Water risks in agricultural supply chains

WWF and PRI
OUR MISSION:

CREATE A SUSTAINABLE GLOBAL FINANCIAL SYSTEM
Launched in April 2006 at the NYSE, the Principles for Responsible Investment has:

- 2 UN Partners: UNEP Finance Initiative, UN Global Compact
- 1260 Signatories: Asset owners, investment managers, and service providers
- 45 USD trillion assets under management
- 6 Principles: Recognising the materiality of environmental, social and corporate governance issues
COLLABORATION

PRI investor steering committee

WWF

PwC

Guided engagement with companies
KEY FINDINGS

- Data and disclosure on supply chain risks is inadequate to allow investors to understand where they face potential risks.
- Supply chains are complex and require additional focus by companies and investors alike.
PROJECT EXPOSURE

Fiona Reynolds
Managing Director
Principles for Responsible Investing
Key analyses

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High risk crop/country combinations

Guided engagement with companies

List of largest companies related to these high risk combinations
Understand your risk, and take action

- Free and easy-to-use online tool
- Water risks for 34 industries and 120+ crops
- >100 indicators, best available (and peer-reviewed) datasets
- >750 map overlays
- Unique country profiles
- Largest online library of mitigation responses and case studies
- Linked with AWS, Water Action Hub, and CDP
The Water Risk Filter aims to cover all water risk aspects that can impact bottom line.

<table>
<thead>
<tr>
<th>Physical risk</th>
<th>Basin related risk</th>
<th>Crop related risk</th>
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</thead>
<tbody>
<tr>
<td>Scarcity (quantity)</td>
<td>• (Monthly) scarcity</td>
<td>• Blue/green water footprint</td>
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<tr>
<td></td>
<td>• Groundwater</td>
<td>• Blue/green water dependency</td>
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<td></td>
<td>• Climate change impacts</td>
<td>• Sensitivity to water shortages</td>
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<td></td>
<td>• Floods</td>
<td>• Water access issues</td>
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<td></td>
<td>• Droughts</td>
<td>• Use of soil moisture and other techniques</td>
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<tr>
<td>Pollution (quality)</td>
<td>• 9 pollution indicators</td>
<td>• Use and type of agri-chemicals</td>
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<tr>
<td>Impact on Ecosystem</td>
<td>• Threat to freshwater biodiversity</td>
<td>• Treatment requirements</td>
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<td></td>
<td>• Vulnerability of water ecosystems</td>
<td>• Quality measurements</td>
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<td></td>
<td>• Access to safe drinking water</td>
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<tr>
<td></td>
<td>• Access to improved sanitation</td>
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<tr>
<td>Regulatory risk</td>
<td>• Local / national water strategy</td>
<td>• Use of techniques to maintain soil quality</td>
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<tr>
<td></td>
<td>• Sophistication of water regulation</td>
<td>• Use of riparian buffers or other measures</td>
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<td></td>
<td>• Enforcement of regulation</td>
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<tr>
<td>Reputational risk</td>
<td>• Local and global media coverage</td>
<td>• Legal compliance</td>
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<td></td>
<td>• Cultural/religious value of water</td>
<td>• Incidents / penalties</td>
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</tr>
<tr>
<td></td>
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<td>• Local and global media coverage</td>
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<td>• Stakeholder engagement</td>
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<td></td>
<td></td>
<td>• Internal governance and monitoring</td>
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PwC ESCHER combines industry data, crop-level information, water data and supply chain modeling.

Example: Geographic mapping of export volume and export value

Example: Water stress within river basins, reflecting both, regional water availability and regional water use.

Example: Crop level water data
ESCHER computes water flow and storage and water use by 18 different types of crops. Simulations are based on a global geographic raster of 5 arc minutes (~6 x 9 km in Europe), which is currently the finest available resolution of global-scale hydrological models.

Example: Industry data
ESCHER computes water consumption of the following sectors:
- Bovine meat products,
- Meat products nec,
- Vegetable oils and fats,
- Dairy products,
- Beverages and tobacco products,
- Textiles,
- Wearing apparel,
- Leather products,
- etc.
Data challenges

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High risk crop/country combinations (incl economic value)

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List of largest companies related to these high risk combinations

Ongoing data improvements
Partly based on data models

Supplier structures often not available > use of industry generic data and proxies
Guided engagement with listed companies

Engagement questions to investee companies linked to WWF stewardship approach

1. Water awareness
2. Knowledge of impact
3. Internal action
4. Collective action
5. Influence governance

Response strategies

Awareness & relevance

Water risk assessment

Disclosure

Material value of risk (and opportunity)

Leverage existing initiatives
Next steps

- WWF and PRI continue to provide guidance to investors
- Incorporating results in the Water Risk Filter
Thank you

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