RepRisk ESG Business Intelligence

Analysis and metrics to measure and manage environmental and social risks

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Introduction: RepRisk is a global research and business intelligence provider on ESG risks

- Global research and **business intelligence** firm specializing in dynamic **ESG risk analysis and metrics**

- Founded in 1998 as environmental risk consultancy

- Launch of RepRisk ESG database in 2006 as a **due diligence tool** for the financial sector

- Today, runs **comprehensive database on ESG risks** related to companies, projects, sectors and countries worldwide

- Database used by **100 global financial and corporate clients** for risk management, compliance, supply chain, as well as monitoring of reputation, peers, NGOs and ESG issues
A new business imperative: ESG risks can translate into bottom-line impacts

Environmental, social and governance (ESG) risks

E.g. Environmental degradation, human rights abuses, corruption and fraud

Compliance risks

E.g. Violation of policies, commitments, international standards

Reputational risks

E.g. Risks to earnings and capital from adverse public perception

Financial risks

E.g. Direct impact on cash flows and capital, including credit or investment risks, business continuity, etc.
Two megatrends: Increased stakeholder attention and transparency amplify ESG issues

Increased and rapidly changing stakeholder expectations

- Environmental, social and governance (ESG) issues have evolved from tangential importance to material relevance over the last decade

Increased transparency and disclosure

- The internet and social media create a hyper-transparent and hyper-connected world, which serves to amplify stakeholders’ expectations about ESG issues
Big data: How can business leaders navigate the endless stream of open-source intelligence?

Source: cloudtimes.org
Within the landscape of ESG information, an external perspective provides a reality check.

Information type

<table>
<thead>
<tr>
<th>Information source</th>
<th>Policies, management systems, commitments (&quot;intention&quot;)</th>
<th>Performance (&quot;reality&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company-provided information</td>
<td>e.g. Rating agencies, Research organizations</td>
<td>e.g. KPIs, GRI, CDP</td>
</tr>
<tr>
<td>Third-party and stakeholder-based information</td>
<td>e.g. Annual CSR Reports, Sustainability websites, Policy summaries</td>
<td>External perspective on company operations</td>
</tr>
</tbody>
</table>
Why look at third-party, media and stakeholder information?

- Third-party, media and stakeholder information can provide valuable insight into a company’s performance – e.g. can act as an early warning system, can provide a different perspective.

- Complements information provided by the company itself (“mirror”), helping to ensure a data-driven, holistic assessment.

- Helps assess whether a company’s intention translates into reality (“reality check”).
Leveraging stakeholder data supports transparency and informed decision-making

+80,000 sources in 15 languages

- Gov’t agencies
- NGOs
- News sites
- Twitter
- NGOs
- News sites
- Print media
- Think tanks
- Newsletters
- Blogs

ESG Risks

- Criticism
- Negative incidents (e.g. factory fire)
- Violation of international standards
- Controversies
- ...i.e. – no positive information

Extracting information that supports transparency and decision-making
Broad language coverage supports the early identification of risks

- Risks often appear earlier at the local level – i.e. in local sources, in local languages
- Language coverage helps ensure early identification of ESG-related risks

Chinese
Dutch
English
French
German

Italian
Japanese
Korean
Portuguese
Russian

Spanish
Danish
Finnish
Norwegian
Swedish
Following a strict, rules-based approach ensures consistent data over time.

**ESG and reputational risk**

1) **Screen**
   - Prop. IT Tool
   - Over 80,000 sources from stakeholders, media and third parties
   - 15 languages
   - Issues-driven searches

2) **Identify**
   - Human intelligence
   - ESG-related
   - Identified as a risk (no positive info)
   - Related to a named company
   - Severity threshold

3) **Filter**
   - Human intelligence
   - Removal of duplicates
   - Each risk incident added only once, unless risk profile of incident changes

4) **Analyze**
   - Human intelligence
   - Summary of risk incident
   - Scoring of risk incident according to parameters:
     1) Severity
     2) Source
     3) Novelty
   - Quality check

5) **Quantify**
   - Algorithm
   - Risk metric that quantifies ESG-related reputational risk exposure
   - From 0-100 (higher = more exposure)
   - Available for all entities

**Systematic and rules-based, daily 5-step process**
All quantitative and qualitative data captured on an Entity Profile Page

Entities in database

- Companies: +50,000**
- Projects: +12,000
- Sectors: All sectors
- Countries: All countries
- Gov’t bodies: +7,000
- NGOs: +9,000
- Issues: 27 ESG issues
- Topic Tags: 36 ESG Topic Tags

Qualitative data: summaries and scores of risk incidents

General: **Database grows daily as new information is screened, identified, filtered, analyzed and quantified**  
**Approx. 37,000 privately-held; 13,000 publicly-traded**
What happens when no information is available on a specific company?

- In absence of company-specific information, the risks related to the company’s country and sector can be analyzed – e.g. mining in Guatemala.

- Country-Sector Analysis Tool plots the ESG-related country risk, over which sector risk can be plotted.

- Country-Sector Profile Page helps identify “hot spots” and issues that support analyses and engagement.
What new data-driven metrics are on the horizon?

RepRisk ESG Risk Rating (beta)

- Aims to be a simple, yet holistic rating that facilitates benchmarking and ESG integration
- Combines the (A) reputational risk exposure of a company and (B) the company’s country-sector risk exposure (based upon HQ and countries linked to risks)

**ESG Risk Exposure**

- **Low**: AAA, AA, A
- **Moderate**: BBB, BB, B
- **High**: CCC, CC, C
- **Very high**: D
“Big data” provides information that helps make ESG risks more manageable
Appendix I:
Background information
RepRisk’s scope of 27 ESG issues guides the risk screening and identification process

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Social</th>
<th>Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental Footprint</strong></td>
<td><strong>Community Relations</strong></td>
<td><strong>Employee Relations</strong></td>
</tr>
<tr>
<td>Global pollution and climate change</td>
<td>Human rights abuses, corporate complicity</td>
<td>Forced labor</td>
</tr>
<tr>
<td>Local pollution</td>
<td>Impacts on communities</td>
<td>Child labor</td>
</tr>
<tr>
<td>Impacts on ecosystems and landscapes</td>
<td>Local participation issues</td>
<td>Freedom of association and collective bargaining</td>
</tr>
<tr>
<td>Overuse and wasting of resources</td>
<td>Social discrimination</td>
<td>Discrimination in employment</td>
</tr>
<tr>
<td>Waste issues</td>
<td></td>
<td>Health and safety issues</td>
</tr>
<tr>
<td>Animal mistreatment</td>
<td></td>
<td>Poor employment conditions</td>
</tr>
</tbody>
</table>

**Controversial products and services**

- Product-related health and environmental issues
- Violation of international standards
- Violation of national legislation
- Supply chain

*Note: All 10 Principles of the UN Global Compact map to RepRisk’s ESG scope*
RepRisk’s scope also includes 36* Topic Tags – specific ESG “hot topics” and themes

<table>
<thead>
<tr>
<th>Abusive/illegal fishing</th>
<th>Agricultural commodity speculation</th>
<th>Alcohol</th>
<th>Animal transportation</th>
<th>Arctic drilling</th>
<th>Asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic weapons</td>
<td>Cluster munitions</td>
<td>Coal-fired power plants</td>
<td>Conflict minerals</td>
<td>Deep sea drilling</td>
<td>Depleted uranium munitions</td>
</tr>
<tr>
<td>Diamonds</td>
<td>Endangered species</td>
<td>Forest burning</td>
<td>Fracking</td>
<td>Gambling</td>
<td>GMO</td>
</tr>
<tr>
<td>Genocide/ethnic cleansing</td>
<td>High conservation value forests</td>
<td>Illegal logging</td>
<td>Indigenous people</td>
<td>Land grabbing</td>
<td>Landmines</td>
</tr>
<tr>
<td>Monocultures</td>
<td>Mountaintop removal mining</td>
<td>Negligence</td>
<td>Nuclear power</td>
<td>Oil sands</td>
<td>Palm oil</td>
</tr>
<tr>
<td>Pornography</td>
<td>Privacy violations</td>
<td>Protected areas</td>
<td>Sea-bed mining</td>
<td>Tobacco</td>
<td>Water scarcity</td>
</tr>
</tbody>
</table>

* Additional Topic Tags will be added by June 2015:
Hydropower (dams); Migrant labor; Predatory lending
RepRisk selects, defines and assesses ESG issues in line with key international standards

- United Nations Global Compact (UNGC)
- World Bank Group (IFC) Performance Standards
- World Bank Group Environmental, Health and Safety Guidelines
- OECD Guidelines for Multinational Enterprises
- The Equator Principles
- ILO Conventions
- United Nations Principles for Responsible Investment (UN PRI)
- UN Convention Against Corruption
- Universal Declaration of Human Rights
RepRisk runs a comprehensive and dynamic ESG risk database that supports transparency.

<table>
<thead>
<tr>
<th>Comprehensive</th>
<th>Timely</th>
<th>Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal coverage: Unlimited coverage of companies, listed and non-listed, in developed and emerging markets</td>
<td>Dynamic updates: Database updated daily as new ESG-related risk incidents are detected</td>
<td>Third-party sources: +80,000 third-party sources in 15 languages (not company-provided information)</td>
</tr>
</tbody>
</table>

Supports effective management of ESG risks related to clients, business transactions, partners, and suppliers.
Headquarters in Zurich and over 40 risk analysts in North America, Europe and Asia
RepRisk serves 100 global clients, helping them to manage and mitigate ESG risks
RepRisk partners with key sustainability index providers and initiatives to advance ESG issues

More coming in 2015...
RepRisk ESG Risk Platform – Sector Profile Page provides information on sector-specific risks

Mining

RepRisk sectors are based on the ICB structure (www.icbenchmark.com). This sector includes:

- Companies engaged in the exploration for or mining of coal.
- Companies engaged in the exploration for and production of diamonds and other gemstones.
- Companies engaged in processing of coal.

RepRisk Index Trend (ESG Breakdown)

Current RRI: 68
Peak RRI: 78 in Mar 2013
News Stats: 8121 Total

News results reflect any applied filters.

<table>
<thead>
<tr>
<th>Date / Source</th>
<th>News</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.03.2015 Hindu; The (online)</td>
<td>Company of former Indian coal minister linked to money laundering probe against Jindal Steel and others on coal block allocation</td>
</tr>
<tr>
<td>31.03.2015 Reuters (online)</td>
<td>Baosteel Group executive faces corruption investigation in China</td>
</tr>
</tbody>
</table>

This news covers less severe and less complex criticism and incidents from an English news source. Please refer to RepRisk Latest Updates for further information.
RepRisk ESG Risk Platform – Country Profile
Page to analyze country-specific risks

Colombia

Capital: Bogota

GDP - millions of US$: 378,148
(Source: The World Bank)

World Governance Indicator Weight: 60
Further Information

RepRisk Index Trend (ESG Breakdown)

News results reflect any applied filters.

Date / Source | News | Abstract
--- | --- | ---
27.03.2015 bsnorrell.blogspot.com (Censored News) | Nestle Waters denounced for unlimited water use as Sacramento citizens suffer water restrictions | Days after a senior water scientist warned that only one year's water supply remained in California's reservoirs, activists blocked entrances to Nestle Waters' Sacramento bottling plant, criticizing its alleged consumption of 80 million gallons of water yearly from Sacramento's aquifers. The members of the "Crunch Nestle Alliance" denounced the company's license to draw so much water during a record drought, while citizens have to contend with severe restrictions on water use. They also criticized Nestle's and the Sacramento officials' refusal to provide details of the company's water usage. Similarly, Nestle Waters North America is criticized for pumping water from the San Bernardino National Forest, allegedly without any assessment by the US Forest Service of its ecological impacts, and with a permit to transport water that apparently expired in 1988. The activists further disputed Nestle's claims to environmental stewardship, and Food and Water Watch has
RepRisk ESG Risk Platform – Topic Tag Profile
Page helps you research specific ESG themes

**Land Grabbing**

<table>
<thead>
<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Refers to the seizing of large areas of land, usually illegally or without the consent of local communities. Often associated with agriculture and biofuel acquisitions in the Global South and linked to concerns over water or food security.</td>
</tr>
</tbody>
</table>

**RepRisk Index Trend (ESG Breakdown)**

- Current RRI: 48 (+1)
- Peak RRI: 48 in Mar 2015
- News Stats:
  - Total: 1715
  - Environment: 376
  - Social: 1109
  - Governance: 151
  - (-79)

**News results reflect any applied filters.**

<table>
<thead>
<tr>
<th>Date / Source</th>
<th>News</th>
<th>Abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>28.03.2015</td>
<td><strong>South Boulder Mines criticized over adverse social and environmental impacts of resource exploration</strong></td>
<td>The rebel group Red Sea Afar Democratic Organisation has accused South Boulder Mines of illegal natural resource exploration in Afar’s region of Danakil in Eritrea. Allegedly, the company is partnering with the Eritrean government to forcibly remove indigenous Afar communities from their homelands, which are considered central to their cultural and social well-being. In addition to environmental damages, the exploration also allegedly caused an impact to the communities’ economic standing. Furthermore, South Boulder is accused of disrespecting human rights laws and disgracing international resolutions such as various UN declarations and covenants.</td>
</tr>
<tr>
<td>27.03.2015</td>
<td><strong>The World Bank Group faces strong criticism over funding of polemic</strong></td>
<td>The NGO International Rivers has accused the World Bank Group (WBG) of contributing to massive relocation and detrimental social impact.</td>
</tr>
</tbody>
</table>
Appendix II:
Use cases
Putting the data to use in banking: Integrating ESG risks in KYC and due diligence procedures

Internal compliance, risk management and sustainability policies and procedures

Onboarding, periodic reviews and monitoring

Clients  Partners  Transactions  Suppliers

RepRisk ESG Risk Platform

Not Flagged

Flagged

Escalation to:
- Risk function/CRO
- Legal and compliance
- CSR/Sustainability
- Corporate Affairs

In line with policy
Violation of policy
Putting the data to use in insurance: Integrating ESG risk data in underwriting processes

- Know your customer (KYC) and partner
- Underwriting Single Risks
- Asset Management

All lines of business
- Specialty
- Property
- Casualty, incl. D&O
- Credit Risk and Surety

Investment decisions
Putting the data to use at ECAs: Data to support environmental and social due diligence

OECD Common Approaches for ECAs

<table>
<thead>
<tr>
<th>Environmental and social due diligence</th>
<th>Exporters</th>
<th>Buyers</th>
<th>Project sponsors</th>
<th>Contractors</th>
<th>Projects</th>
<th>Country-sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
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<td>Classification</td>
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<td>Review</td>
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<td>Monitor</td>
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</table>

RepRisk ESG Risk Platform

In line with ECA Policies

Not in line with ECA Policies
Putting the data to use in asset management: ESG integration into all asset classes

Adherence to ESG risk management policies

1) Daily monitoring and alerts for policy-related ESG risk incidents
2) In-depth research triggered by high risk incidents and possible engagement with portfolio manager and research teams

List of all investment positions for all asset classes
Putting the data to use in supply chain: Supporting supplier selection and monitoring

- **Standard setting and Supplier Code of Conduct**
  - Selection of relevant ESG issues for benchmarking against standards and internal policies

- **Supplier selection and risk analysis**
  - Assessment of supplier ESG risk based on company-specific data

- **Supplier monitoring and audits**
  - Ongoing monitoring of all suppliers for possible breaches of standards and internal policies
Putting the data to use in CSR, sustainability and communications: Data-driven research

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Tracking ESG trends, developments and issues</td>
<td>NGO monitoring and engagement</td>
</tr>
<tr>
<td>Country- and sector-specific research</td>
<td>Peer benchmarking and monitoring</td>
</tr>
<tr>
<td>Corporate responsibility reporting (e.g. materiality analyses)</td>
<td>Internal management reporting</td>
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</tbody>
</table>