. car drivers) when considering where responsibility for impacts ultimately lies.

Figure 10: Activities impacting on biodiversity¹⁴⁸



17.3 Assessment framework

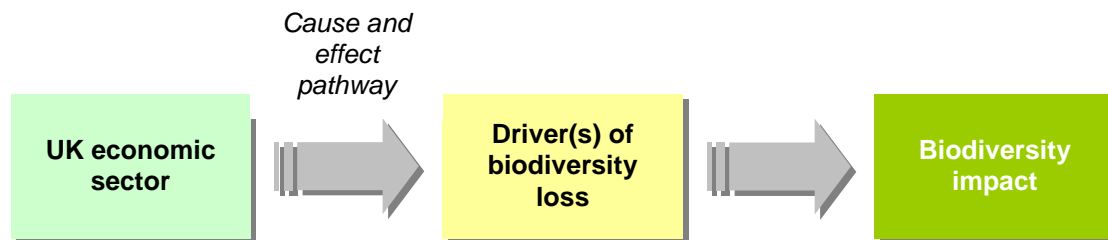
17.3.1 In order to assess the implications of the six shortlisted sectors for biodiversity we once again documented their potential impacts on the five direct drivers of biodiversity loss – see Chapter 3. In order to identify potentially significant impacts as well as ‘leverage’ opportunities for the UK Government, we also identified a range of **spatial and geographical factors** which we took into account in undertaking the assessment – see Chapter 18. These included areas of biodiversity value globally where impacts on biodiversity might be disproportionately significant (e.g. the WWF’s Global 200 Ecoregions) and areas of British influence or investment where UK Government actions to promote the protection of biodiversity might have greater traction (e.g. the Commonwealth and those countries that are the recipients of significant UK development assistance). In addition, for each sector we also highlighted some current initiatives which could provide the UK Government with a platform or entry point for future or enhanced action (e.g. in the case of Food supply, the Round Table on Sustainable Palm Oil and the Marine Stewardship Council).

¹⁴⁸ See www.unep-wcmc.org/conventions/harmonization/workshop04/ppts/Gordon_McInnes.ppt

17.4 Undertaking the assessments

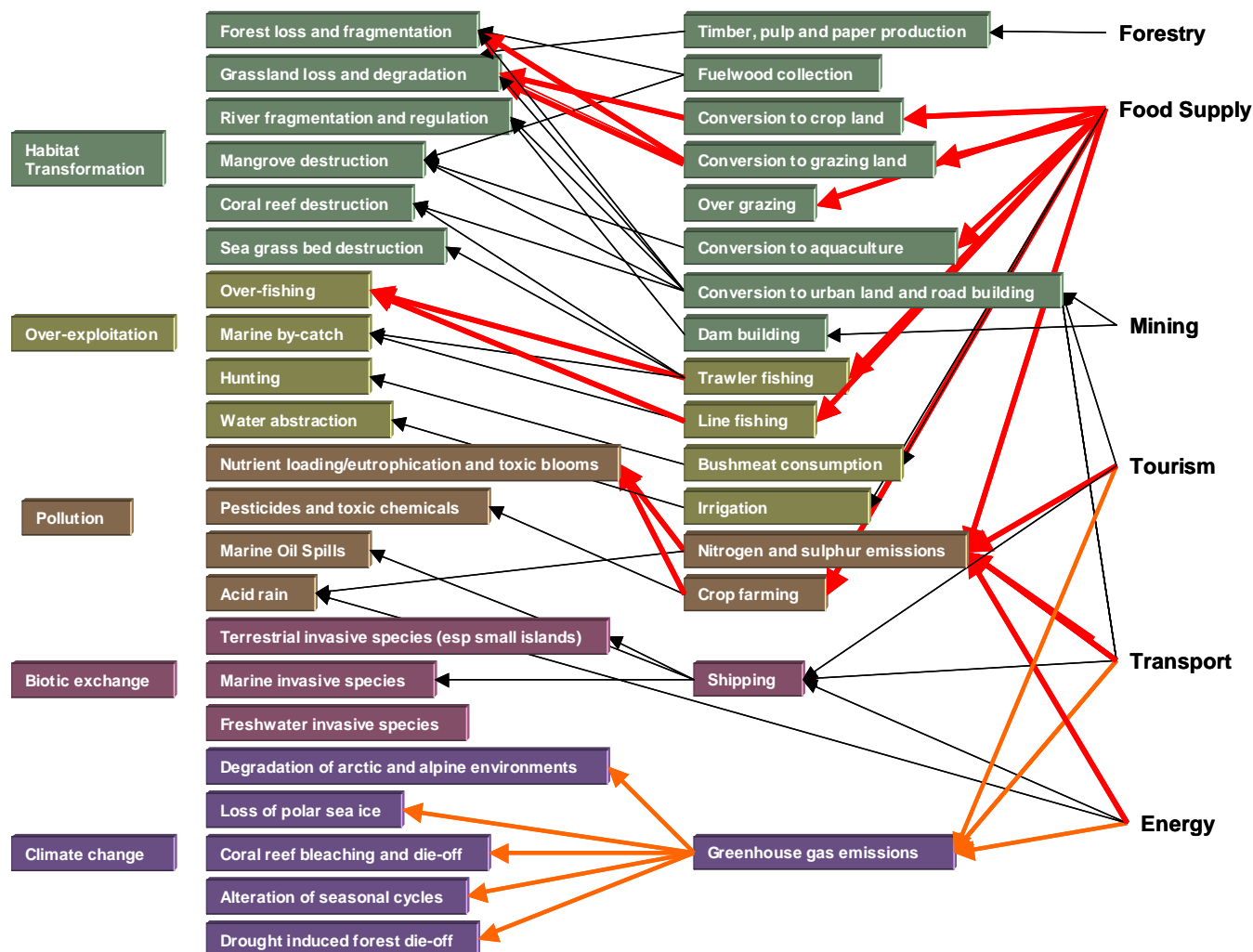
17.4.1 In undertaking the sector assessments, we have sought to identify cause-and-effect pathways: how do the *activities* of different sectors impact on the direct drivers of biodiversity loss (and ultimately on habitats and species)? (see Figure 11).

Figure 11: Identifying cause-and-effect pathways



17.4.2 To assist us in identifying cause-and-effect pathways, Figure 12 provides an indication of some of the activities linked to the different sectors and their links to biodiversity impacts and drivers. The bold red arrows show issues that have been identified as major causes of biodiversity loss by the MA. The orange arrows highlight the growing threat of climate change.

Figure 12: Sectors, activities and links to biodiversity impacts and drivers



17.4.3 The findings of the sector assessments are documented in chapters 19 – 24. Given the amount of information to document, rather than use tables (as we did for the commitments and policies), the information is presented in the form of a 'briefing paper' for each shortlisted sector.

18 SPATIAL AND GEOGRAPHICAL FACTORS

18.1 Introduction

18.1.1 In order to help identify the impacts of the shortlisted sectors on biodiversity and to highlight potential ‘leverage’ opportunities for the UK Government, we identified a series of **spatial and geographical factors** which we took into account in undertaking the assessments. These included areas of biodiversity value globally where impacts on biodiversity might be disproportionately significant (e.g. the WWF’s Global 200 Ecoregions) and areas of British influence or investment where UK Government actions to promote the protection of biodiversity might have greater traction (e.g. the Commonwealth and those countries that are the recipients of significant UK development assistance). The spatial and geographical factors are introduced in the sections that follow.

18.2 Areas of biodiversity value

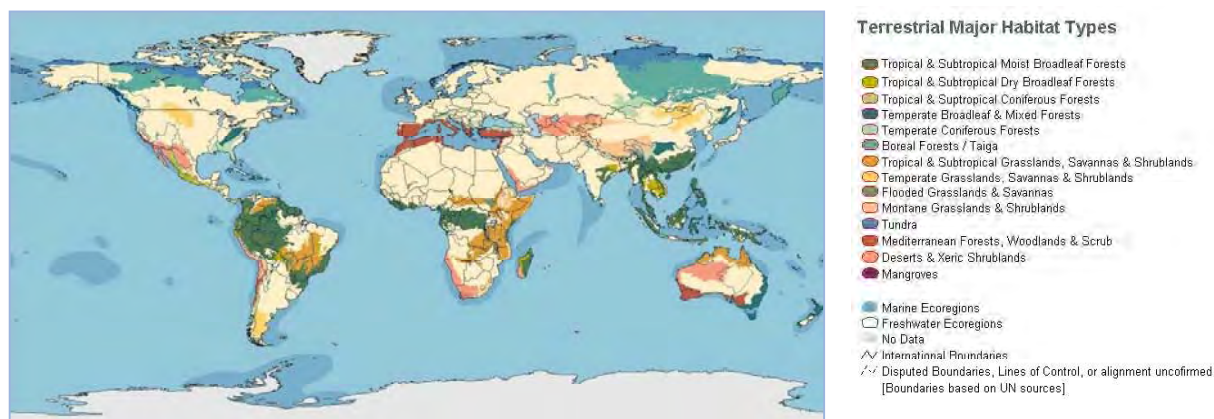
18.2.1 Some areas are more important and / or sensitive with regards to biodiversity than others. Box 4 introduces several initiatives that have identified key areas of global biodiversity value. For the purposes of this assessment, we have used the WWF’s Global 200 Ecoregions – see Figure 13 - as a means to help identify sectoral impacts. These ecoregions were selected by WWF on the basis of criteria including species richness and endemism.

Box 4: Areas of global biodiversity value

There are three main studies focusing on areas of global biodiversity value:

- **WWF Global 200 Ecoregions**
 - 7 biogeographic realms
 - Ecoregions that represented the most distinctive examples of biodiversity for a given major habitat type were identified within each biogeographic realm. They were chosen based on the following parameters:
 - Species richness
 - Endemism
 - Higher taxonomic uniqueness
 - Extraordinary ecological or evolutionary phenomena
 - Global rarity of the major habitat type
- **Conservation International Biodiversity Hotspots**
 - 34 biodiversity hotspots
 - Must contain at least 1,500 species of vascular plants (>0.5% of the world’s total)
 - It has to have lost at least 70% of its original habitat
- **Millennium Ecosystem Assessment Biogeographical Realms**
 - Biogeographical realms are large spatial regions within which ecosystems share a broadly similar biological evolutionary history. These realms are split into 14 biomes.

Figure 13: WWF Global 200 Ecoregions

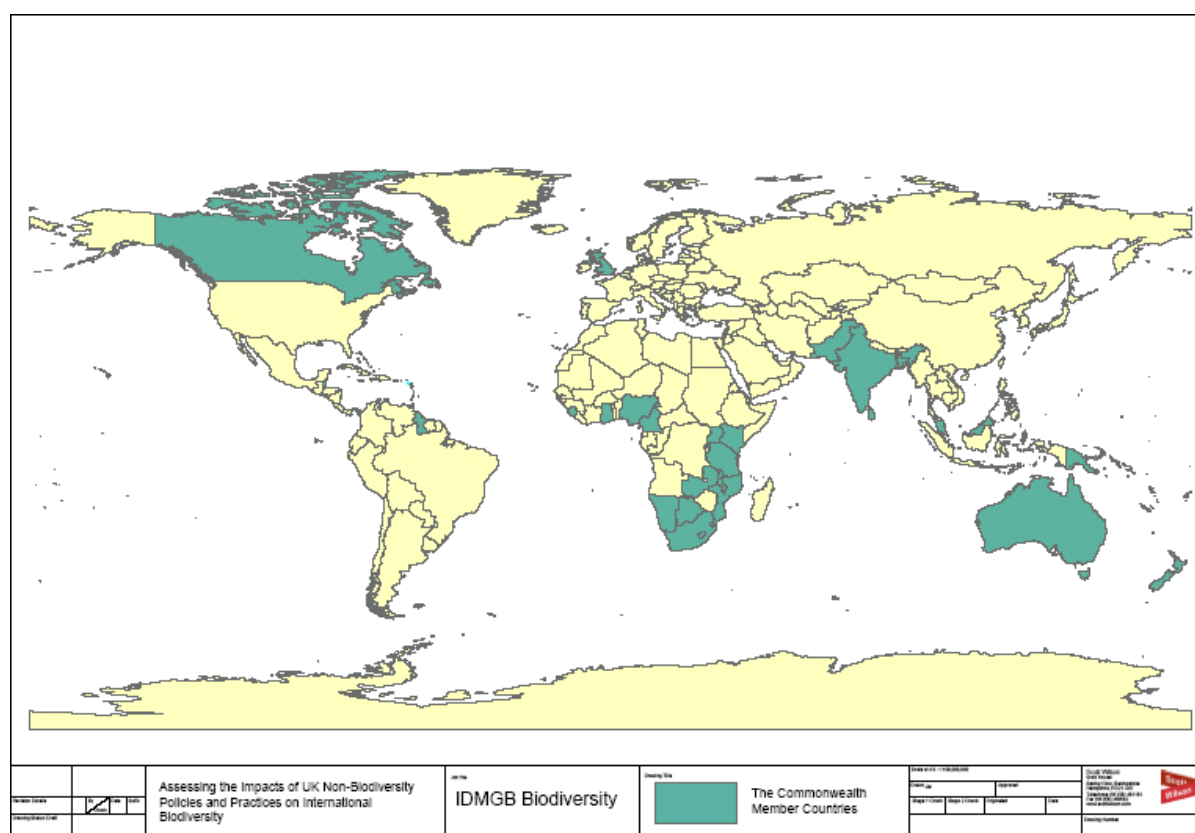


18.2.2 Although we have used the WWF's G200 Ecoregions to assist us in identifying sectoral impacts on biodiversity, it is important not to lose sight of the value that biodiversity in more marginal habitats can have for local people, i.e. for sustainable livelihoods. In other words, it is important to consider the instrumental as well as intrinsic value of biodiversity.

18.3 The Commonwealth

18.3.1 The British monarch is the head of the Commonwealth of Nations (usually known as The Commonwealth), a voluntary association of 53 independent sovereign states (see Figure 14), all of which, with the exception of Mozambique, are former colonies of the United Kingdom. The Commonwealth is home to around 2 billion citizens (around 30% of the world's population). The Commonwealth provides a forum for co-operation between member countries and seeks to promote, among other things, democracy, human rights and good governance.

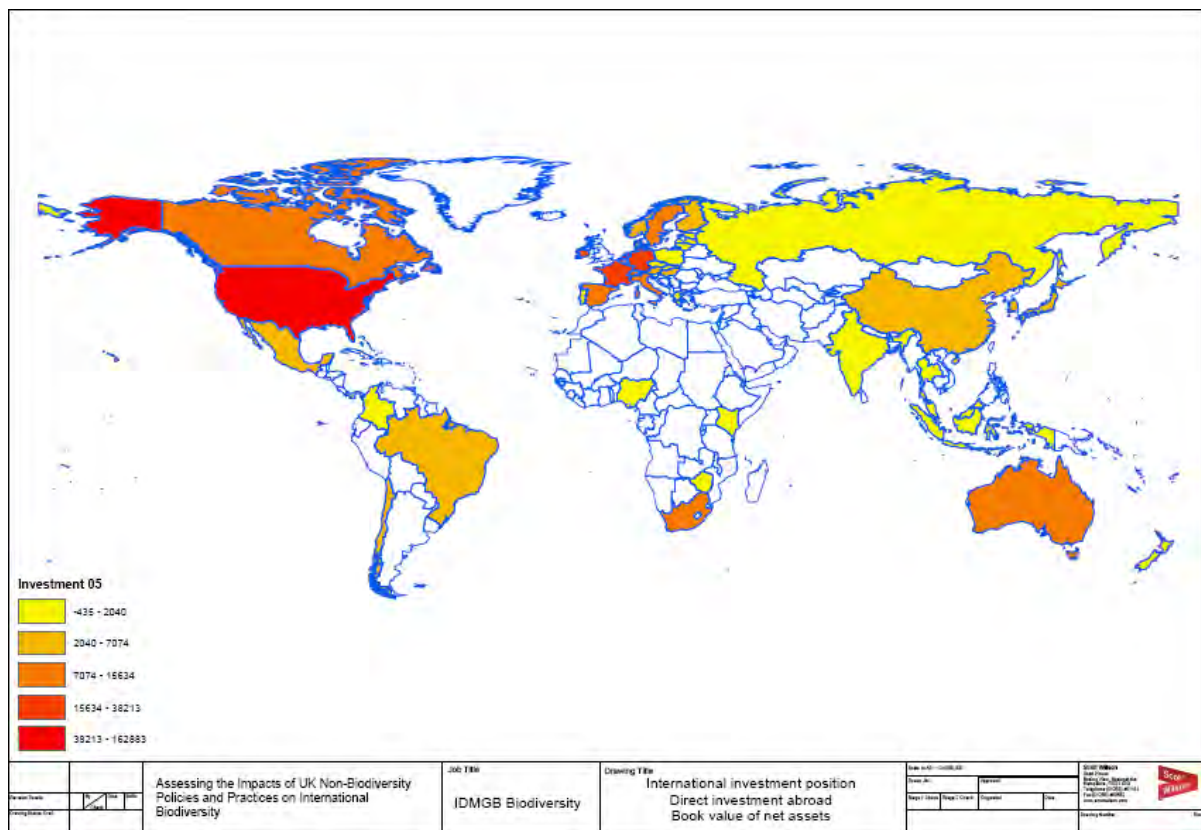
Figure 14: Current members of the Commonwealth



18.4 UK investment abroad

18.4.1 The level of foreign direct investment (also called the International Investment Position) by UK companies at the end of 2005 was £713.4 billion, a rise of £67.6 billion from the end of 2004¹⁴⁹. Figure 15 maps the spatial distribution of foreign direct investment and demonstrates that the majority of this is concentrated in the developed world (with 82% going to OECD countries).

Figure 15: UK direct investment abroad (source: JNCC)



¹⁴⁹ National Statistics (2005). Foreign Direct Investment 2005

18.5 Development assistance

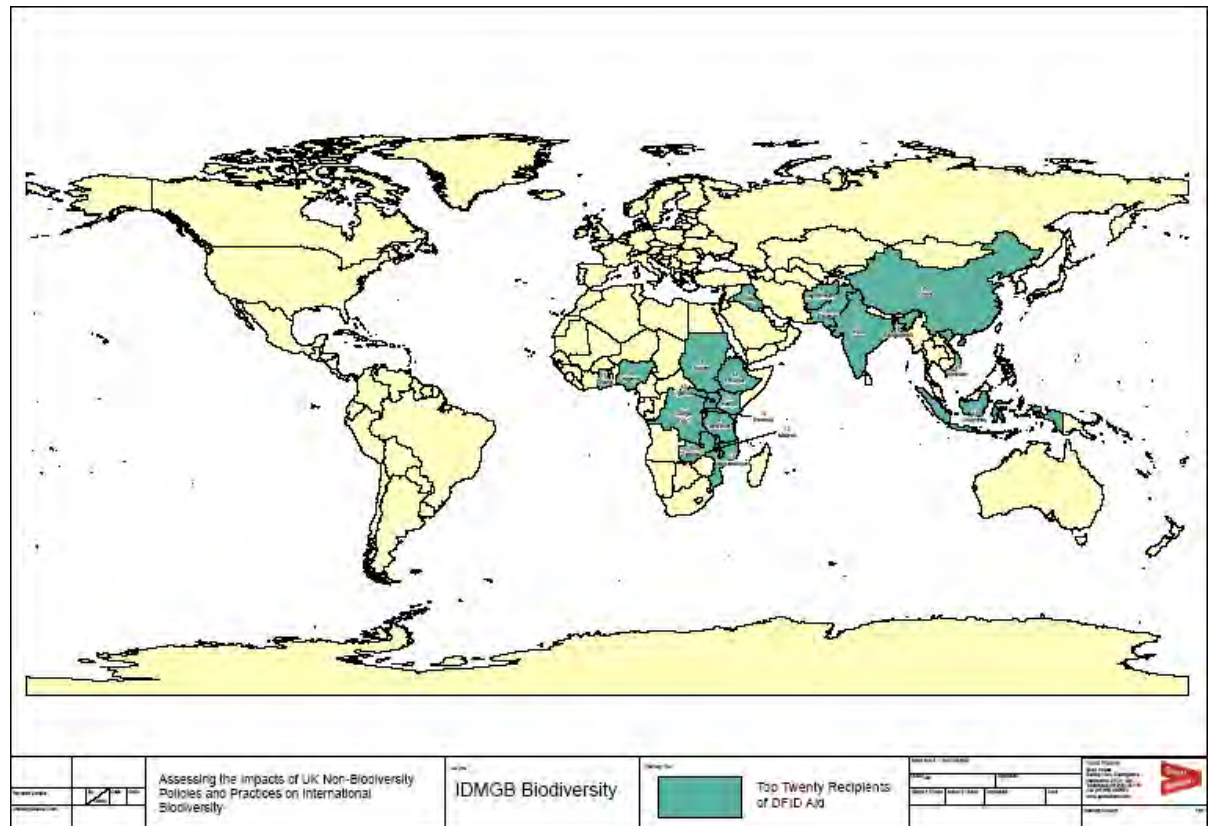
- 18.5.1 The UK Government, through DFID, provides bilateral development assistance to developing countries throughout the world (multilateral assistance is provided through international organisations). Table 20 and Figure 16 below highlight the top twenty recipients of DFID bilateral aid.

Table 20: Top twenty recipients of DFID bilateral aid¹⁵⁰.

Rank	2003 / 04		2004 / 05		2005 / 06	
	Country	£m	Country	£m	Country	£m
1	Iraq	209	India	259	India	253
2	India	198	Bangladesh	128	Bangladesh	123
3	Tanzania	80	Tanzania	97	Sudan	117
4	Afghanistan	80	Sudan	84	Tanzania	113
5	Ghana	68	Afghanistan	80	Afghanistan	98
6	Pakistan	66	Ghana	72	Pakistan	97
7	Uganda	56	Ethiopia	62	Ghana	95
8	Bangladesh	55	Uganda	61	Iraq	87
9	Malawi	54	Malawi	56	Nigeria	78
10	Ethiopia	43	Iraq	49	Uganda	72
11	South Africa	42	Mozambique	48	Rwanda	70
12	Mozambique	36	Nigeria	47	Malawi	69
13	Sierra Leone	34	Rwanda	43	Kenya	63
14	Zimbabwe	34	Vietnam	40	Ethiopia	63
15	China	32	China	36	Congo	59
16	Nepal	32	Kenya	35	Indonesia	58
17	Nigeria	31	Nepal	35	Vietnam	58
18	Zambia	28	Indonesia	34	Mozambique	56
19	Rwanda	27	Pakistan	31	Zambia	48
20	Kenya	26	South Africa	31	China	35
Total: Top 20 recipient countries		1,233		1329		1711
Total: Bilateral aid		1961		2112		2504
Proportion of Total to Top 20		63%		63%		68%

¹⁵⁰ Statistics on International Development 2001/02-2005/06 (available from: <http://www.dfid.gov.uk/pubs/files/sid2006/sid06-full.pdf>)

Figure 16: Top twenty recipients of DFID bilateral aid (2005 / 06)



18.6 Sustainable Development Dialogues

18.6.1 The UK has established Sustainable Development Dialogues (SDDs) with five countries: China, India, Brazil, South Africa and Mexico – see Figure 17. The SDDs are conceived as a mechanism for engaging leading emerging nations in a proactive partnership for sustainable development.

Figure 17: Sustainable Development Dialogue countries

