



# A Guide to Biodiversity for the Private Sector

[www.ifc.org/BiodiversityGuide](http://www.ifc.org/BiodiversityGuide)

## Power

### The Bottom Line

Global demand for energy is growing rapidly and, with it, the need to meet this demand as efficiently as possible. Power generation, from both non-renewable and renewable sources, can have a wide range of biodiversity impacts. Linear features, such as roads and corridors for power lines, can fragment habitats and allow increased access to previously undeveloped areas, leading to potentially significant impacts from land conversion, small-scale mining, hunting and logging. Power generation may use a significant amount of water, and improper disposal of waste can also threaten biodiversity resources. The burning of fossil fuels can impact biodiversity through air and water pollution. Although wind power is a renewable resource, wind turbines may adversely affect wildlife, particularly birds. And the building of dams for hydroelectric power can profoundly affect biodiversity by flooding habitat, providing water resources to fuel agricultural expansion and emitting increased levels of greenhouse gases from rotting vegetation in reservoirs.

The electricity sector was identified as a high risk (“red zone”) sector for biodiversity risk in the September 2004 report *Is Biodiversity a material risk for companies?* (F&C Asset Management plc) [Report available from: <http://www.businessandbiodiversity.org/pdf/FC%20Biodiversity%20Report%20FINAL.pdf>] The report defines red-zone sectors as those sectors in which *most companies* are likely to be exposed to biodiversity risks and the risks are *likely to be significant*.

### Drivers for change

- Increasing **pressure from major financial institutions** for good environmental performance, particularly in relation to major dam projects (financiers)
- Tightened **national legislation** in response to pollution issues such as acid rain (governments, regulators)
- Increasing international interest in and controls on **greenhouse gas emissions** (governments, regulators, NGOs, clients)
- Business opportunities created by **market liberalization** and the move towards decentralized production in some countries, allowing companies to create new markets and service the demand for “green” electricity (clients, consumers, shareholders)

### Key sustainability initiatives and good practices

- **The World Commission on Dams (WCD):**  
[<http://www.dams.org>] A joint initiative of the World Bank and the World Conservation Union (IUCN) [<http://www.iucn.org>], the WCD carried out an extensive survey on the development effectiveness of dams and developed criteria, guidelines and standards for large dams.
- **The UNEP Dams and Development Project:**  
[<http://www.unep.org/dams>] The UNEP project was established in November 2001, in response to a request from WCD to apply the Commission’s recommendations in a local context around the world.
- **Powering a Sustainable Future: An agenda for concerted action**  
[<http://www.wbcsd.org/plugins/DocSearch/details.asp?type=DocDet&ObjectId=MjEyMzE>], a report by the World Business Council on Sustainable Development [<http://www.wbcsd.org>] and eight of the world’s leading

electric utility companies, lays out a strategy for ensuring future electricity supply, expanding the provision of power to more people around the world, and decreasing the sector's greenhouse gas emissions.

- **The Sustainable Asset Management (SAM) Smart Energy Fund:** [<http://www.sam-group.com>] A specialized fund for clean energy projects launched in 2003.
- **Cagayan Electric Power and Light Company (CEPALCO):** [<http://www.ifc.org/ifcext/pressroom/ifcpressroom.nsf/PressRelease?openform&1C46CD2F7BC8576F85256D3A004E4736>] GEF, through the IFC, has invested in a major solar photovoltaic installation with this Filipino company.
- **The Efficient Lighting Initiative:** [<http://www.ifc.org/ifcext/enviro.nsf/Content/EfficientLighting>] A GEF/IFC initiative to develop markets for emerging “green” technologies.
- **The Photovoltaic Market Transformation Initiative (PVMTI):** [<http://www.ifc.org/ifcext/enviro.nsf/Content/PVMTI>] A GEF/IFC initiative to promote the commercialization of solar power technology.
- The wind energy sector has published a large amount of material on both costs and benefits to biodiversity:  
<http://www.nationalwind.org>  
<http://www.ewea.org>