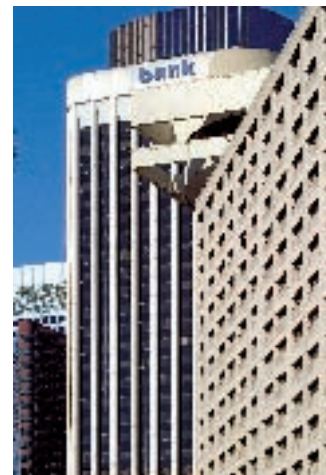


The biodiversity footprint of UK Foreign Direct Investment



Joint Nature Conservation Committee
Spring 2009



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As part of its Global Impacts Programme, the Joint Nature Conservation Committee is developing techniques to track commodities coming into the UK and investments flowing out with the objective of linking these flows of resources to potential ecosystem impacts around the world.

In 2007 the UK economy was the second largest global source of Foreign Direct Investment, after the USA. Over 75% of this investment goes into the developed economies of Europe and North America but there are significant flows into the developing and transition economies of South America, Africa and the Commonwealth of Independent States. In these regions the exploitation of natural resources and increasing food production, to meet national and global demands, poses risks to ecosystems and biodiversity.

The JNCC work on Foreign Direct Investment is tracking the flow of UK funds overseas using official statistics. The work highlights the risks and opportunities in respect of potential biodiversity impacts arising from these investment flows. This initial report by JNCC sets the scene for future work by describing recent global trends in FDI, identifying key sectors and geographical regions and characterising the nature of the biodiversity impacts and opportunities that may arise through UK investments overseas. The global financial crisis of 2008 will affect the scale and nature of these investments and JNCC will monitor new trends and patterns as the UK and global economies adjust and recover.

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I.1 Global Foreign Direct Investment (FDI)

In 2007 global flow of Foreign Direct Investment (FDI) exceeded \$1.8 trillion growing 30% on the previous year. FDI accounts for half of all net capital flows into developing countries, reaching a record \$500 billion in 2007, with the developed countries currently providing the major source of funding. Trans National Companies (TNCs) are the leading sources of FDI accounting for over 80% of global outflows. This investment has the ability to impact upon the environment in countries receiving investment but also provides the opportunity for corporations and investment institutions based in developed countries to apply and share sustainability best practice within their business sector.

Three principal FDI groups are recognised, namely; primary resources, manufacturing and services. Since 2002, there has been a steady overall growth in global FDI with increased investment in services, particularly financial services, and less direct investment in manufacturing. Investment into primary resources showed a relative decline until 2006 but in some regions has seen resurgence in response to increased primary commodity prices.

I.2 UK Foreign Direct Investment

There has been an overall increase in *annual* flows of investment funds from the UK over the period 2002-2007 reaching £49 billion in 2006 (UK Office of National Statistics) increasing three fold to £150 billion in 2007 (UNCTAD figures). The UK was the 2nd largest global source of outward FDI in that year after the USA. Over 75% of UK FDI goes into Europe and North America¹ but the principal areas of interest for this report are outside these regions, lying in a suite of countries across South America, Africa, and Eastern Europe. Although these countries attracted less than 5% of total UK FDI in 2006 these areas contain some of the world's largest growing global economies (including Brazil and Russia) and large areas of land which are potentially available for production of agricultural foodstuffs, biomass based fuels and exploitation of other natural resources. Pressure on global biodiversity will inevitably result from these activities along with associated infrastructure developments.

The UK is one of the major sources of global foreign investment and UK based Trans National Corporations have a significant global role in transferring environmental best practice and promoting the value of ecosystems and biodiversity.

¹ Based on 2006 statistics breakdown

I.3 Sustainable development implications for UK FDI

The UK is one of the major global sources of FDI. UK based Trans National Corporations, therefore, have a significant potential role to play as sector leaders in transferring environmental best practice to host countries. Understanding this role requires knowledge of FDI flows, not only in terms of countries and business sectors receiving UK FDI, but also requires identification of those sectors that are most significant in terms of their biodiversity impacts. Different business sectors have different potential biodiversity impacts. Combining biodiversity impact analysis with the review of the nature and distribution of UK FDI suggests that the following investment sectors are of most relevance in terms of level of investment and/or likely environmental impacts within receiving countries:

- ▶ financial services;
- ▶ food products and agriculture, forestry & fishing;
- ▶ extractive industries.

JNCC has undertaken new work and collated existing studies to characterise these sector impacts and identify sources of information for use in identifying corporate leaders in each sector.

Patterns of foreign investment flow vary through time reflecting global economic cycles and changing corporate priorities. The events of 2008 will have an impact on the scale and nature of future FDI by the UK economy. This initial report by JNCC on FDI sets the scene for future work. This work will track these changes on an annual basis and JNCC will monitor and report on the implications of UK FDI into new geographical areas involving those investment sectors regarded as important for biodiversity.

Scope and purpose of JNCC work on Foreign Direct Investment

The UK's priorities for International Sustainable Development include promotion of corporate social responsibility. The high level aim in respect of this priority is for government to foster:

'...an enabling environment for responsible business practice to maximise the positive contribution that business can make to the UK's objectives on international sustainable development - including human rights, trade and investment, poverty eradication, environmental protection and corruption - whilst at the same time effectively tackling adverse impact'².

Foreign Direct Investment, and the TNCs that invest these funds, have a significant global role both in global economic development and in managing the environmental impacts that accompany such developments. JNCC has developed a work project to monitor UK FDI and characterise its potential biodiversity impacts in terms of geography and business sector. The work also identifies sources of information to help identify UK corporations that may act as sector leaders for demonstrating best environmental practice.

Approximately 75% of UK FDI goes into developed economies in Europe and North America where the impact of UK investment is likely to be minimal and scope for UK business to transfer and encourage best practice equally limited. Global FDI into the developing and transition economies located in South America, Africa and Eastern Europe is playing a key role in their growth and the UK is a significant contributor to these monetary flows. These regions of the planet have large areas of land that are seen as available for food and biofuel production and valuable mineral and forest resources. Increased food production and natural resource exploitation carry with them the potential for significant environmental impacts through land use change, infrastructure development and a variety of other pressures. All of these pressures can seriously affect biodiversity, with land use change probably being the most significant.

JNCC's work on FDI is directed towards monitoring and reporting on changing trends and patterns of UK overseas investment and highlighting the risks and opportunities in the context of those areas of the world where biodiversity is most vulnerable.

Key elements of the JNCC work on UK FDI are to:

- ▶ put the UK FDI streams into a global context (using UNCTAD reports);
- ▶ identify key FDI sectors attracting UK investment (using UK Office of National Statistics data) based on sector impacts and their relative importance in attracting funding flows;
- ▶ identify key countries within the priority regions of South America, Sub-Saharan Africa and Eastern Europe where UK investment is important, quantifiable and traceable to specific business sectors;
- ▶ characterise the biodiversity impacts of key business sectors through new work or collation of existing studies;
- ▶ identify mechanisms for recognising key UK Trans National Companies that may be regarded as sector leaders demonstrating environmental management best practice; and,
- ▶ publish an annual overview of UK FDI highlighting trends, identifying data sources and drawing attention to emerging issues in respect of the links between investment flows and biodiversity impacts overseas.

The objectives of the JNCC work on UK FDI are to highlight trends in terms of key investment sectors, characterise sector impacts and the geographical areas where these impacts may occur. Detailed evaluation of impacts arising within individual countries is beyond the scope of the work programme.

The events of 2008 will have an impact on the scale and nature of future FDI by the UK economy. This initial report by JNCC on FDI sets the scene for future work. This work will track these changes on an annual basis and JNCC will monitor and report on the implications of UK FDI into new geographical areas involving those investment sectors regarded as important for biodiversity.

² www.defra.gov.uk/sustainable

Data sources for Foreign Direct Investment

3.1 Overview

UK and UN sources of FDI statistics have been utilised in the preparation of this report. These sources have been accessed either directly by JNCC or through contracted work undertaken by GHK on JNCC's behalf³.

Principal sources include:

- ▶ *UK Office for National Statistics*: UK business investment abroad (Foreign Direct Investment) is surveyed annually by the Office for National Statistics (ONS), the government department responsible for collecting and publishing official statistics about the UK's society and economy;
- ▶ *UNCTAD country and sector reports*: UNCTAD analyses FDI trends and their impact on development, compiles data on FDI⁴ and has a comprehensive online database⁵.

The two key reporting mechanisms used in this report are measures of annual FDI **flows** and the cumulative FDI **value** (investment position). The former statistics reflect year-by-year trends, the latter are an indication of long term value and growth of FDI. Care should be taken when reading numbers within the text or in diagrams to discriminate between these two indicators. In some cases value is a more useful indicator being independent of year by year flow fluctuations which, in years of net disinvestments, may actually be negative.

At the time of writing, detailed statistics for UK FDI have not been released for 2007 and this report uses 2006 statistics. UNCTAD has published (September 2008) their annual FDI report⁶ which covers 2007 and released the associated database from which gross figures for UK FDI can be obtained, but contain no sector details.

For some countries receiving UK FDI, there are major problems determining into which business sectors the money is flowing. Based on official statistics for 2006, 99.5% of UK investment into Russia remains confidential. Other sources must be used to assess how this money has been invested.

3.2 Significant data gaps

Vital for understanding the implications of UK outward FDI is an analysis of which business sectors are involved in the key host countries, but significant gaps have been identified. Examples of data gaps identified by GHK in respect of the 2006 data from the UK ONS Business Monitor MA4 report are:

- i good data coverage is available for India and South Africa, where sectoral data is undisclosed for only between 6% and 12% of the total UK investment in each respective country;
- ii there is reasonable data for Brazil (28% unknown) and China (37% unknown). By contrast, the 2004 sectoral data for China was virtually complete with almost all of the total investment allocated to individual sectors;
- iii there are significant confidentiality issues concerning UK investment in Indonesia (73% unknown) and Russia (99.5% unknown).

These data sets, and their limitations, are discussed in more detail in the GHK report.

The ability of the UK ONS to identify the different sectors attracting UK investment in certain key countries appears to vary through time. When such information is not available through ONS datasets other sources need to be used, such as host country national datasets, major company annual reports and business analyst reports. The reliability of these sources varies but their use can provide useful background information to supplement the ONS data.

³ Available on www.ukglobalinfluence.org/UKFDI

⁴ www.unctad.org/en/docs/wir2008_en.pdf

⁵ <http://stats.unctad.org/FDI>

⁶ WORLD INVESTMENT REPORT 2008 UNITED NATIONS New York and Geneva, 2008-11-12. www.unctad.org/en/docs/wir2008_en.pdf

Global trends in FDI – investors, recipients and sector analysis

4.1 Foreign Direct Investment background

Overseas (out of country) investment by private sector business is a major driver of the global economy. This Foreign Direct Investment is defined as investment ‘made to acquire lasting interest in enterprises operating outside of the economy of the investor’⁷.

In terms of targeting investments, and funding sources, there are three main categories of FDI:

- ▶ Greenfield investment in new facilities or the expansion of existing facilities;
- ▶ Mergers and Acquisitions (M&A) - Cross-border acquisitions occur when the control of assets and operations is transferred from a local to a foreign company, with the local company becoming an affiliate of the foreign company;
- ▶ Reinvested earnings where local profits are reinvested in the country in which they are made rather than repatriated as net earnings.

4.2 Foreign Direct Investment overview for 2006 and 2007

In 2007 global flow of FDI exceeded \$1.8 trillion (£1250 billion at the then exchange rate) growing 30% on the previous year. This FDI growth reflected high economic growth and increased corporate profits but UNCTAD⁸ estimates the global economic slowdown in 2008 will result in a 10% decline in FDI flow rates for the year although it predicts that developing countries may be less affected. FDI accounts for half of all net capital flows into developing countries reaching a record \$500 billion in 2007 whilst the developed countries currently provide the major source of funding. These investment flows carry the potential to impact

upon the environment in countries receiving investment and provides the opportunity for corporations and investment institutes based in developed countries to apply and share sustainability best practice in the developing world.

The developed country TNCs are the main source of FDI, accounting for 84% of global outflows in 2006 and half of world outflows of investment funds originate from the European Union. TNCs from developing and transition economies were growing in importance through to 2006 with \$193 billion, or 16% of world FDI, originating in these countries in that year led by China and Russia. The role of TNCs is expanding and although manufacturing and petroleum companies are still important their role in the services sector is now growing.

FDI inflows accounted for half of all net capital flows to developing countries and this represents a significant source of funding for developing countries. The role of TNCs in providing FDI, and the influence of both in influencing sustainable development policy in recipient countries needs to be recognised and addressed.

Figure 1. Global sources of FDI (flow) for 2007.

Source: data from UNCTAD

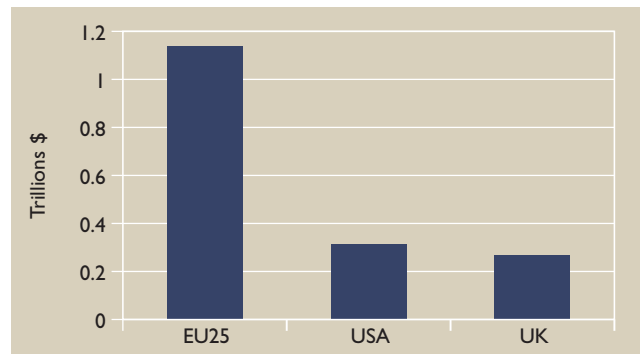
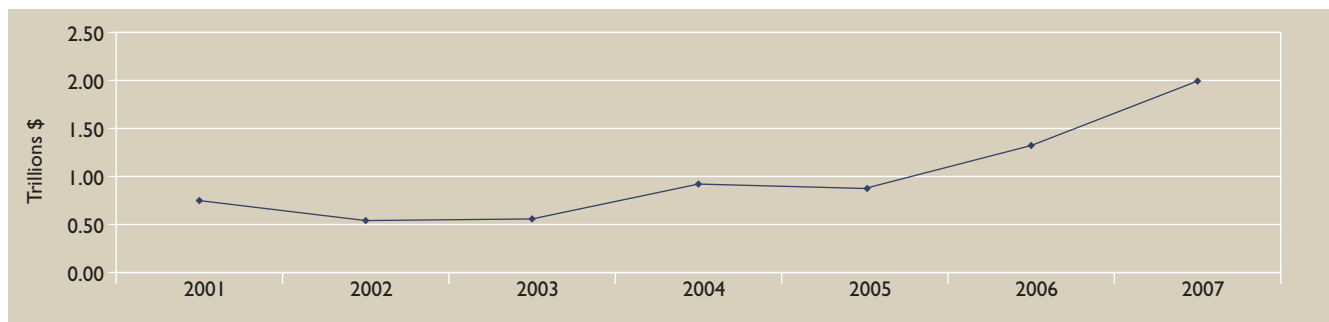


Figure 2. Global outward FDI (flow) 2001 – 2007. Source: data from UNCTAD



⁷ UK Office of National Statistics.

⁸ WORLD INVESTMENT REPORT 2008 UNITED NATIONS New York and Geneva, 2008-11-12.

www.unctad.org/en/docs/wir2008_en.pdf

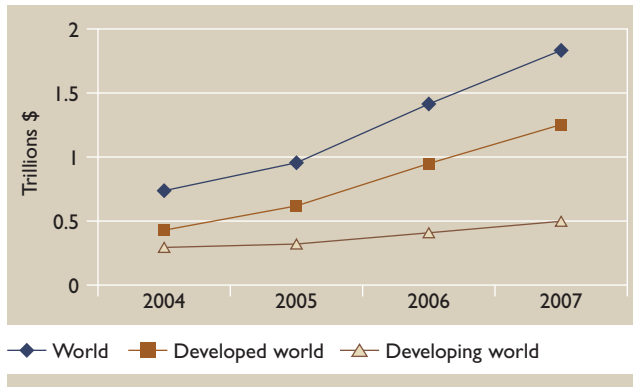
4.3 Geographic patterns of FDI flow

The established pattern of FDI flows, with investments moving from 'north' to 'south', has changed in recent years. Prior to 2008, new countries were emerging as significant originating and receiving economies. FDI from developing

and transition economies and the growth of 'South-South' FDI were important recent trends with outflows of \$253 billion in 2007. Well established bilateral relationships between individual countries, which have dominated international investment flows, are being replaced by a more complex global position, reflecting the involvement of more countries.

Figure 3. Global FDI inflow.

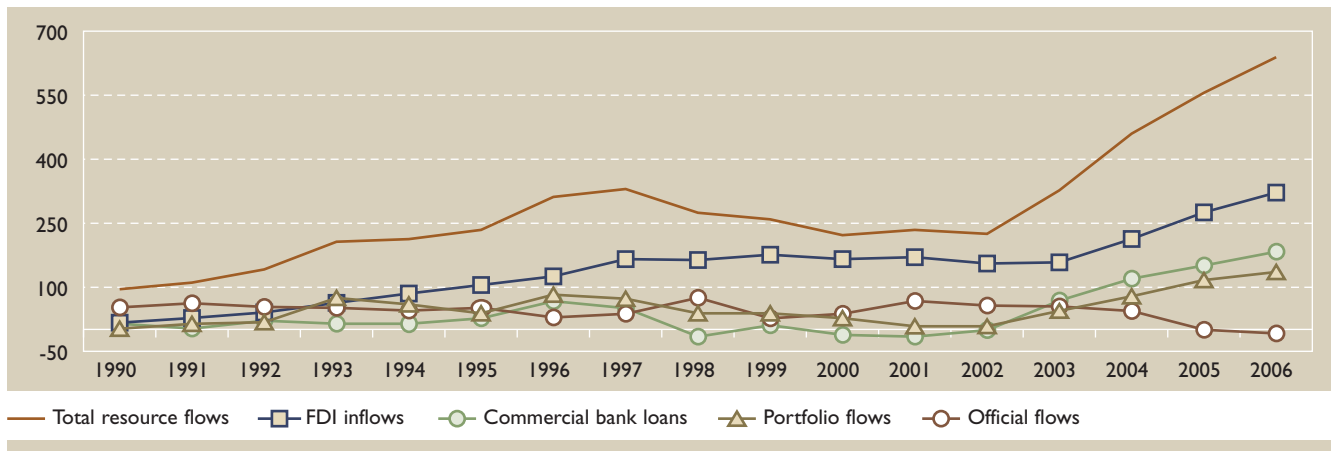
Source: data from UNCTAD.



In spite of these changing patterns of FDI flow, the developed countries currently still provide the major source of funding with outflows from developed countries growing by 45% in 2006 to \$1 trillion and continuing to grow to \$1.5 trillion in 2007. The United States and four EU countries comprised the 5 largest outward investor economies in the world. Within the EU France, Spain, the UK and Germany are the major FDI sources.

Developing countries saw record inflows of investment in 2007 reaching £500 billion, about 27% of global FDI flows with Asia being the recipient of almost half of this investment. However, Latin America saw the largest increase (36%) on the previous year.

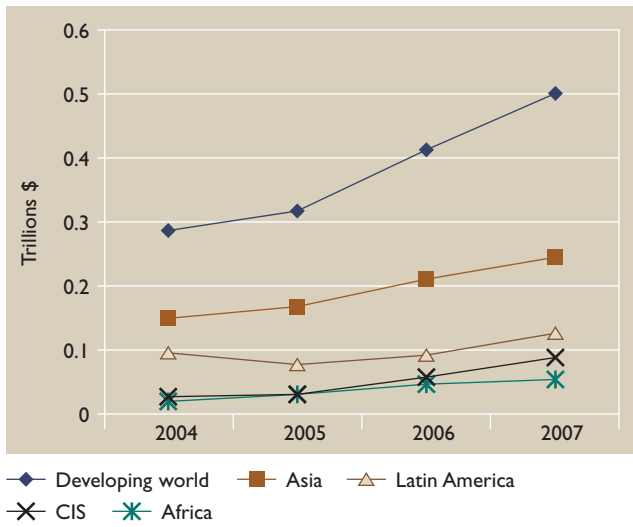
Figure 4. Net resource flows (billions of US\$) to developing countries by type of flow, 1990-2006. Source: UNCTAD



In recent years there has been a resurgence of global investment into primary industries such as mining and quarrying. © Markwr/Dreamstime.com

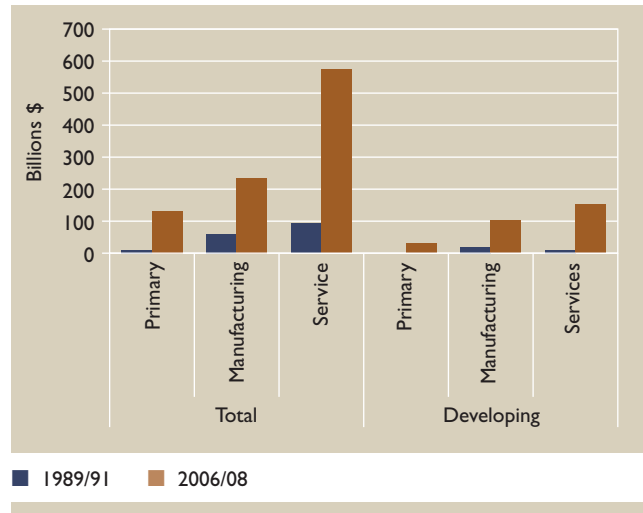
Figure 5. Global FDI inflow to developing world.

Source: data from UNCTAD.



© Jose Marques Lopes/Dreamstime.com

Figure 6. Global outward FDI (flow) sector changes 2004-2006. Source: UNCTAD



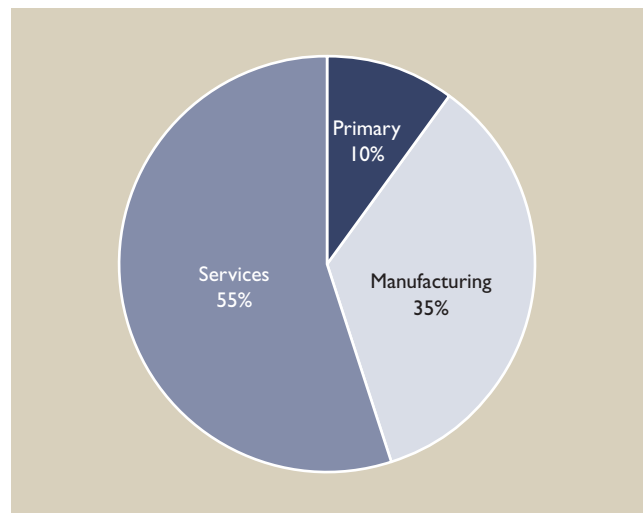
4.4 Sectoral distribution of FDI

Three sectors are recognised and recorded for global FDI purposes: primary resources (mining, agriculture, forestry, fisheries), manufacturing and services. During the past 25 years there has been a steady shift away from FDI in the primary sector and manufacturing and a shift towards services, in particular the financial services sub-sector (Fig 6). Recent increases in global demand for raw materials, primarily driven by the growth of the Chinese economy has, however, resulted in a resurgence of FDI flows into resource rich countries, mainly within Africa and South America. The primary sector's share of FDI is now comparable to that of the late 1980s.



Growing global demand for food and bioenergy crops is driving increased foreign investment in production of crops such as sugar cane (illustrated). © Michael Jung/Dreamstime.com

Figure 7. Global FDI (value, 2006) in developing countries by sector. Source: Statistics from UNCTAD



5.1 UK FDI overview

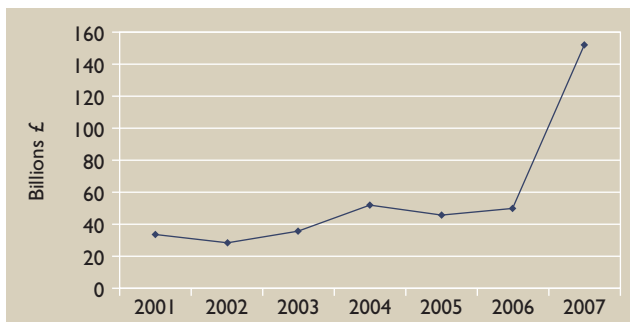
The UK Office for National Statistics (ONS), the government department responsible for collecting and publishing official statistics about the UK's society and economy, reports annually on FDI. The investment figures published are net of disinvestments by companies into its subsidiaries, associate companies and branches.

Within the UK ONS data collection systems, UK investment flows into and out of the country are measured in three ways):

- ▶ *Net direct investment abroad by UK companies* – a measure of *annual net flows* of UK investment money into overseas economies;

Figure 8. UK outward FDI (flow). Source: data from UNCTAD.

Figures in £ based on 2006 \$ exchange rates.



- ▶ *Net international investment position* – direct investment abroad by UK companies – a measure of the *cumulative value* of UK business investments overseas;
- ▶ *Net earnings from direct investment abroad by UK Companies* – a measure of *net earnings* repatriated from overseas economies.

The two key reporting mechanisms used in this report are measures of annual FDI **flows** and the cumulative FDI **value** (investment position). There has been an overall increase in *annual flows* of investment funds from the UK over the period 2002-2007 reaching £49 billion in 2006 and then, according to UNCTAD figures, increasing three fold to £150 billion in 2007. The UK was the 2nd largest global source of outward FDI in that year (after the USA) with half of this investment expected to be going into Europe and 25% into North America⁹.

The growth of UK FDI in recent years has been driven by increasing corporate profits and rising share prices. The effects of the financial and economic crisis of 2008 will affect the ability and willingness of UK business to invest in overseas economies. UNCTAD estimates in mid 2008 suggest that a 10% reduction in global FDI as a result of these events. The true scale of the global crisis was not apparent at that time and it seems likely that global FDI flows will suffer a more significant interruption in the short term.

The JNCC work on UK Foreign Direct Investment is tracking the flow of UK funds into selected overseas economies. The work highlights the biodiversity risks and opportunities associated with this flow of money. The global financial crisis of 2008 will affect the scale and nature of these investments. JNCC will monitor new trends and patterns as the UK and global economies adjust and recover.

⁹ Based on 2006 statistics breakdown.

5.2 UK FDI – geographical analysis

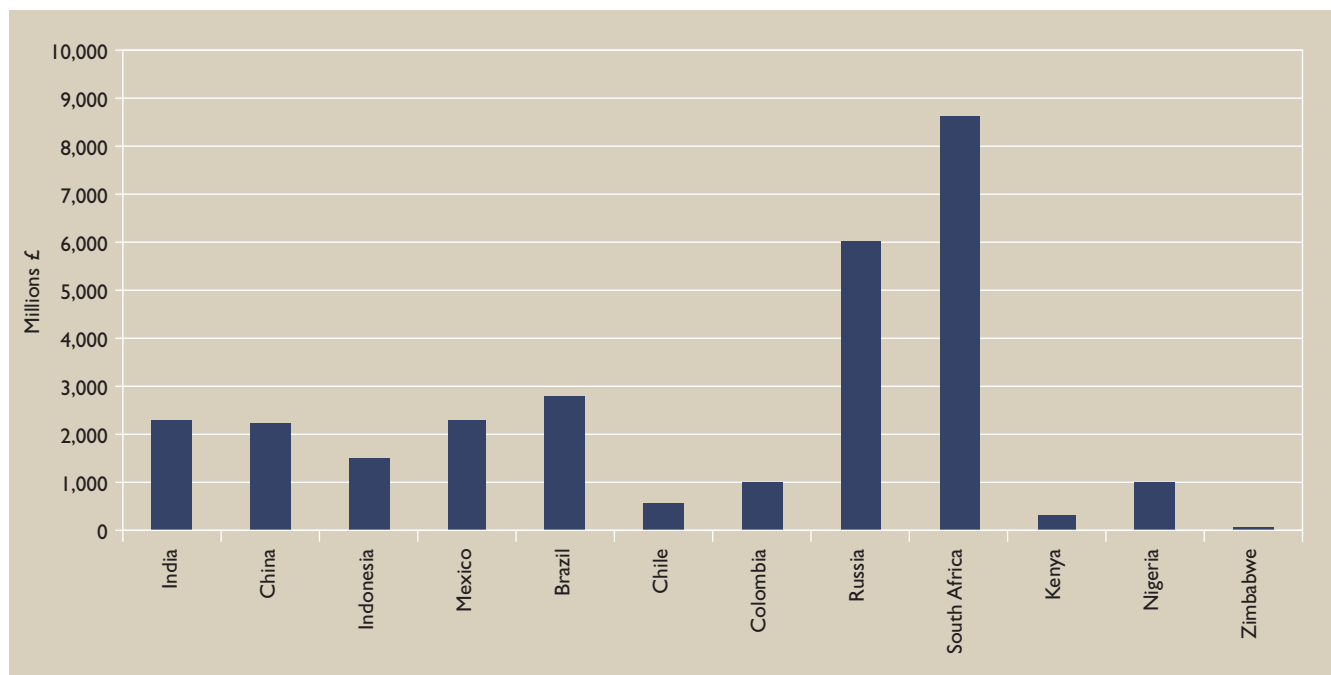
The UK ONS statistics for UK FDI include data for individual countries receiving UK FDI grouped in five geographical regions (Table 1). Based on all three measures – annual flow, investment position (value) and earnings, the bulk of UK FDI goes into Europe and North America. Outside these regions Asia, Australasia and Africa follow in importance in that order. The principal areas of interest for the JNCC work lie outside the OECD where UK FDI is focussed principally on countries across South America, Africa, and Eastern Europe.

The UK ONS data allows analysis of FDI at a regional level. Country specific FDI flows are available for only a limited set of countries in the regions of interest. Figure 9 illustrates the scale of investment across selected developing and transitional economies, including some of those identified as priorities for JNCC's ongoing analysis and review.

Table 1. UK FDI, 2006. Figures (flow, value and earnings) in £ billions. Source: UK ONS

| | Direct investment abroad by UK companies | | |
|-----------------------|--|-------------------|------------------|
| | Flows in 2006 | Level at end 2006 | Earnings in 2006 |
| Europe | 16.0 | 393.8 | 39.0 |
| The Americas | 21.2 | 259.7 | 27.1 |
| Asia | 8.3 | 53.0 | 11.8 |
| Australasia & Oceania | 3.6 | 12.6 | 3.2 |
| Africa | 0.3 | 15.5 | 3.5 |
| Total | 49.4 | 734.7 | 84.6 |

Figure 9. UK FDI (value) as of 2006 into 12 key countries outside North America and Europe. Source: Data from UK ONS



5.3 UK FDI – sectoral analysis

In 2006 the pattern of UK investment flows overseas showed an approximately even distribution between the three business sectors, manufacturing, primary resources and services. Notable investment trends over recent years are:

- ▶ the continued pre-eminence of the Financial Services sub-sector within the Service sector from 2003 to 2006;
- ▶ the decline of, and then a major resurgence in, investment into the extractive industries sub-sector (Primary Resources sector);
- ▶ the steady growth in investment into food products (Manufacturing sector).

Figures 10 to 12 show the relative distribution of UK FDI by sector and recent trends.

Figure 10. Percentage split of UK FDI (flow) by major industry type for 2006. Source: ONS

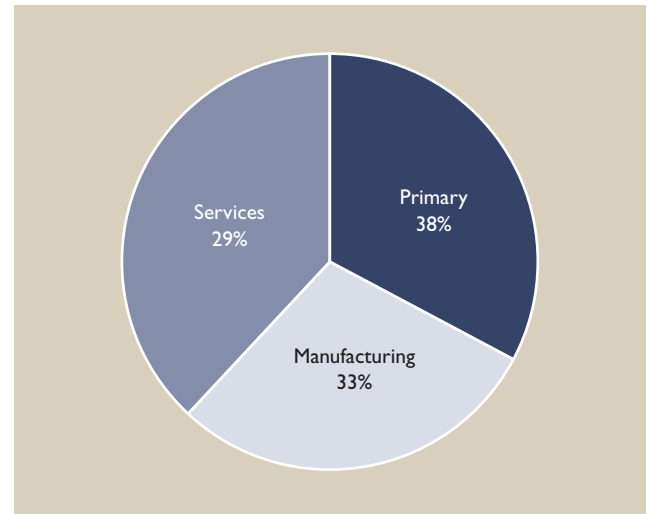


Figure 11. Changing pattern of UK FDI (flow) in four key industry types, 2002-2006.

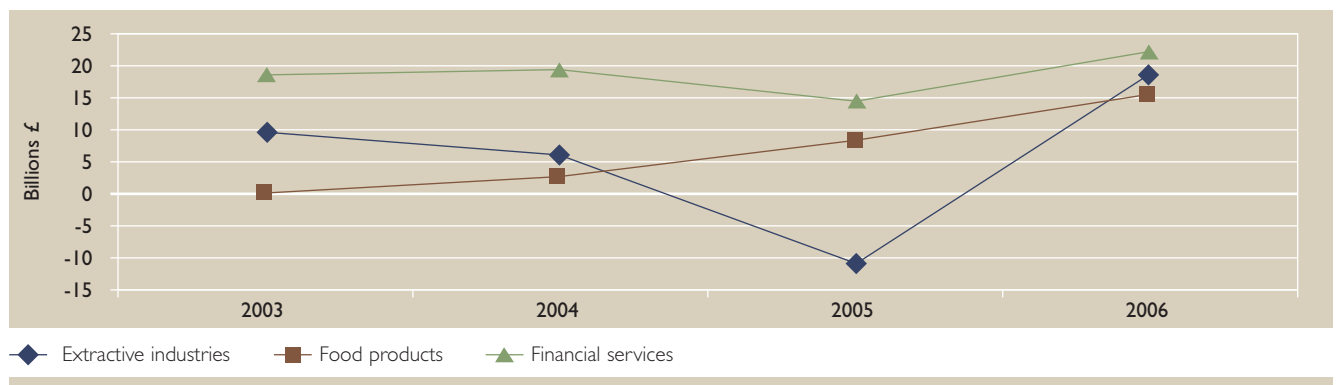
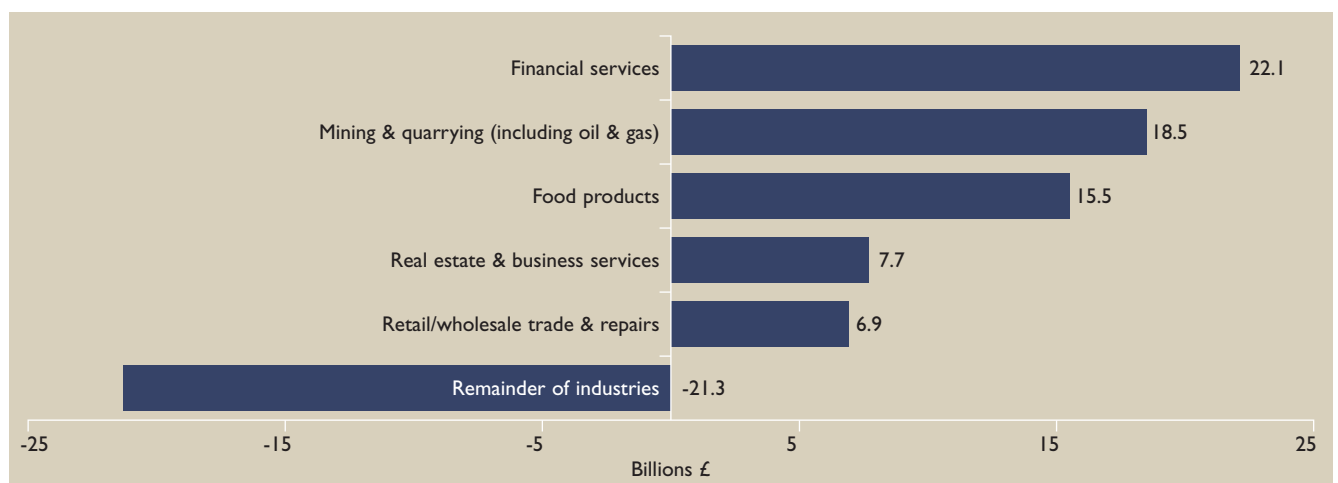


Figure 12. Sectoral trends in UK global FDI (flow) for 2006. Source: UK ONS



UK Foreign Direct Investment in selected economies

6.1 Overview

The UK, as a major source of Foreign Direct Investment in the global economy, has the ability to impact upon biodiversity in those countries receiving investment flows. Over 75% of UK FDI, however, goes into the developed economies of Europe and North America where corporate and national environmental governance is well developed and where UK corporate influence may be minimal. The level of development in these areas, and the extent of land use change which has already taken place, also limits the potential scale for future biodiversity loss. By contrast, although investment into the developing regions of the world accounts for less than 25% of UK FDI these regions contain areas of high biodiversity value and large land areas which are likely to be subject to major land use change in the future.

Analysis of current global land use and future 'availability' highlights Latin America, Sub-Saharan Africa and the transition economies of Eastern Europe as having major potential for land use change and, by extension, loss of biodiversity. These changes will be driven by increased national, regional and global demand for food, forest

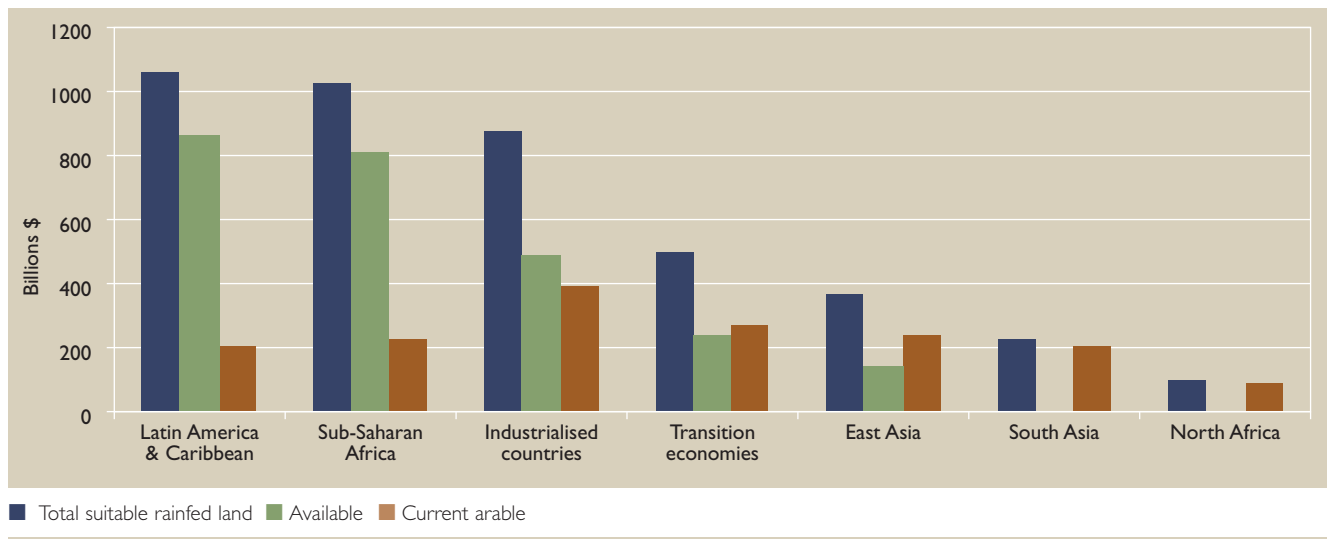
products and bioenergy with the potential for direct biodiversity impacts. Development of other natural resources through hydrocarbon developments, mining and quarrying will also be significant in the developing economies as will growing infrastructure development. Collectively, all of these activities have the potential to impact upon biodiversity and UK investment into these activities carries with it the opportunity and responsibility to address these impacts.

The focus of the rest of this report is therefore on those developing regions where potential biodiversity impacts are likely to be greatest and where there is correspondingly greater scope for UK influence.

The scale, nature and geographical distribution of UK FDI will change through time, and new areas of interest will emerge. For 2009 and 2010 JNCC's analysis will focus on the following:

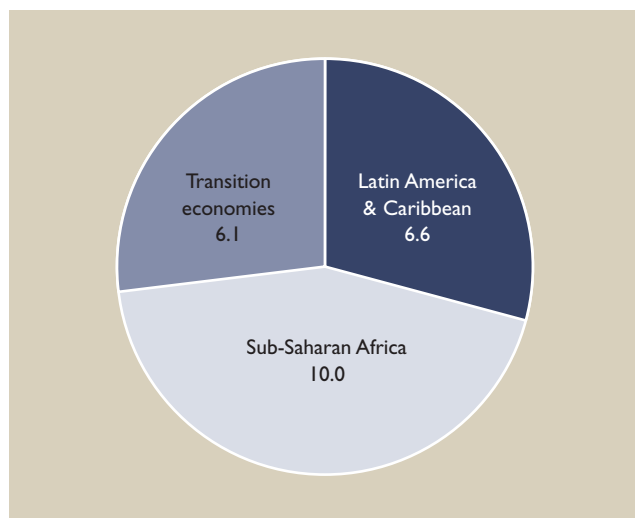
- ▶ South America – Brazil, Chile, Colombia;
- ▶ Sub-Saharan Africa – South Africa, Kenya, Nigeria;
- ▶ Commonwealth of Independent States – Russia, Ukraine, Kazakhstan (transition economies).

Figure 13. FAO analysis of global land use and future availability for food and bioenergy use.



The biodiversity impacts, both positive and negative, of UK FDI are most likely to be felt in those areas of the world where major land use change is expected to occur in the coming 10-20 year period. JNCC has identified South America, Sub-Saharan Africa and the transition economies of Eastern Europe as the areas most at risk.

Figure 14. Split of UK FDI (value) in selected regions (£ billions) for 2006.

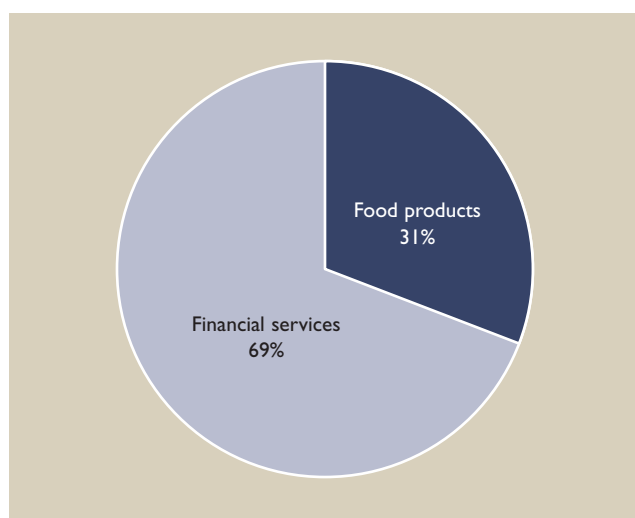


6.2 Sector analysis across selected economies/regions

South America

Global FDI flows to Latin America and the Caribbean rose in 2007 by 36%, to a record level of \$126 billion. In general, FDI inflows continued to be drawn to this subregion by high commodity prices attracting inflows into extractive activities and resource-based manufacturing. The largest three host countries (Brazil, Chile, Colombia) showed a

Figure 15. Distribution of UK FDI (value) in key sectors in Brazil 2006.



78% increase in investment. In Brazil, the greatest growth was in the primary sector (mainly in metal mining) and in natural-resource-based manufacturing (basic metallurgy, food and beverages, refineries, chemical products). In Chile and Colombia the extractive industries attracted more than half the inflows.

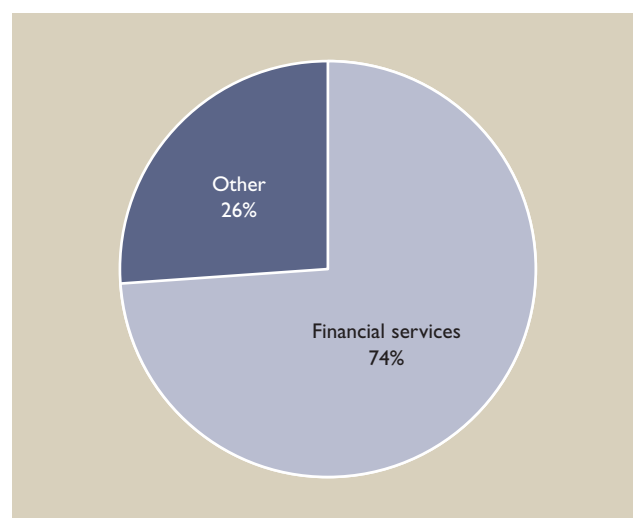
Government statistics allow UK investment into the three key countries – Brazil¹⁰, Chile and Colombia - to be tracked in detail with food and the financial sectors dominating.

Sub-Saharan Africa

In 2007, global FDI inflows into Sub-Saharan Africa grew by around 20% to reach over \$30 billion in total. Analysis of the UK contribution to this flow for that year is not yet available but is likely to represent at least 10% of this investment based on prior year statistics. UK investment in the region is focussed on four countries, Kenya, Nigeria, Zimbabwe and South Africa where, in 2006 the value of UK investment exceeded £8 billion out of a total UK investment for the continent of £15 billion. Analysis of the inward investment pattern for South Africa shows the importance of UK investment in financial services with relatively little money identified as going directly into natural resources¹¹. Identification of investment sectors in other countries is more difficult, although the food sector emerges as significant in Kenya.

A recent development in South East Africa is the biofuels industry, which has attracted significant foreign investment including UK funds.

Figure 16. Distribution of UK FDI (value) in key sectors in South Africa 2006.



¹⁰ www.ukglobalinfluence.org/UKFDI

¹¹ www.ukglobalinfluence.org/UKFDI

Commonwealth of Independent States

As near neighbours to the EU, where economic redevelopment is following on from political change, the three key countries of interest are Russia, the Ukraine and Kazakhstan; the biggest recipients of FDI in the region. The primary and services sectors in the CIS received significantly higher inflows in 2007 than in the previous year, while flows to manufacturing declined. Foreign TNCs also increased their investments in energy and natural-resource-related projects.

In 2007, FDI inflows to the Russian Federation grew by 62%, reaching \$52 billion. Kazakhstan, owing to the development of hydrocarbon projects, was the second largest recipient of FDI inflows. Ukraine attracted FDI inflows that reached a new high of almost \$10 billion principally into financial services.

FDI into natural resources is expected to increase in future with the EU countries accounting for the bulk of investments. On the basis of available statistics, UK investment into the

region can only be traced into Russia (although this analysis is itself difficult) where natural resources and food sectors attract significant investment flows.

Figure 17. UK FDI value in key sectors in Russia 2006.

Source: UK ONS and GHK report

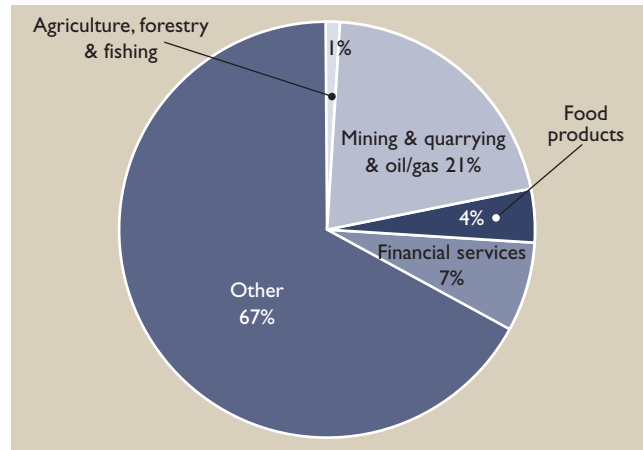
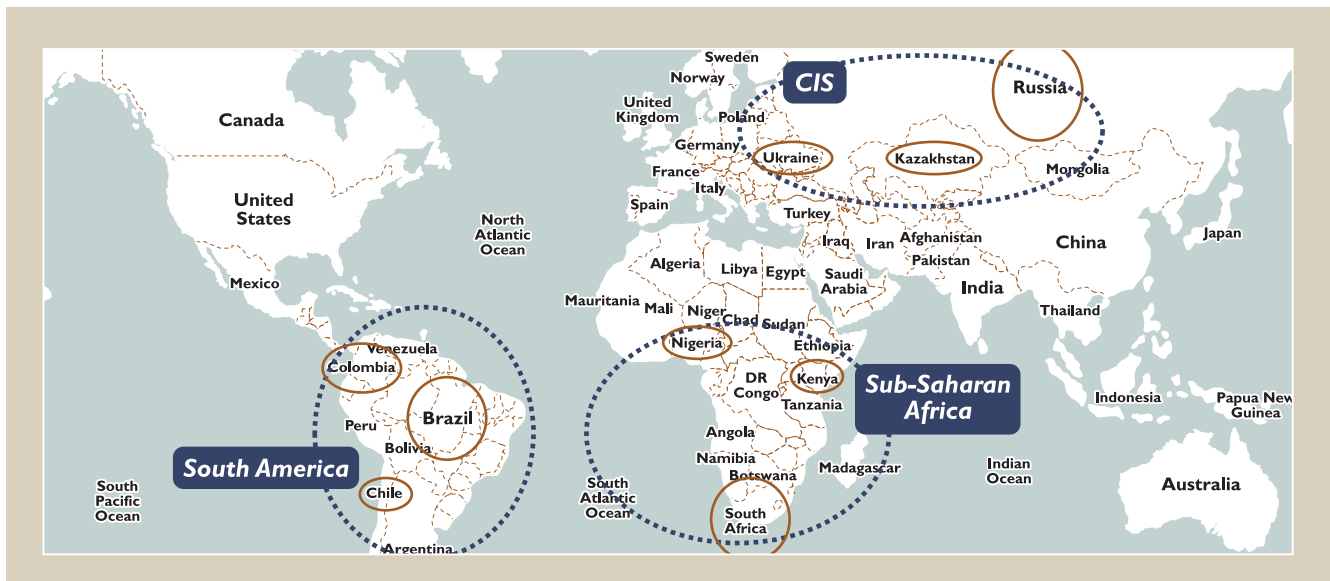


Figure 18. Priority countries and regions for current and future JNCC analysis of UK FDI outside North America and Western Europe.



Global biodiversity implications for UK FDI

7.1 Key business sector identification

The UK is one of the major global sources of FDI and UK based Trans National Corporations (TNCs) therefore have a significant potential role to play as sector leaders in transferring environmental best practice to host countries. Understanding this role requires knowledge of FDI flows not only in terms of countries and business sectors receiving UK FDI, but also requires identification of those sectors that are most significant in terms of their biodiversity impacts. Different business sectors have different potential biodiversity impacts and JNCC contracted GHK¹² to develop a strategic overview of the potential biodiversity impacts of specific industrial sectors using the five MEA drivers¹³. The sectors have been categorised into three groups:

Group A: Sectors with very direct impacts on biodiversity, which include the agriculture, forestry and fishing sectors.

Group B: Sectors with a mix of direct and indirect impacts on biodiversity, which include mining and quarrying, food processing, electricity, gas and water, construction, and transport and communications. These sectors affect biodiversity through their direct use of land as well as more indirect impacts through raw material use, infrastructure development and pollution.

Group C: Sectors where specific impacts are more difficult to determine, which include the remaining manufacturing and service sectors. These sectors have more indirect impacts, which may nevertheless be significant in certain circumstances and locations.

For each sector and MEA driver, the scale of the impact has been assessed (high, medium, low) alongside a description of the impact.

Combining this biodiversity impact analysis with the review of the nature and distribution of UK FDI, suggests that the following investment sectors are of most relevance in terms of level of investment and/or likely environmental impacts within receiving countries. For the purposes of this report, this analysis places four key FDI investment sub-sectors (as employed by the ONS) into three groups:

- ▶ extractive industries;
- ▶ food products and agriculture, forestry & fishing;
- ▶ financial services.

The biodiversity impacts of these sectors varies according to scale, location and the precise nature of operations. The GHK overview, and more detailed government and NGO reviews, have characterised these impacts. Some of these reviews are summarised in the following section. These reviews, combined with tracking FDI into individual countries and business sectors, provide the basis for analysing the potential scope for UK business to impact upon overseas ecosystems and their biodiversity.



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Understanding the potential influence that UK investment, and UK companies, can have on global biodiversity requires identification of key global business sectors attracting this investment. Different business sectors have different potential impacts on the ecosystems in which they operate.

¹² www.ukglobalinfluence.org/UKFDI

¹³ Habitat change, over exploitation, invasive species, pollution, climate change

Table 2: Analysis of Direct vs Indirect Impacts of individual business sectors

| | | Habitat Change | Over Exploitation | Invasive Species | Pollution | Climate Change |
|--|---|--|-------------------|------------------|-----------------|-----------------|
| Agriculture | 1 | Direct | Direct | Direct | Direct | Direct |
| Forestry | 1 | Direct | Direct | Direct | Direct | Direct |
| Fishing | 1 | Direct | Direct | Direct | Direct | Direct |
| Mining & quarrying (including oil/gas) | 2 | Direct/Indirect | Direct/Indirect | Direct/Indirect | Direct/Indirect | Direct/Indirect |
| Food products | 2 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Transport & communications | | Direct/Indirect | Indirect | Direct/Indirect | Direct/Indirect | Direct/Indirect |
| Electricity, gas & water | 2 | Direct/Indirect | Direct/Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Textile & wood, printing & publishing | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Chemical, plastic & fuel products | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Metal & mechanical products | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Office, IT & communications equipment | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Transport equipment | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Construction | 2 | Direct/Indirect | Indirect | Direct/Indirect | Direct/Indirect | Direct/Indirect |
| Other manufacturing | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Hotels & restaurants | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Retail/ wholesale trade & repairs | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Financial services | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Real estate & business services | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Other services | 3 | Indirect | Indirect | Indirect | Direct/Indirect | Direct/Indirect |
| Key | 1 | Sectors with most direct impacts on biodiversity | | | | |
| | 2 | Sectors with direct and indirect impacts on biodiversity | | | | |
| | 3 | Sectors with more cryptic impacts on biodiversity | | | | |

Analysis of the impacts of individual business sectors has been undertaken for JNCC using a matrix to assess the impacts of the different sectors on biodiversity using the five Millennium Ecosystem Assessment drivers – Habitat change, Over Exploitation, Invasive Species, Pollution and Climate Change. The sectors have been categorised into three groups, those with:

- ▶ clear, direct impacts on biodiversity – including the agriculture, forestry and fishing sectors. These sectors are direct users of ecosystems resources;
- ▶ a mix of direct and indirect impacts on biodiversity - including mining, quarrying, food processing, electricity, gas and water; construction, and transport and communications. These sectors affect biodiversity through their direct use of land as well as more indirect impacts through raw material use, infrastructure development and pollution;
- ▶ indeterminate impacts – including the remaining manufacturing and service sectors. These sectors have more indirect impacts, which may nevertheless be significant in certain circumstances and locations. This is particularly true of the financial services sector which can fund direct impact activities.

Table 3: Analysis of Impact Strength (on biodiversity) of individual business sectors

| | | Habitat Change | Over Exploitation | Invasive Species | Pollution | Climate Change |
|--|---|--|-------------------|------------------|-----------|----------------|
| Agriculture | 1 | High | High | High | High | High |
| Forestry | 1 | High | High | High | Medium | High |
| Fishing | 1 | Medium | High | Medium | Low | Low |
| Mining & quarrying (including oil/gas) | 2 | High | Medium | Low | High | High |
| Food products | 2 | High | High | Medium | Medium | Medium |
| Electricity, gas & water | 2 | High | Medium | Low | High | High |
| Construction | 2 | High | Low | Low | High | High |
| Transport & communications | 2 | High | Low | Medium | High | High |
| Textile & wood, printing & publishing | 3 | Medium | Medium | Medium | Medium | Medium |
| Chemical, plastic & fuel products | 3 | Medium | Low | Low | High | High |
| Metal & mechanical products | 3 | Medium | Low | Low | High | High |
| Office, IT & communications equipment | 3 | Medium | Low | Low | Medium | Medium |
| Transport equipment | 3 | Medium | Low | Low | Medium | Medium |
| Other manufacturing | 3 | Medium | Low | Low | Medium | Medium |
| Retail/ wholesale trade & repairs | 3 | Low | Low | Low | Low | Low |
| Hotels & restaurants | 3 | Medium | Medium | Medium | Low | Low |
| Financial services | 3 | Medium | Medium | Medium | Medium | Medium |
| Real estate & business services | 3 | Low | Low | Low | Low | Low |
| Other services | 3 | Low | Low | Low | Low | Low |
| Key | 1 | Sectors with most direct impacts on biodiversity | | | | |
| | 2 | Sectors with direct and indirect impacts on biodiversity | | | | |
| | 3 | Sectors with more cryptic impacts on biodiversity | | | | |

Analysis of the impacts of individual business sectors has been undertaken for JNCC using a matrix to assess the impacts of the different sectors on biodiversity using the five Millennium Ecosystem Assessment drivers – Habitat change, Over Exploitation, Invasive Species, Pollution and Climate Change. For each sector and MEA driver; the scale of the impact has been assessed – High, Medium, Low. This approach allows the strategic nature and significance of the biodiversity impact of individual business sectors to be assessed. For details of this evaluation see the GHK report on: www.ukglobalinfluence.org/UKFDI.

7.2 Key business sector impacts

Overview

The Department for International Development has, through externally contracted work, undertaken a review of the potential global biodiversity impact of selected economic sectors. This review involved both a screening exercise to identify the most important sectors for biodiversity impacts and identification of spatial and geographical factors to assess the impacts of each selected sector. Sectors shortlisted by Dfid were energy, food supply, forestry, mining, tourism and transport¹⁴.

The potential significance of the six shortlisted sectors for biodiversity were assessed by documenting their potential impacts through the five direct drivers of biodiversity loss (see footnote 13) as well as what are described as 'leverage' opportunities for the UK Government. These are areas of British influence or investment where UK Government actions to promote the protection of biodiversity might have greater traction such as the Commonwealth or those countries that are the recipients of significant UK development assistance or investment.

Finally, a range of spatial and geographical factors were examined to identify areas of global biodiversity value globally where impacts might be disproportionately significant such as the WWF's Global 200 Ecoregions.

This UK Government work, in combination with other reviews, provides a framework for assessing the potential biodiversity impacts of the most important business sectors attracting UK Foreign Direct Investment.

Extractive industries

The Extractive industries sub-sector (within the Primary Resources sector) as used by the ONS in FDI data collation includes:

- i coal/peat mining;
- ii oil/gas extraction and related services;
- iii mining of uranium/thorium ores;
- iv mining of metal ores;
- v other mining and quarrying.

This sub-sector contains a wide range of activities with potential biodiversity impacts which vary greatly as a result of their geographical locations, types of activity, and processing methods. Habitat loss and pollution impacts are probably the most significant but the full range of impacts is reviewed in the relevant Dfid sponsored reports¹⁵. These reports stress that impact assessment is normally focussed on extraction and the early stages of processing and these are the impacts that are likely to occur on or in close proximity to the mining/oil development concession sites, many of which are located in environmentally sensitive areas. For example, one third of all active mines and exploration sites are located within areas of intact ecosystems of high conservation value.

Food products and agriculture, forestry & fishing

The food products and agriculture/forestry/fishing sub-sectors are two separate categories used by the ONS in FDI data collation. The former, as part of the Manufacturing Industries sector includes food/tea/coffee/ beverage production and is a significant attractor of UK FDI growing steadily over recent years (Fig 12). The agriculture, forestry & fishing sub-sector (within the Primary Resources sector) includes agriculture and fishing and forestry/logging. Given the links between food production and manufacture, and the overall biological natural resource theme of these business areas, these two sub-sectors are linked together for this analysis. The agriculture, forestry and fishing sub-sector attracts relatively low levels of direct investment but these activities are highly significant from an ecosystem impact perspective.

The Covalence¹⁶ Food & Beverage Industry Report for 2007 shows a significant growth of interest in the environmental impact of food production (see Figure 19) and a series of Defra and Dfid commissioned reports are available reviewing impacts arising from this sector and also from forestry. These impacts are as diverse as the wide range of activities grouped under this heading but primarily involve land use change, over-exploitation and water use.

Financial services

The Financial Services sub-sector, within the Service Industries sector, includes:

- i financial intermediation services/banks/building societies/investment trusts/venture capital companies;
- ii insurance services/life/non-life/pensions;
- iii other financial intermediation services.

¹³ Habitat change, overexploitation, invasive species, pollution, climate change

¹⁴ www.ukglobalinfluence.org/index

¹⁵ www.ukglobalinfluence.org/index Follow 'Economics' link

¹⁶ www.covalence.ch

¹⁷ www.ukglobalinfluence.org/index Follow 'Economics' link

The recognition of the Financial Services sector's substantial indirect impacts on the environment led to promotion and adoption of the Equator Principles in 2003 designed to bring social and environmental concerns 'into the heart of project finance'¹⁸. These voluntary Principles commit signatory banks to follow the environmental and social guidelines of the International Finance Corporation (IFC) of the World Bank Group. The Principles have become the standard for all banks and investors on how to deal with potential social and environmental effects of projects to be financed.

The sector has a significant impact on biodiversity in particular those institutions that provide financial support to high-impact sectors such as forestry, mining, oil and gas, fisheries, water delivery and infrastructure, and agriculture. To fully comply with the Equator Principles banks should

adopt policies that take into account the protection of biodiversity (including ecosystems, species and genetic resources) as reflected in international conventions and national laws. Banks should establish biodiversity policies aimed at achieving the consensus goals of the CBD and other international instruments which embody three principles:

- ▶ the conservation and protection of biodiversity;
- ▶ the sustainable management and use of biodiversity; and,
- ▶ the fair and equitable sharing of benefits from biodiversity.

Table 4 lists what such policies should involve based on a WWF/BankTrak report on sustainable finance¹⁹.

Table 4: WWF/BankTrak biodiversity guidelines for the finance sector

| |
|---|
| ▶ Evaluate cumulative biodiversity impacts upstream and downstream (including impacts on ecosystems, species and genetic resources). |
| ▶ Investments and financial services provided by the bank should not negatively impact upon any of the protected areas covered by the IUCN I-IV categories or sites listed under UNESCO World Heritage and the Ramsar Conventions. |
| ▶ Industrial extractive projects such as mining, oil, gas and forestry should not be financed within World Heritage Sites and IUCN I-IV protected areas, nor where they negatively impact upon those sites and areas. |
| ▶ Projects should be excluded if they: (i) could have an impact at a community or population level on a species identified on the IUCN Red List; (ii) could lead to the commercial trade of any species listed as endangered under CITES; or (iii) are likely to involve the intentional or unintentional introduction of invasive alien species. |
| ▶ Natural resources such as fish, forests, animals and plants should be used and managed sustainably. |
| ▶ Support for the production or trade in any living modified organism should be prohibited except with the approval of the importing country and as otherwise required under the Cartagena Protocol. |
| ▶ Any activity involving access to genetic resources must meet the consent and benefit-sharing requirements found in the CBD. |
| ▶ The project should not lead any member country to violate any international treaty relating to biological diversity. |
| ▶ Management systems should ensure the collection of baseline data and provide for the ongoing monitoring and reporting of impacts at least consistent with the guidelines found in the Global Reporting Initiative for reporting on biodiversity and land use. |

¹⁸ The state of the art. Special Report: November 2006 www.ethicalcorp.com and www.equator-principles.com/principles.shtm

¹⁹ Shaping the future of sustainable finance. Moving from paper promises to performance. WWF/BankTrak.

UK flagship company identification – looking for best practice

8.1 Overview

Overseas investment activities by UK based corporations can have significant influence on the ecosystems and biodiversity of the host country either through their impact on these systems (the extractive industries, forestry, food production) or through their dependence on ecosystem services (fisheries, forestry). Corporate ability to avoid, mitigate or compensate for the consequences of their activities depends upon attitudes to corporate social responsibility and the financial and technical resources and capabilities available to the organisation. These resources and capabilities are often business and sector specific. By contrast, many developing world FDI host countries have limited capabilities at corporate and government level for assessing and dealing with environmental impacts (due to resource, managerial and other expertise limitations) preventing adequate environmental impact assessments at strategic and project levels. This has implications for environmental governance in general, and biodiversity in particular, in FDI host countries.

In addition to the flow of funds into a host country, knowledge and expertise are therefore important advantages which can be transferred to host-country operations by Trans National Corporations (TNCs).

Key points in respect of such transfer are:

- ▶ this transfer may occur within the same or different business sectors;
- ▶ use of international best environmental practice by host country affiliates of TNCs can, through 'spillover' or 'demonstration effects' lead to adoption of similar practices by other foreign and domestic businesses operating in the host country;
- ▶ host country regulatory authorities can be exposed to international best practice;
- ▶ a TNC may only have a limited financial role in a particular business sector in a given host country but can still be well placed to demonstrate best practice and act as a sector leader – flagship company - in respect of sustainability and environmental practices.

Analysing flows of UK finance into overseas economies in terms of host country and business sector can therefore be complimented by recognising those corporations that are active within particular sectors. Potential flagship companies for demonstrating best practice can then be identified to highlight the positive role UK companies can take at the global level.

8.2 Tools for identifying flagship corporations

The annual UNCTAD report²⁰ on FDI identifies major Trans National Corporations involved in global investment and such general listings can be used in conjunction with more specific, environmentally focussed assessments, to seek out flagship companies. The increasing significance of Corporate - Social Reporting (CSR) for maintaining business reputations and protecting shareholder value has resulted in a variety of screening tools being developed to monitor business sector and individual corporate performance. Such performance can be judged on a wide range of social and environmental criteria. Judgements and rankings may be derived through external monitoring of corporate activities based on such criteria or may involve individual corporations actively seeking to comply with criteria established by monitoring bodies.

A good example of an external monitoring programme is the ethical quotation system operated by Switzerland based Covalence²¹. This is a 'reputation index' based on quantifying data classified according to 45 criteria such as labour standards, waste management, human rights policy and 'Environmental Impact of Production' (Covalence 'Criteria 26'). The system integrates information from the media, NGO reports and corporate publications and can be used to measure the evolution of the reputation of individual corporations through time and also to highlight which issues are important within selected business sectors. Within the banking²² and food production sectors²³ Covalence recognises a significant recent growth in interest in respect of the environmental impacts of production (see Fig 19 for food production sector).

²⁰ WORLD INVESTMENT REPORT 2008 UNITED NATIONS New York and Geneva, 2008-11-12.

²¹ www.covalence.ch/

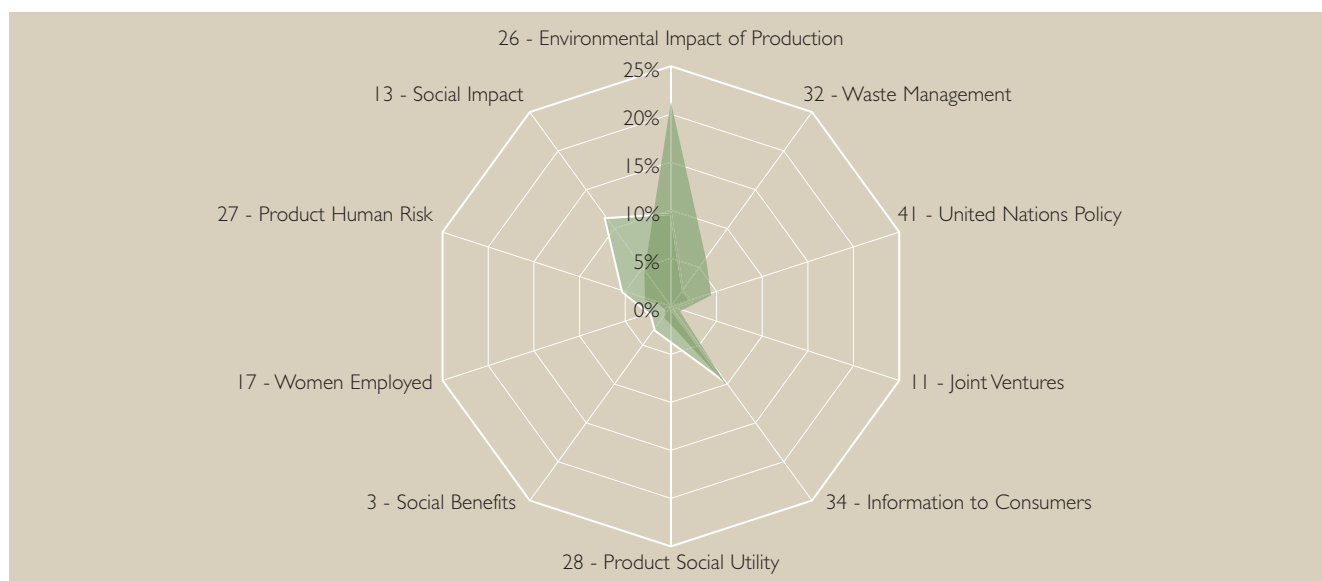
²² Covalence Banking Industry Report 2008. Press release 3 July 2008.

²³ Covalence Food & Beverage Industry Report 2007. Press release 11 February 2008

Table 5: Covalence top ten corporations in the Food & Beverage sector for 2007.

| Food and Beverage | | | |
|-------------------|--------------------------|--------------------|---------------------------|
| Rank | Best Ethical Quote Score | Best Ethical Quote | Best Reported Performance |
| 1 | Unilever | Coca-Cola Co | Coca-Cola Co |
| 2 | Starbucks | Unilever | Starbucks |
| 3 | Diageo | Starbucks | Nestlé |
| 4 | Danone | Nestlé | Unilever |
| 5 | SABMiller | PepsiCo | PepsiCo |
| 6 | Kellogg | Kellogg | Kellogg |
| 7 | Heinekin | SABMiller | Danone |
| 8 | Kraft Foods | Danone | Kraft Foods |
| 9 | Cadbury | Kraft Foods | Cadbury |
| 10 | Heinz | Heinz | SABMiller |

Figure 19. The environmental impact of the Food & Beverage industry has become a major sector issue in 2007. See section 8 for background information. Source: Covalence



In recent years there has been a steady growth in UK FDI into the food production sector. With the FAO projecting a 50% growth in food demand by 2030, and rising commodity prices, this sector is becoming increasingly important. The Covalence analysis presented in the above illustrations demonstrates how environmental issues are now critical to this sector. This analysis also demonstrates how many ‘household’ name companies are well placed to recognise and promote the value of the ecosystems goods and services that they rely upon.

Table 6: FTSE4Good Index high and medium environmental impact sectors.

| High Impact Sectors | Medium Impact Sectors |
|---|--|
| Agriculture | DIY & Building Supplies |
| Air Transport | Electronic and Electrical equipment |
| Airports | Energy and Fuel Distribution |
| Building Materials (includes Quarrying) | Engineering and Machinery |
| Chemicals and Pharmaceuticals | Financials not elsewhere classified |
| Construction | Hotels, Catering and Facilities Management |
| Major Systems Engineering | Manufacturers not elsewhere classified |
| Fast Food Chains | Ports |
| Food, Beverages and Tobacco | Printing and Newspaper Publishing |
| Forestry and Paper | Property Developers |
| Mining and Metals | Retailers not elsewhere classified |
| Oil and Gas | Vehicle Hire |
| Power Generation | Public Transport |
| Road Distribution and Shipping | |
| Supermarkets | |
| Vehicle Manufacture | |
| Waste | |
| Water | |
| Pest Control | |

The FTSE4Good Index (Table 6) Series²⁴ has been designed to measure the performance of companies that meet globally recognised corporate responsibility standards. The series has several functions including use as a research tool to identify environmentally and socially responsible companies. Key features of the series are:

- ▶ evolving selection criteria to reflect changes in globally accepted corporate responsibility standards and codes of conduct over time;
- ▶ challenging yet achievable criteria that encourage companies to strive to meet them;
- ▶ higher impact companies have to meet higher standards;
- ▶ transparent criteria and methodology;
- ▶ criteria based on internationally respected codes and principles with new criteria subjected to a widespread consultation and approved by an independent oversight committee.

Unlike the Covalence screening system, companies can choose to be listed on the FTSE4Good Index and then have to meet the criteria or be delisted. Companies are classified as High, Medium or Low Impact based on the environmental footprint of their activities. The higher the environmental impact of the company's operations, the more stringent the inclusion criteria. The FDI investment sectors identified as significant for biodiversity in this report - financial services, food products and agriculture, forestry & fishing, extractive industries - all fall into the high or medium categories for the FTSE4Good Index.

These, and other emerging corporate screening approaches, offer an opportunity for UK Government and business to identify and support UK companies that demonstrate the best environmental practice currently available. These companies have the potential to be the UK's biodiversity champions overseas.

²⁴ www.ftse.com/Indices/FTSE4Good_Index_Series



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 (CNCC), the Countryside Council for Wales (CCW), Natural England, and Scottish Natural Heritage (SNH). The functions that arise from these responsibilities are principally to:

- ▶ advise Government on the development and implementation of policies for, or affecting, nature conservation in the UK and internationally;
- ▶ provide advice and disseminate knowledge on nature conservation issues affecting the UK and internationally;
- ▶ establish common standards throughout the UK for nature conservation, including monitoring, research, and the analysis of results;
- ▶ commission or support research which it deems relevant to these functions.

The Committee comprises 14 members: a Chairman and five independent members appointed by the Secretary of State; the Chairman of CNCC; the Chairmen or deputy Chairmen of CCW, Natural England and SNH; and one other member from each of these bodies.

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.

Details of publications produced by JNCC are available from:
Communications Team, JNCC, Monkstone House, City Road, Peterborough PE1 1JY, UK.
Telephone: +44 (0)1733 562626
Fax: +44 (0)1733 555948
Email: communications@jncc.gov.uk

JNCC also provides extensive information through its website: www.jncc.gov.uk

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