MANAGING WATER RISKS AS BUSINESS RISKS

2019 Mazars Global Water Risk Survey
Results in Chile
The key findings from our Chile survey are consistent with the results of our global survey: the water risk is critical today and the impact on businesses is real and immediate.
Due to its geography, Chile is considered a privileged country in terms of its water resources. According to data from the Public Works Ministry, the country has 101 hydrographic basins, with its superficial and underground waters distributed around 756,102 km² of land. Among them, we find 1,251 rivers and 12,784 water bodies (lakes and lagoons). Additionally, Chile has 24,114 glaciers. Meanwhile, the average precipitation in the country is 1.525 mm/year.

However, due to the effects of climate change, drought has become a severe problem in different parts of the country, which is creating new impacts on the population and the business world. Data compiled by Fundación Chile reveal that roughly 76% of the Chilean surface is being affected by drought, desertification and degraded soil, which makes Chile one of the economies with the highest water risk by 2025, according to Radiografía del Agua, Brecha y Riesgo Hídrico en Chile, 2018.

Given this scenario and its effects on the population, we decided to assess the impact on business by surveying more than 265 C-level, or equivalent, executives in Chile across more than 25 sectors. The survey is based on the same methodology used in our 2018 Global Water Risk Survey covering France, the UK, China, Spain, and Germany with the support of YouGov.
This year, we surveyed more than 265 C-level executives and equivalent in Chile across over 25 sectors. The survey sample shows a good representativeness of the Chilean economy. Among the top responses, we find Industrials (Construction, Manufacturing, Material extraction, Chemicals, Energy & Utilities, etc.), Agriculture, Services (Hospitality & Leisure, Transport, Retail, Media, Professional services, etc.), Financial Services (Banking, Insurance, etc.), as well as Public Sectors and Non-Profit Organizations. Our sample also contains responses from a good variety of small, medium and large businesses, with about a third of the sample coming from businesses with revenue in excess of $1 billion.
## AWARENESS OF WATER RISK

Generally speaking, how do you judge today’s global water risk?

<table>
<thead>
<tr>
<th></th>
<th>Critical</th>
<th>Low risk</th>
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<tbody>
<tr>
<td>68%</td>
<td>6%</td>
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Overall, and similar to our Global Water Risk Survey, water risk in Chile is critical today and the impact on businesses is real and immediate. Indeed, the survey reveals a high appreciation of the critical level of risks associated with water challenges: almost 1/3 of all respondents (32%) consider it ‘Already very critical’. If we analyse responses by company size, there is an even higher level of water risk awareness among larger companies where 37% of respondents think it ‘Already very critical’, and if we add those who responded ‘Critical’, the number reaches almost 80%.

<table>
<thead>
<tr>
<th></th>
<th>Business with less than $1 Billion revenue</th>
<th>Business with more than $1 Billion revenue</th>
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<tbody>
<tr>
<td>No risk at all</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Risk of some sort</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Somehow critical</td>
<td>21%</td>
<td>13%</td>
</tr>
<tr>
<td>Critical</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td>Already very critical</td>
<td>33%</td>
<td>37%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>5%</td>
<td>0%</td>
</tr>
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</table>
Business risk refers to the possibility that a company will experience lower profits or lose value as a result of events, circumstances, actions, or inactions. As the world becomes ever more sophisticated, we benefit from technology advances, and as externalities evolve, an ever growing number of factors are impacting business risks. Water has emerged as one of these factors and it affects all commonly accepted risks: strategy, compliance, financial, operational, and reputational. The top risks when it comes to water are:

**Key business risks related to water**

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**Environmental impacts:**
For decades, water has been a critical resource for industrial processes as a cleaning material; for the energy industry as a cooling fluid, for any agricultural operations as a nutrient, and in many other industries. At the end of all these processes there are discharges in natural water ways, i.e. rivers, aquifers, or oceans. The chemical make-up, temperature, and density of these discharges affect the environment daily, and potentially create liabilities.

**Supply chain dependence:**
Without a proper understanding of supply chain’s operational dependence on water, or of their suppliers to water sources that might be stressed, enterprises should plan for capital projects in areas that will be impacted by the effect of changes in water supply, or find its operations at a full stop due to unprecedented climate conditions. In which case, the lack of consideration for the dependence on water will ultimately destroy value for shareholders.

**Social responsibility:**
There is mounting market pressures [investors, regulators, customers, etc.] for corporates to be focused on the greater good for our planet and society. In the water sector, the need to produce more with less water in order to reduce corporates’ pressure on global demand and, therefore, the price of water is a prime example. Businesses that neglect this call for greater water efficiency are exposed to major reputational risks.

<table>
<thead>
<tr>
<th>Survival risks (Food supply, Health, Human rights, Drinkable water availability etc.)</th>
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<tbody>
<tr>
<td>Low risk</td>
</tr>
<tr>
<td>Critical risk</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Societal &amp; Community risks (Political stability, Economic stability, Infrastructure, Energy supply etc.)</th>
</tr>
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<tbody>
<tr>
<td>Low risk</td>
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<tr>
<td>Critical risk</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Business risks (Capital market, Trade, R&amp;D, Supply chain, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low risk</td>
</tr>
<tr>
<td>Critical risk</td>
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</table>

Please rate the risk level of water related events (ex. Flood, drought, contamination, scarcity, etc.) on the following aspects:

More than half of the respondents recognize how critical water related events impact survival, societal & community risks, with a slightly lower level (44%) recognizing the impact of water related events on business risks. However, if we look closer within the samples, smaller businesses (below the $1 Billion revenue threshold) show a higher awareness of water related events on business risks, indicating a higher sensitivity and exposure of their business model to water related events.
When do you think global water related events will significantly impact global business, if ever?

Almost 96% of the sample affirms that a global water related event will significantly impact global business. In terms of estimated timeframes, nearly 3/4 of managers (73%) consider that global water risk events will affect business within the next 10 years, with 22% saying it will be immediate and other 22% predicting in less than 5 years.

Which industries will be most affected by water risks in the next 20 years?

When it comes to the impact on specific industries, Agriculture is recognized as the most affected (59%), followed by Energy (33%) and Food and Beverage (31%), which is similar to findings in our Global Water Survey. Metals & mining (18%), Consumer products (17%) and Hospitality & Tourism (11%) are also among the most at risk industries in Chile.
ACTIONS ARE BEING TAKEN

Currently your company:

- Reports on water risks: 58%
- Considers water risk in its evaluation of corporate projects: 57%
- Discusses water risks during management meetings: 48%

In the next 5 years your company:

- is implementing measures to mitigate water-related risks: 74%
- will implement measures to mitigate water-related risks: 72%
A MATTER FOR ALL STAKEHOLDERS

Water risk and water risk impact is a subject of discussion with the following stakeholders of your organization:

Compared to our global results, where water risk is considered a purely internal management matter, our survey in Chile found that water risk and its impact have become a subject of common interest among almost all stakeholders up and down the supply chain, as well as with external agencies such as investors and regulators. Indeed, almost 1/3 of our respondents discuss water and water risk impact 'To a great extent'.

It’s good news that Chilean companies are taking measures to deal with water risks in their businesses. The next step should be assessing the effectiveness of those actions on financial results...

Damien de la Panousse
Managing Partner,
Chile
CREATING EFFECTIVE LEADERSHIP AND STEWARDSHIP

Which three roles are most effective in pushing forward better water engagement practices?

- Financial, environmental, social and governance advisors (43%)
- Corporate leaders (36%)
- International organizations (39%)

What could be the top most significant drivers towards proper water risks management practices?

- Regulation by state & international bodies (32%)
- Corporate leader engagement / management willingness (29%)
- Establishement of a global performance standard (26%)
- Market transparency on water risk management (29%)
When it comes to water risk management practices, our Chilean results show an interesting difference compared to our global survey. When indicating roles which are the most effective in pushing forward better water engagement practices, while our global survey shows a clear tendency to call for actions from a regulatory perspective, the Chilean panel clearly prefers a more practical and concrete approach: 'Financial, environmental, social and governance advisors' (43%) are thought of roles that are the most effective, followed by 'International organizations' (39%) and 'Corporate leaders' (36%), with only 31% of respondents choosing regulators. In terms of key drivers towards better water risk management practices and measures, 'Regulation by state & international bodies' (32%) and 'Corporate leader engagement and willingness' (29%) were top choices. However, 'Market transparency on water risk management [ex. data collection, data transparency]' (29%) is also among the top choices, indicating the value of clear communication in water risk management.

Given the importance of this risk and the potential impact it can have for enterprises, investors should assess and reward in their investment decisions those companies that have explicit policies to tackle water risk in their businesses.

*Damien de la Panousse*
*Managing Partner, Chile*

What will be the most helpful tool to price or assess water risks?

<table>
<thead>
<tr>
<th>Tool</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Standard water risk index</td>
<td>38%</td>
</tr>
<tr>
<td>Custom made risk model</td>
<td>25%</td>
</tr>
<tr>
<td>Financial market data (stock price, water index, etc.)</td>
<td>22%</td>
</tr>
<tr>
<td>Insurance premiums data</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
<tr>
<td>None of these</td>
<td>2%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>3%</td>
</tr>
</tbody>
</table>

While globally it seems that the corporate world, financial executives and professional investors are not equipped with the proper tools to assess water risk adequately when evaluating companies or projects, our respondents did contribute by stating their preferences for a standard water risk index (38%) or a custom-made risk model (25%) together with financial market data (stock price, water index, etc.) (22%).
MAZARS IN CHILE

Mazars in Chile specialises in audit, consulting, outsourcing and tax services.

We can count on our team of 150 multidisciplinary experts including auditors, lawyers, engineers and economists with rich experience in providing services to both national and international clients.

At the current stage, we work with more than 350 clients. In addition, we are registered member of Comisión para el Mercado Financiero (CMF) in Chile.

MAZARS IN THE WORLD

Mazars is an international, integrated and independent firm, specialising in audit, accountancy, advisory, tax and legal services.

As of 1 January 2019, Mazars and its correspondents operate throughout 104 countries and territories, of which 89 are part of Mazars’ international integrated partnership and 15 are Mazars correspondent firms and representative offices.

The Praxity Alliance offers Mazars operating capacity via professional teams in 18 additional countries. Mazars draws upon the expertise of 23,000 professionals and 1,040 partners, working from 310 offices worldwide, to assist major international groups, SMEs, private investors and public bodies at every stage in their development.
We believe performance and responsibility go hand in hand and that businesses play a major role in the future of our economies and society. Exemplary corporate citizens, able to think and act long-term, make for healthier communities. Our sustainability services have been designed to help all organisations achieve responsible and long-term growth, under increasing public scrutiny and in the face of new and potentially threatening challenges.

The increasing public interest in ethics and in how companies create value, as well as the growing focus of regulators on sustainability, has led to important changes in the way companies are expected to drive their business and performance, and has given rise to Environmental, Social and Governance (ESG) metrics. The numbers speak for themselves: sustainable investing now accounts for 26% of all professionally managed assets and represents over $22.89 trillion worldwide¹.

At Mazars, we believe this change is for the better. With global experts able to respond to increasing challenges within a more demanding and disparate ESG regulatory system, Mazars is in a position to serve and advise clients in an ever more complex space. We have developed a range of expertise in line with our commitment to doing Business. For Good®, aimed at reengineering trust in business, empowering people and nurturing collective responsibility.

Reengineering trust in business
Our solutions aim to enhance corporations’ ability to act for the benefit of a better functioning economic and financial community. In this area, our services include, but are not limited to, non-financial assurance, GDPR², corporate governance as well as anti-bribery and corruption. We also consider Corporate Social Responsibility (CSR) to be about how companies earn their profits not how they spend them.

Empowering people
We believe that fostering equality and progress can be achieved through providing the right business practices and helping people express their full potential in healthy work environments. To that effect, we offer corporate culture and human rights internal audit, external assurance and consulting, as well as advisory services in the areas of diversity and corporate equality.

Nurturing collective responsibility
We support exemplary leadership and responsible actions which aim to build a better society and a cleaner planet. To this end, our sustainable offer includes CSR consulting and ethics in business consulting.

¹ The Global Sustainable Investment Alliance (GSIA), “2016 Global Sustainable Investment Review”.
² The General Data Protection Regulation is a regulation in EU law on data protection and privacy for all individuals within the European Union (EU) and the European Economic Area (EEA).
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