Equilibrium RESEARCH

BRIEFING

Investigating the biodiversity impacts of investments by a pension fund

HEADLINES

THE BRIEFING OUTLINES LESSONS FROM ANALYSIS OF COMPANIES IN THE INVESTMENT PORTFOLIO OF A MAJOR PENSION FUND.

IT SUMMARISES:

- **SOURCES OF INFORMATION USED AND HOW THEY WORKED**
- **BIODIVERSITY IMPACTS USED AS CRITERIA**
- **TYPE AND QUALITY OF COMPANY REPORTING**
- **OBSERVATIONS ON RESULTS**
- **KEY INFORMATION SOURCES**

We reviewed almost 2,000 companies for a major pension fund in Europe, to identify investments seriously damaging biodiversity. This briefing explains how we did this and assesses the options and limitations of this kind of analysis.

Four sources of information were used:

- Mapping operations against protected areas and Key Biodiversity Areas using the Integrated Biodiversity Assessment Tool, IBAT
- Reference to company websites
- Web-based and literature searches
- Expert opinion and interviews from academics, activists and civil society groups

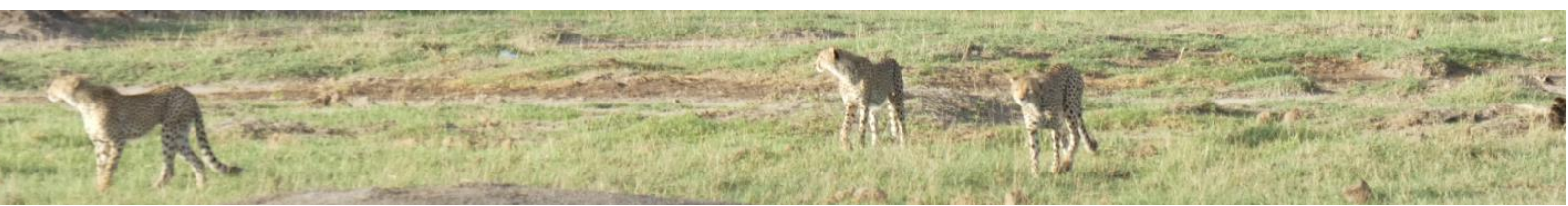
IBAT was useful for companies with geographically distinct operations, but less so for those with more diffuse operations or those purchasing products from multiple sources.

Company reporting is variable, dependent on previous criticism received, industry type, location, etc. The Sustainable Development Goals are an important indicator, although many companies still rely on old-fashioned corporate social responsibility reporting.

Web-based searches and interviews are a rich source of information but very time-consuming; in future more effective reporting networks are needed with more efficient search tools and tagging.

Impacts were classified as operations in or near protected areas, Ramsar sites and Key Biodiversity Areas, with some consideration of chain of custody. Species impacts were tricky to measure. Extractive industries had the highest number of impacts overall, but this may reflect methods used, with diffuse impacts from agriculture harder to identify.

This was a scoping study; the aim was to identify companies of concern and further detailed research is needed to confirm the findings.



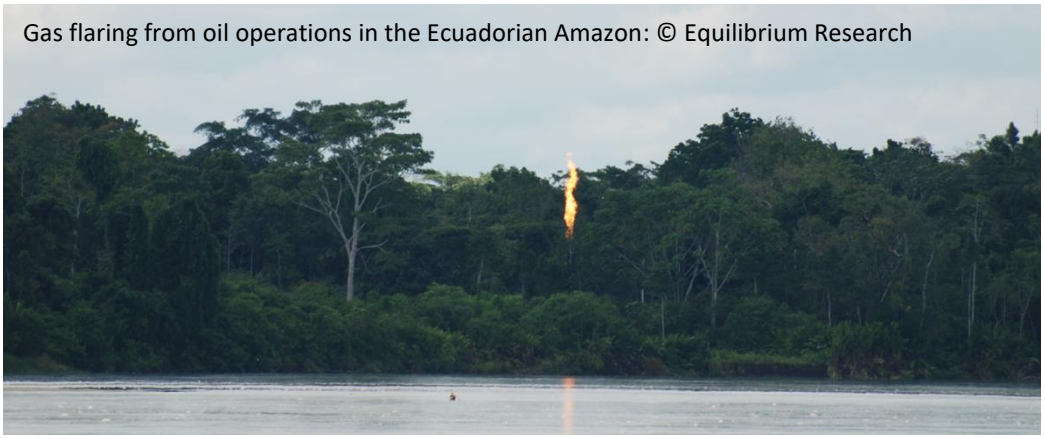
SOURCES OF INFORMATION

Four main approaches were used:

IBAT WORKS WELL WITH COMPANIES THAT HAVE DISCRETE AND GEOGRAPHICALLY BOUNDED AREAS OF OPERATION

1. Mapping of company operational locations using the Integrated Biodiversity Assessment Tool (IBAT) developed by the UNEP World Conservation Monitoring Centre: This was the most precise way of getting location-specific data, although only worked for those companies where operations were discrete, geographically exact, locatable and relatively limited in extent (e.g., mines and hydropower dams). Upstream companies, sourcing from multiple different locations, or companies involved in dozens or hundreds of different projects, required a different approach.

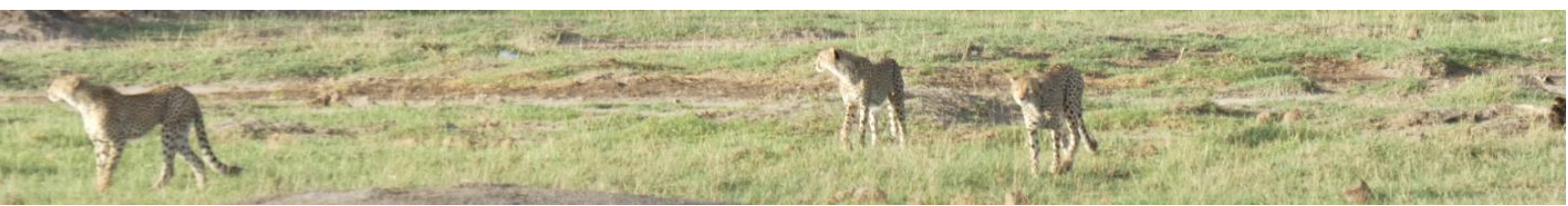
2. Reference to company websites: Useful for getting a general idea of the type of business and the chances of it impacting on valuable areas, and also in many cases for geographic information about areas of operation (by no means all companies provide this and much of what is provided is partial). Company websites were also useful in providing information on sustainability policies: presence, absence and quality of reporting was very useful in determining the degree of awareness of and interest in biodiversity.



Gas flaring from oil operations in the Ecuadorian Amazon: © Equilibrium Research

3. Web-based and literature searches: We drew on specialised sites such as Mongabay and carried out generalised web searches using key words. These were useful; Wikipedia also often has information on controversies about companies, some but not all of which proved useful, particularly in providing additional sources to follow up. Standardised databases from Reuters and the *Financial Times* provide information on company activities; this is not always up to date.

4. Expert opinion: Specialists provided information and reviewed drafts. In particular, we worked with the Great Ape Specialist Group of the Species Survival Commission, who contacted all their members. While some of the reviews were useful, and we spoke to some very helpful people, these sources were generally less useful than we hoped. Many people were unable to provide hard information. Not surprisingly, asking specific questions, or focusing on one or two companies, worked better than asking people to review long lists of companies. We have developed suggestions about next steps, including building networks and standardising approaches.



IDENTIFYING IMPACTS ON BIODIVERSITY

"Impacts on biodiversity" are complex and hard to measure. We drew a shortlist of key indicators, based partly on accessibility to geographically explicit data, shown in Table 1. This focuses on areas of high importance to biodiversity. While we explored analysis using key species (e.g., in the IUCN Red List) this proved less useful in practice.

Table 1**: Sites/areas of importance**

Criterion	Reason
Protected areas (primarily categories I-IV)	Protected area categories I-IV are all used in various countries to identify fairly strict protection. We drew on the *Protected Planet* website, which includes all protected areas.
Key Biodiversity Areas	These rely heavily on bird data and coverage is incomplete; the fact that an area is not a KBA may mean there has been no analysis. Even so, they are a useful marker and coverage will increase over time.
Ramsar sites	Wetlands of importance mostly also protected areas; all are committed to "wise use". Mapped globally but the website proved difficult to use when searching coordinates or using satellite imagery. Many Ramsar sites are represented as point data making it hard to assess overlaps from operational sites.
Ecologically or Biologically Significant Marine Areas	These remain the most useful marine designation beyond marine protected areas and have been mapped. We did not find this a particularly useful dataset in the present instance, particularly as fishing locations are so difficult to determine.
Biodiversity Hotspots	These are useful in part because they focus on endemic plants but omit key areas (e.g., Amazon, Congo Basin). They cover enormous, often highly urbanised, areas so while they help focus research, did not prove useful as a criterion of high risk.

PROTECTED AREAS AND RAMSAR SITES ARE THE MOST COMMONLY REFERENCED AREAS IN COMPANY REPORTS, AND YET EVEN THESE WERE SELDOM MENTIONED

Protected areas and Ramsar sites were most often referenced in company reporting; there was little or no mention of KBAs. For location-specific, mappable operations, IBAT identified overlaps with KBAs and PAs, but was less useful in sectors with widespread operations. IUCN advises that KBAs need not all be protected, but rather managed to maintain their values, so if operations overlap a KBA, analysis is needed to find if the impact is negative. Under current plans from the Convention on Biological Diversity, area-based conservation is set to expand to 30% of land surface, and over 60 nations have pledged to meet this. KBAs are likely to be increasingly important indicators in the future, in identifying potential conservation areas.

Chain of custody data are harder to find, although for companies involved in high-risk commodities with a voluntary certification scheme, the presence or absence of reference to certification gives a useful first indication of the risks of impacts on biodiversity.

Quantitative, site-specific evidence is rare; a few high-profile developments receive a lot of media attention, while many others carry on unnoticed. Some material from activist groups is useful, others tend to regard all developments as bad, and it is hard to distinguish explicit, data-rich examples. While there is much information on exploitation of labour and conflicts with communities, perhaps unsurprisingly there is less data quantifying negative impacts on biodiversity and less still connecting impacts to threatened species.

COMPANY REPORTING

The extent to which a company is open about environmental policies, commitments and actions depends on factors such as level of controversy, prior exposure to criticism, how public facing it is, and awareness amongst senior staff. Options are shown in Figure 1.

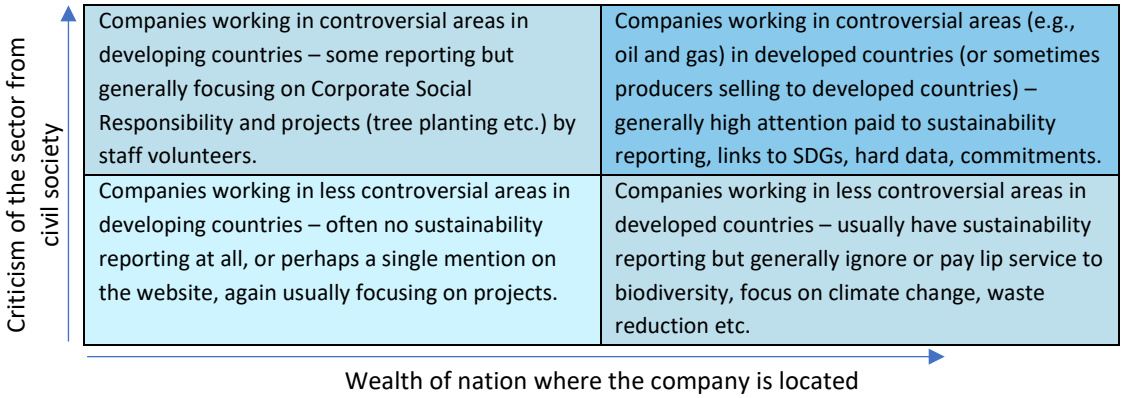


Figure 1: **Different approaches to sustainability reporting**

SUSTAINABILITY REPORTING BY COMPANIES IS HUGELY VARIABLE AND BIODIVERSITY CONSIDERATIONS ARE OFTEN OMITTED ALTOGETHER. BETTER GUIDANCE ON BIODIVERSITY REPORTING BY COMPANIES IS URGENTLY NEEDED

- Most companies report on ***policies*** (often general), rather than ***performance*** (against their own principles or requests from NGOs, the public or governments).
- Many companies have **annual sustainability reports**, varying from glossy reviews with vague commitments, to data-rich analyses of targets, impacts and progress.
- Very few refer directly to **protected areas** and we found none that referred to **key biodiversity areas**. More mentioned the **IUCN Red List**.
- The **Sustainable Development Goals** are often cited; some companies report against all 17; others identify a few considered relevant. Reporting against SDGs 14-15 on biodiversity is usually vague or absent. (This matches other research, analysis of 729 companies[1] found 72% cited SDGs but only 2% identified indicators or targets.)
- **Corporate Social Responsibility** reporting is common, especially in Asia. Reports are often simplistic, focus on projects or donations (e.g., tree-planting) rather than analysis of the company's own operations.
- **Chain of custody** reporting is common in parts of the food sector. Many companies refer to **voluntary certification schemes** like the Roundtable on Sustainable Palm Oil, but few specify the proportion of their products certified.
- **Biodiversity** is under-represented in reporting, compared to climate change or recycling. A few exceptional companies report in detail.
- Watchdogs, journalists and NGOs often give vague information on PAs and KBAs; do not link to the World Database on Protected Areas or the KBA database, and do not provide standard company identification numbers.
- Generally, companies in Europe and North America provide the best information and those involved in the extractives and food industries have the most detailed reports.

1. PwC. 2018. *From Promise to Reality: Does business really care about the SDGs? And what needs to happen to turn words into action*. PWC, London

SOME OBSERVATIONS ON THE RESULTS

The results remain confidential; the following notes describe factors relevant to other researchers. We divided companies into five broad sectors, by main interest. Many larger companies (e.g. Korean *chaebol*) cover a huge array of goods and products and offer services (e.g., consultancy) and management (e.g., property rental) alongside production.

1. Mining: the extractive industries had the largest direct impact identified, but this is partly because they operate in sites with fixed boundaries that can be mapped against spatial conservation parameters. There were some clear operational overlaps with PAs and/or KBAs where no additional information could be found on impacts; this seems to indicate a gap in reporting (both by watchdogs and the company itself).

2. Agri-forestry: probably has more impact but is hard to pin down; a dairy products company likely relies on feed containing soy and palm oil, which may come from deforested areas. But this needs a level of inquiry not feasible if a fund has thousands of investments. Many companies refer to voluntary certification schemes like the RSPO, but it is often unclear whether all or only part of their products are certified.

3. Energy: larger fossil fuel companies with multiple sites often have operations in or near protected areas or KBAs, "near" being especially pertinent for marine sites. HEP companies may impact PAs and KBAs downstream. Major transmission companies often have power lines crossing protected areas; the risks to biodiversity are debated. A minority have policies to avoid important areas and take mitigation action.

4. Infrastructure: Most activities are irrelevant, occurring in urban or industrial sites; exceptions are dams, transport infrastructure and greenfield development. Operations of many large companies are hard to identify. Limestone and gypsum quarrying for cement production has devastating impacts; this sector reports little on biodiversity.

5. Chemicals: Most of these companies do not have a direct impact on biodiversity as defined in this analysis. However, many – perhaps most –will be causing significant environmental damage in their production processes or products, e.g., making and selling pesticides and fertilizers. It might be worth looking, for instance more closely at those selling particularly toxic active ingredients.

NEXT STEPS

As part of the follow up to this process, we will develop best practice guidance on biodiversity reporting, along with sources of information and advice.

This briefing was written by Nigel Dudley and Hannah Timmins. Reproduction is encouraged but only for non-profit purposes, with full acknowledgements. Comments, criticism and ideas are welcome. Many thanks to the people who helped us; due to the confidential nature of this research we can't name you here, but we remain deeply grateful.

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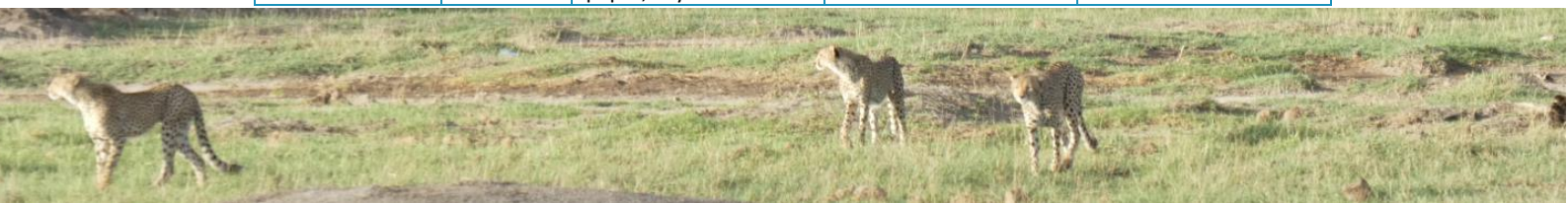
APPENDIX: INFORMATION SOURCES

Some of the key sources of information used to identify impacts.

Source	Location	Business data	Ecological data	Impact data
Global Forest Watch	Global	Logging concessions	Biodiversity intactness	Fire alerts
		Mining concessions	Global biodiversity significance	Tree cover loss (by driver)
		Oil Palm concessions	Alliance for Zero Extinction sites	GLAD Deforestation Alerts
		Palm Oil mills	Key Biodiversity Areas	Emerging hotspots
		RTRS Guides for Responsible Soy	Mangrove biomass density	CO_2 emissions from tree loss and peat
		RSPO oil palm concessions	Tiger Conservation Landscapes (WWF)	Terra-i Deforestation Alerts
		Oil & gas concessions	Endemic Bird Areas	
		Landcover: Agriculture	Tree biomass density	
		Major dams	Soil carbon density	
		Tree plantations	Biodiversity Hotspots	
		Wood fibre concessions	Potential carbon sequestration rate	
			Tree cover	
			Primary forests	
			Intact forest landscapes	
			Mangrove forests	
			Grassland, wetlands, shrublands, etc.	
https://www.globalforestwatch.org/				
Global Dam Watch	Global	Georeferenced dams		
http://globaldamwatch.org/				
Database of dams in PAs	Global			
https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12719				
Proyecto AMBIODUCTO	Ecuador Amazon	Petroleum		
http://geodata.policysupport.org/ambioducto				
Co$ting Nature	Global	Global surface mines Oil and gas, etc		
http://www.ambiotek.com/mapping/partners/costingnature/pc_wc_pop/geapi_def.html				
Oil Watch	Global	Links to country action networks		
https://www.oilwatch.org/links/				
Eyes on the Forest	Sumatra, Indonesia	Pulp and paper - concessions, mills and transportation corridors Palm oil - mills, refineries, illegal plantations,	Government and customary PAs, ranges of rhino, orangutan, elephant, tiger, eco-floristic diversity, extinction risk, carbon storage	Hotspots and haze monitoring, elephant deaths
Interactive map - http://maps.eyesontheforest.or.id/				
Mongabay	Global - can search by location	Agriculture, Amazon soy, biofuels, cattle ranching, coal, dams and hydropower, energy, fishing, fossil fuels, logging, mining, oil, palm oil, pulp and paper, soy		Multiple sources of information on individual projects



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https://eiti.org/. Reports for individual countries found: https://drive.google.com/drive/folders/0B361RU22DTPfZ1JsQTZ5Y09DdTA				
Responsible Mining Map	Global	Business names		Only responsible mines on the map
https://map.responsiblemining.net/				
Forest Governance and Legality	Map of strong-weak forest governanc e – global	Illegal timber, pulp and paper hotspots		
https://forestgovernance.chathamhouse.org/				
Forest Peoples Programme	Global			Reports by trade
https://www.forestpeoples.org/en/resources				
Mined Amazon	Amazon	Mine concession shapes, corporation names, years active, active mines, ore type	Protected area names	
https://infoamazonia.org/en/maps/amazoniaminada/#!/story=post-61441&loc=-6.217012327817175,-57.755126953125,7				
SkyTruth Toolbox	Gulf of Mexico			Oil spills
	Global			Flaring maps
	Parts of the USA			Mountaintop mining maps and data
https://skytruth.org/toolbox/				
Global Fishing Watch	Global	Vessel names, fishing effort	MPAs (plus No-Take zones)	
https://globalfishingwatch.org/				
Environmental Investigation Agency				Deforestation, illegal logging and timber trafficking
https://eia-international.org/				
Mining Watch Canada	Global	Companies	Conservation values of the area	Recent stories on global impacts
https://miningwatch.ca/				
International Rivers	Global	Companies		Impacts on rivers
https://www.internationalrivers.org/				
Mekong Reservoir Mapping Tool	Mekong	Dams and Reservoirs - locations and operational data		
http://damtool-servir.adpc.net/				
SPOTT	Global	Transparency and traceability rankings for oil palm, pulp and timber and rubber	Identification of species of concern	Absence/presence of deforestation monitoring
https://www.spott.org/dashboard