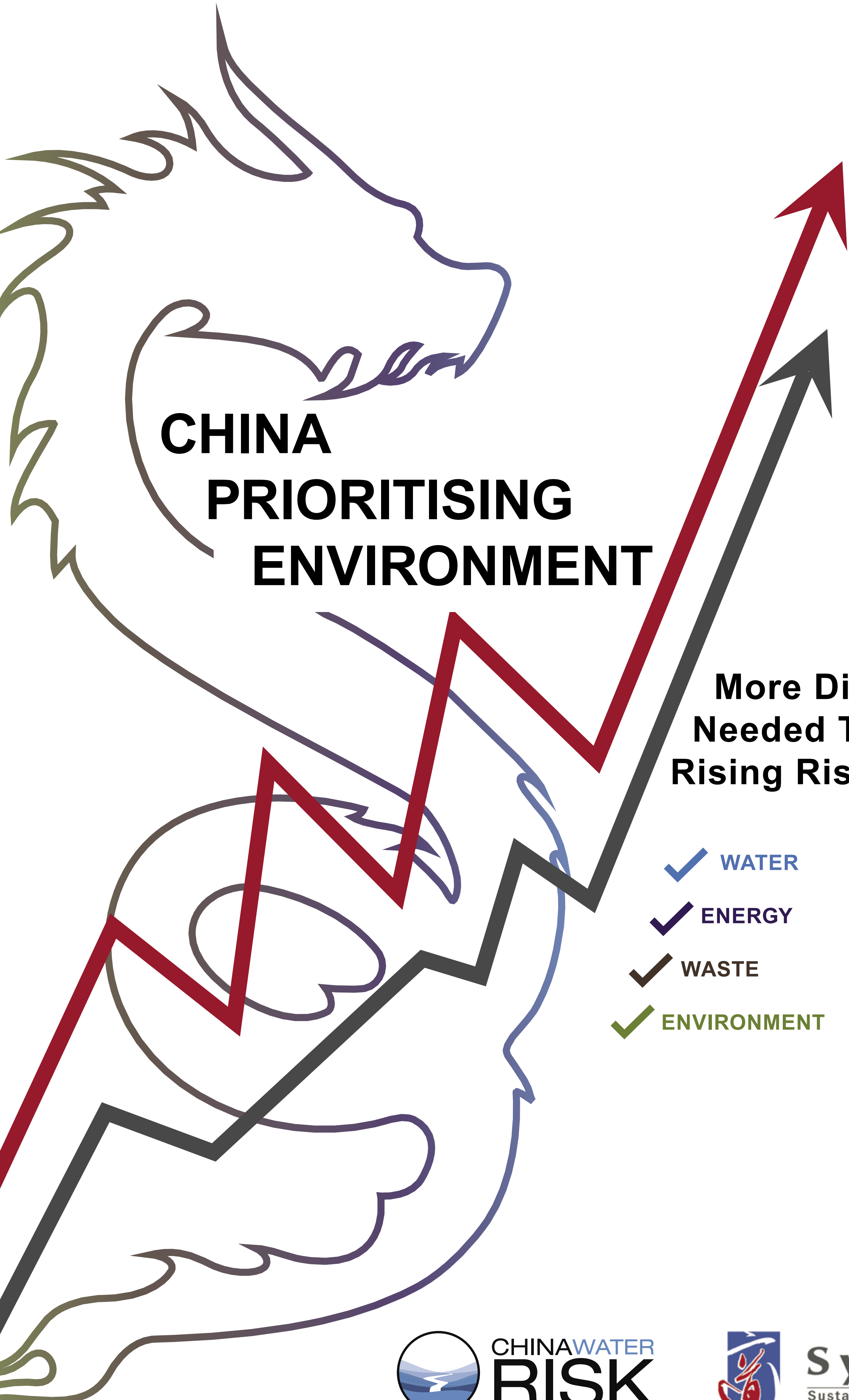


CHINA PRIORITISING ENVIRONMENT

More Disclosure Needed To Match Rising Risks

- WATER
- ENERGY
- WASTE
- ENVIRONMENT

CHINAWATER RISK

SynTao
Sustainability Solutions

NEW REPORT!

CHINA PRIORITISES ENVIRONMENT:
More Disclosure Needed To Match Rising Risks

May 2018: China Water Risk and SynTao release their new joint report titled, "*China Prioritises Environment: More disclosure needed to match rising risks*".

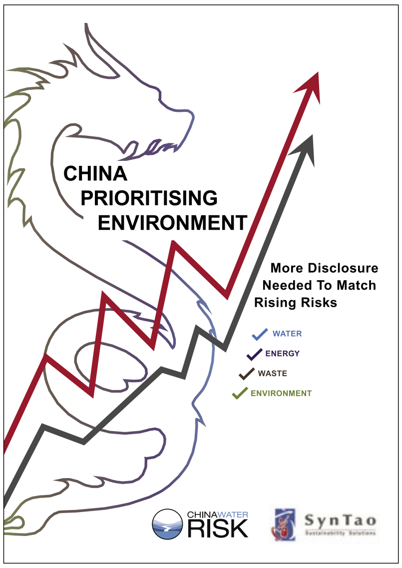
Environmental and water related risks have consistently been in the World Economic Forum's Top Five Global Risks for the last eight years. Hurricane Harvey in 2017 cost the US between USD70-108 billion. Troublingly, climate change exacerbates these risks. Already their persistent and material impacts are shifting the regulatory landscape, which in turn is creating mainstream risks. It follows then that the finance sector should be working on identifying, valuing and managing these risks so to build a resilient global financial system. While action to do this has started, the assessments are dependent on the underlying corporate disclosure, which is still lagging, largely inconsistent and not decision relevant.

China, facing serious environmental challenges and recognising the immediacy of these risks is moving towards mandatory environmental disclosure for its exchanges for which it has a tentative 2020 deadline. This is necessary if the country is to embed environmental and water risks in its credit policies as it has said it wants to.

Given China's actions we thought it was a good time to take stock on where the E in ESG disclosure is in China. CWR' & SynTao's report seeks to do this by analysing disclosure on the environment and three subcategories (energy, water & waste) by Chinese companies from 2012 to 2015 as per SynTao's MQI database. Specifically five indicators from the database common to all sectors were analysed. Six sectors with significant environmental impact were analysed. They are: agriculture, automobile manufacturing, coal, electricity, oil & gas and smelting. A deep dive into the disclosure of the top five listco's by market cap for each sector was also done and can be found in the full report. It should be noted that the analysis method used is not perfect so our findings are meant as a guide.

Check out 8 key takeaways on the following pages and details on accessing the full report below.

Authors: Dawn McGregor, Yuanchao Xu, Quqing Huang & Zhong Honfu
Graphic design: Charmaine Chang
Contact Information: info@chinawaterrisk.org or contact@syntao.com



Download the report with the QR code or from the link below:

http://chinawaterrisk.org/notices/new-cwr-report-china-prioritises-environment-more-disclosure-needed-to-match-rising-risks/

http://www.syntao.com/syntao/index.php/web/article/detail?id=456

FOREWORD

Debra Tan
Director
China Water Risk

For disclosure to be useful information needs to be accurate, relevant and timely. Although there has been much improvement in ESG disclosure over the last few years, environmental disclosure has generally lagged that of social and governance issues. Yet, environmental risks are on the rise globally with extreme weather and climate change wreaking havoc.

There is also the question of our ecological carrying capacity. The economy runs on water and in China, a series of reforms are being put into place to realign the economy with the environment. Limited water resources put a hard constraint on China and it has responded with policies to cap water use at national and provincial levels. Underlying scarcity and over-use issues are also compounded by rampant pollution. Tougher laws and regulations, not just for water but to clean air and soil, are now in place. All these regulations impact valuations and we see Chinese banks starting to assess their exposure to these environmental regulations and risks.

The last two years saw the rise of Environmental Risk Analysis (ERA) globally and we are pleased to be part of China's ERA working group led by ICBC under the guidance of the China Green Finance Committee. Since ERA is only as good as the underlying environmental data, and with China's shift to mandatory disclosure with a tentative 2020 deadline, we thought it was time to take stock of where the E in ESG disclosure is in China. We could think of no better partner to do this with than SynTao, the leading ESG disclosure expert in China.

As the findings from the report reveal, there are multiple challenges ahead. Sectors which are clearly exposed to water and carbon risks are not disclosing enough and issues around standardisation and integrating these local risks in a global framework still exist. Nevertheless, although some question the relevancy, quality and usefulness of environmental disclosure, there is no doubt that ERA in China is the way forward. CWR's previous research and investor surveys have shown that physical water risks, as well as environmental regulations in place can have material impact on valuations and portfolios. As China moves to guide its banks to embed environmental risks into credit policy, aside from figuring out how to value the risk, it is imperative we look to secure the integrity of baseline information provided by environmental disclosure.

Finally, it is important to remember that these risks have implications not just for China but globally. China is at the heart of supply chains for multiple sectors such as fashion, electronics and infrastructure. It's not just manufacturing but the supply of raw materials from cotton, synthetic fibres, wool, aluminium, steel, rare earths and other critical raw materials. Given the potential exposure, surely it is time to identify and assess the risks? There is no better start than relevant environmental disclosure; so all eyes on China as it steps up disclosure to match risks.

FOREWORD

Dr Guo Peiyuan
General Manager
SynTao

China faces serious environmental challenges while accelerating its construction of an "ecological civilization". However, positively, we have made rapid progress in green finance, which will help achieve national targets and improve environmental conditions. China has come a long way and today is a global pioneer in policy architecture, local pilot programs, green credit, green bonds, green industry funds, as well as environmental stress testing.

Corporate sustainability disclosure is an important aspect of green finance and key to embedding and valuing environmental-related risks. SynTao has long been working in this area and has seen corporate social responsibility (CSR) reporting flourish. Each year, we publish a research report "*A Journey to Discover Values*" to trace progress and provide up-to-date analysis on CSR reporting in China.

We also continue to expand our MQI database, which to date has the disclosure from over 10,000 CSR reports released by companies in China. And supplementing this, we offer the MQI Guidelines, which provide a set of material and quantitative indicators by sector so that companies can improve reporting quality.

With the rise of green finance and China's stock exchanges moving to mandatory environmental disclosure with a tentative 2020 deadline, we thought it was a good time to do a status check on where Chinese companies are on environmental disclosure.

We are excited to partner with China Water Risk on this report given their expertise in placing water as a financial risk across multiple sectors and their engagement with the global investor community on these risks.

We hope that this report will provide useful insights into environmental disclosure by Chinese companies. The trends identified show good progress but also that there is still a way to go. The challenges identified highlight the quantity and quality issues in corporate sustainability disclosure. We believe that publicly available environmental data (PAED) can help tackle both these challenges. Already some Chinese provinces are linking PAED to company operating costs.

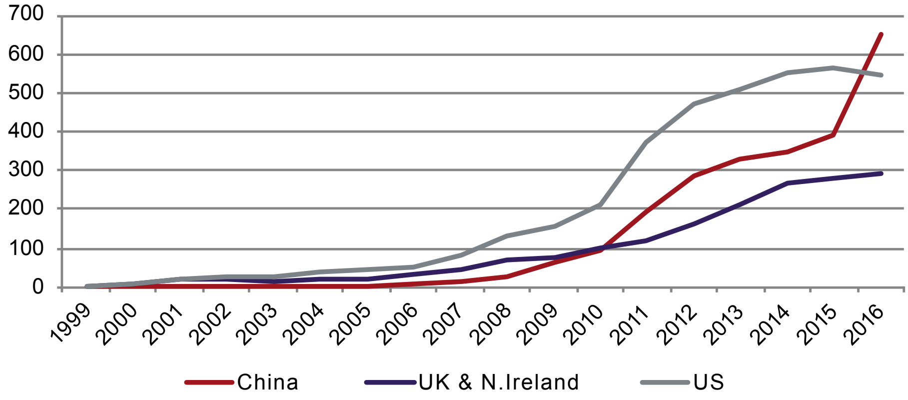
Currently, China is helping lead the way on embedding and valuing environment and water risks. Systems that work here can then be replicated in other parts of the world. It is important that together we succeed as global environmental challenges are still increasing.

8 KEY TAKEAWAYS

1. China's epic rise in global disclosure; but still a way to go for all

A comparison of historic issuance of sustainability reports for China vs the United Kingdom & Northern Ireland (combined) and the United States shows China's epic rise (see chart below). China has gone from its first sustainability report in 2000 to 652 reports in 2016; 100+ more than the US in 2016 and 300+ than the UK & Northern Ireland. Moreover, China is the only country of the three to strongly buck the slowing trend from 2014 to 2016.

No. of Sustainability Reports: China Increasing Most Compared to UK & US



Source: China Water Risk, GRI Sustainability Disclosure Database (data as of 15 Dec 2017)

These findings are not surprising given that China is moving towards mandatory environmental disclosure for its exchanges and that Chinese companies are in close proximity to or among some of the greatest environmental risks with severe air, water and soil pollution in China. Not only are they feeling the impacts from this pollution but also the stringent regulations the Chinese government is implementing to clean-up.

While the increasing numbers of sustainability reports in China and globally are encouraging, there is still a long way to go before it becomes mainstream practice.

2. China leads move to mandatory environmental disclosure

China's two exchanges (Shanghai & Shenzhen) have been pushing CSR/sustainability related disclosure since 2006. Then in 2016 China released the 'Guiding Opinions on Establishing a Green Finance System', which meant that the country's two stock exchanges are moving to mandatory environmental disclosure. Since then a tentative 2020 deadline for this transition has been announced. The mandatory information disclosure system will be established in three steps before the 2020 deadline. Part of this system is already underway, led by the China Securities Regulatory Commission. In 2017, key polluting companies were required to disclose environmental information. Then in 2018, other additional companies have been required to either disclosure environmental information or to explain the lack of disclosure, similar to that of the "comply or explain" directive of the Hong Kong Stock Exchange. Then finally in 2020 (the tentative deadline), all Chinese listco's will need to disclosure environmental information.

Other exchanges around the world are also acting on environmental disclosure (see table below for review of actions by key global exchanges). However, the central issue of voluntary versus mandatory disclosure remains. The majority of exchanges taking action is with a voluntary guide or a "comply or explain" directive, which is thus at the discretion of the individual company and does not effectively tackle the issue around mandatory or consistent disclosure.

Overview of Key Stock Exchanges Actions on ESG

	OVERVIEW		ESG CONSIDERATIONS					
Exchange	Total Market Cap (USDbn)*	No. of Co's Listed*	ESG requirement for Listco's	Date Introduced	Offers ESG Guidance	Sustainable Indices	Sust. Disc. Ranking 2017 ***	Sust. Disc. Ranking y-o-y change***
Hong Kong (HKEx)	3,193	1,973	Comply or Explain	Dec-15	Yes	Yes	24	-
London (LSE) (as part of LSE Group)	3,496	2,588	Yes **	n/a	Yes	Yes	4	4
New York (NYSE)	19,573	2,307	None	n/a	No	Yes	35	-9
Shanghai (SSE)	4,104	1,182	None - but moving to mandatory	Aug-16	Yes	Yes	27	-12
Shenzhen (SZSE)	3,217	1,870	None - but moving to mandatory	Aug-16	Yes	Yes	37	6
Singapore (SGX)	650	757	Comply or Explain	Jun-16	Yes	Yes	16	2

*As of Dec 2016
**Listing rules are set by the regulator not the LSE. In the UK the changes to the Companies Act 2006 mean extra reporting on GHG, human rights & diversity within the front half of the annual report
***Ranking sourced from Corporate Knights report "Measuring Sustainability Disclosure - Ranking the World's Stock Exchanges" July 2016 & September 2017
Source: China Water Risk, Sustainable Stock Exchange website, respective stock exchange websites, Corporate Knights reports

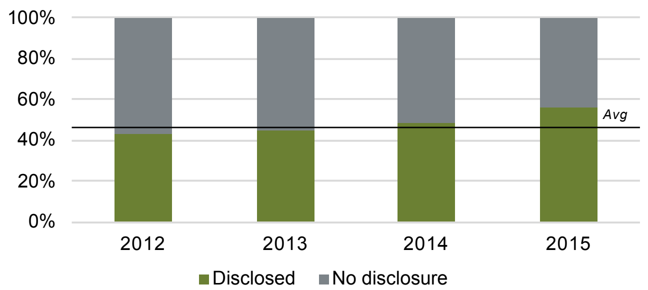
A mandatory element is important according to the Corporate Knights 2017 report which says, "*All top-10- ranked exchanges in this year's ranking have at least one mandatory, prescriptive and broad policy instrument designed to regulate sustainability disclosure that is in force in the jurisdiction where they operate; this is similar to the finding made with last year's top 10.*"

The only top ranked Asian exchange is Thailand, which is ranked No.10. The two Chinese exchanges, Shanghai & Shenzhen, ranked No. 27 & No. 37 out of 55. It should be noted though that both exchanges were part of the UN Sustainable Stock Exchange Initiative in 2017. Clearly however, there is room for more efforts from exchanges in Asia.

3. Half of Chinese companies disclosing on environment; but some more than others

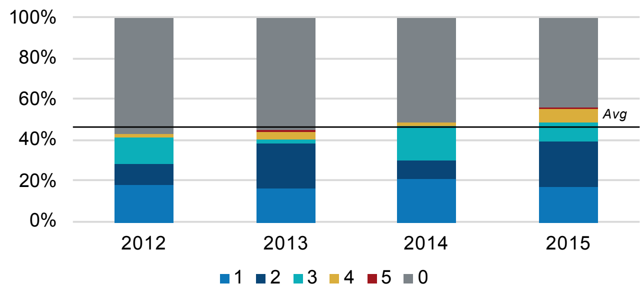
Positively, we found that environmental disclosure by Chinese companies increased year-on-year for the four year period analysed (see chart below left). Starting at 43% in 2012 and increasing to 56% in 2015, a CAGR of 6.8%. The most significant increase was in 2015 where the disclosure rate increased by 6%, double that of 2014. This is not surprising given that it was in 2014 that China declared war on pollution, including a push for greater disclosure and transparency.

Environment Disclosure Rate Across Sectors (%)



Source: China Water Risk, SynTao

Environment Disclosure Rate By Indicators Across Sectors (%)



Source: China Water Risk, SynTao

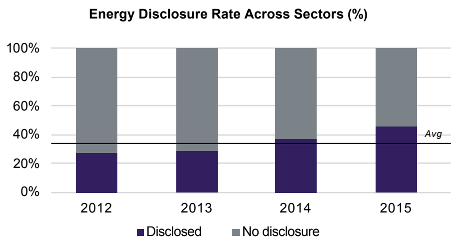
However, while positive there is still clearly room for improvement. Especially since the majority of disclosure is either on 1 or 2 of the total 5 indicators analysed (see chart above right). Only 2 companies disclosed on all 5 indicators for the entire four year period; one in the automobile manufacturing sector in 2013 and one in the coal sector in 2015 (red bands in chart right above).

4. Energy, water & waste disclosure limited, but on the rise

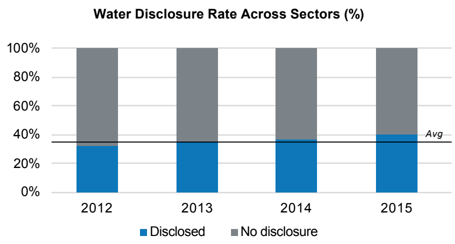
A year-on-year rising trend was also found for companies' disclosure on the energy and water subcategories. Of the three sub-categories, energy had the highest disclosure at 46% (see chart below left). As for water, it had a high of 40% in 2015 but only experienced incremental increases over the period (see chart below middle). Interestingly, despite different growth patterns, water and energy disclosure are largely similar for the four year period. There are two points to note from this:

1) Water and energy carry relatively equal weight in disclosure for Chinese companies, which reflects the Chinese government's holistic environmental policies & regulations; and
2) This equal weighting bucks the global trend where energy disclosure is usually markedly more than water.

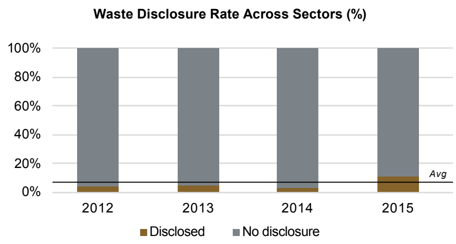
Disclosure on the third subcategory, waste, while it increased, only reached 11%, notably lagging the others (see chart below right).



Source: China Water Risk, SynTao



Source: China Water Risk, SynTao



Source: China Water Risk, SynTao

5. Sector rankings: Three leaders, two mid-performers & one laggard

At the sector level, we expected those facing greater regulatory pressure to disclose more and the trend holds. Analysis found three leaders, two mid-performers and one laggard.

Coal, oil & gas and automobile manufacturing are the top three with environment disclosure rates of 75%, 75% and 72%, respectively. They also are the top three sectors for all disclosure subcategories except in one instance, the waste subcategory, where oil & gas is joint bottom with agriculture. With clear and significant implications for air, water and soil pollution they face significant regulatory pressure, thus, their top performance is not surprising.

Somewhat surprising since they face similar regulatory pressure to the top three sectors is mid-performers electricity and smelting, with lagging disclosure rates of 47% and 48%, respectively. Meanwhile, agriculture is the clear laggard, disappointing on all fronts with only a 20% environment disclosure rate. Sector performance in each disclosure category is shown in the table below.

Sector Ranking by Disclosure Category – 2015 Snapshot

Environment	Energy	Water	Waste
Coal	Oil & Gas	Coal	Coal
Oil & Gas	Automobile Manufacturing	Oil & Gas	Automobile Manufacturing
Automobile Manufacturing	Coal	Automobile Manufacturing	Electricity
Smelting	Electricity	Smelting	Smelting
Electricity	Smelting	Electricity	Agriculture
Agriculture	Agriculture	Agriculture	Oil & Gas

Source: China Water Risk, SynTao

6. SOE composition & exchange listing trends

We also looked to see if company ownership and exchange listing influenced disclosure. We found that a higher State-Owned Enterprise (SOE) sector composition largely points to higher disclosure. This makes sense given that under the updated guidelines of the State-owned Assets Supervision and Administration Commission of the State Council, all central-level SOEs are mandated to publish CSR reports.

As for exchange listing, we found that the majority of listco's across exchanges have environmental disclosure rates below 50%. This is particularly the case for the Shanghai Stock Exchange and the Shenzhen Stock Exchange, where only 13% and 11% of lisco's have equal to or above 50% environment disclosure rates. Comparatively, the Hong Kong Stock Exchange had 29% and Non-Greater China (exchanges like the New York Stock Exchange, London Stock Exchange etc.) had 50%. China's shift to mandatory disclosure should remedy the Shanghai and Shenzhen findings.

7. Three chief challenges found during review

As still a relatively nascent disclosure type and with no consensus on the way forward, challenges in environmental disclosure are not unexpected. But they do need to be overcome as environmental, water and climate risks are here to stay and are only going to increase going forward. Case in point, the extreme weather at the start of 2018 – a bomb cyclone in the US and hurricane strength winds in Europe. We encountered three main challenges during our review:

1) <u>Incomplete data:</u> Despite increasing numbers of sustainability reports in China and globally, overall ESG disclosure levels are still low. Only a small part of the picture is being presented;
2) <u>Inconsistent data:</u> The lack of a single standardised global framework impacts the consistency and decision relevance of environmental disclosure. GRI is the most prominent global framework but is not extensively used in China, which has its CASS-CSR/industry/SynTao guides; and
3) <u>Lack of reliability:</u> Unlike financial reports, third party audits are not mandatory for sustainability reports resulting in incidences of fraudulent reporting. According to SynTao's database only around 4% of reports are audited and has been the case for the last several years.

8. Consistent & decision relevant disclosure is the way forward; plus investors want it

Mandatory consistent and decision-relevant environmental disclosure, which exchanges can drive, is the way forward so that environmental disclosure becomes mainstream practice. Indeed, there is increasing global discussion on the need to move beyond "boilerplate" disclosure. In China Water Risk's investor survey, better accounting for water quality risks was just as important as complete and consistent disclosure: 94% vs 96%. Moreover, mandatory disclosure will help close the current risk-action gap raising questions around fiduciary duty.

Additionally, investors in the survey also felt that stock exchanges can do more with 86% wanting to see "mandatory disclosure required by exchanges". This sentiment has also been seen among other investors, including Blackrock, Rockefeller & Co and recently major investor advocates like US SIF and UNPRI pushed the US Securities and Exchange Commission to require annual, uniform sustainability reporting from public companies.

China is indeed leading the move to mandatory environmental disclosure. It has to, in order to embed environmental and water risk into its credit lending policies, as it has said it wants to. While these are positive objectives, as found in this report, there is still a way to go before disclosure from Chinese companies meets this and reflects the rising risks. At the heart of many supply chains, what happens in China has global implications.

It is important that challenges be overcome and environmental disclosure levels improve as this data is key to advancing the Environmental Risk Assessment work on quantifying environmental and water risks, and ultimately building a resilient global financial system.

DISCLAIMER

This document (the “Document”) has been prepared by China Water Risk (CWR) and SynTao for general introduction, overview and discussion purposes only and does not constitute definitive advice on regulatory, investment or legal issues. It should not be used as a substitute for taking regulatory, financial, tax or legal advice in any specific situation.

Information provided in the Report has been obtained from, or is based upon, sources believed to be reliable but have not been independently verified and no guarantee, representation or warranty is made as to its accuracy or completeness. Information contained in this document is current as of the date specified above and is subject to change without notice. Information contained in this document relating to investments, valuations, unrealised data, and projections is indicative only, and has been based on unaudited, internal data and assumptions which have not been independently verified or audited and are subject to material corrections, verifications and amendments.

This information is not intended to constitute a comprehensive statement of any matter, and it should not be relied upon as such. None of CWR or SynTao, its sponsors, affiliates, officers or agents provide any warranty or representation in respect of information in this Document. In no event will CWR or SynTao be liable to any person for any direct, indirect, special or consequential damages arising out of any use of the information contained on this Document, or any other hyper-linked website, including, without limitation, any virus damage, lost profits, business interruption, loss of programs or data on your equipment or otherwise. This Document may provide addresses or hyperlinks which lead to other websites; however CWR or SynTao may not have reviewed any such websites, and is not responsible for the content of any such websites or pages.

CWR or SynTao makes no representation or warranty, expressed or implied, with respect to the accuracy or completeness of any of the information in the Document, and accepts no liability for any errors, omissions or misstatements therein or for any action taken or not taken in reliance on this Document. The Document should not be regarded by recipients as a substitute for the exercise of their own judgment. All statements contained herein are made as of the date of this Document.

This Document is for information purposes only and should not be construed as an offer, or solicitation of an offer, to buy or to make any investment.

ABOUT THE AUTHORS

China Water Risk (CWR) is dedicated to addressing business and environmental risks arising from China's limited water resources. CWR aims to foster efficient and responsible use of China's water resources by engaging the global business and investment communities. As such, it facilitates discussion amongst industry leaders, investors, experts & scientists on understanding and managing water risks so that we can make better decisions today for a water-secure tomorrow.

At a micro-level CWR works toward embedding water risks into the financial valuation of a company thereby influencing capital flow to responsible users and on a macro-level by wedding provincial/ national water resource management to economic planning. In addition to this, we also explore global exposure risks through the Made in China supply chain.

CWR has thus co-published policy briefs with government-related bodies in China and globally. It also has been commissioned by financial institutions to conduct research analysing the impact of water risks on the Power, Mining, Agricultural, Textiles and the Food & Beverage sectors. These briefs and reports have been considered ground-breaking and instrumental in understanding China's water challenges. CWR is an initiative of the ADM Capital Foundation and is funded by the Rockefeller Brothers Fund and RS Group. Join the conversation at http://www.chinawaterrisk.org

SynTao Co., Ltd. is a leading Beijing-based consultancy promoting sustainability and responsibility in the Asian region. We provide consulting, research and training services in Corporate Social Responsibility (CSR) and Socially Responsible Investment (SRI). SynTao has developed successful partnerships with a wide range of local and overseas organizations such as international and national corporations, government agencies, NGOs, academic institutions and media groups.

SynTao has been working on corporate sustainability disclosure and reporting for a long time. Each year, SynTao publishes a research report A Journey to Discover Values to provide up-to-date analysis on CSR reporting in China.

SynTao also develops the MQI Guidelines and MQI database. MQI Guidelines provide a set of materials and quantitative indicators by sector so that companies can improve CSR report quality. MQI database, www.MQI.org.cn, has included over 10,000 CSR reports released by companies in China.

SynTao is headquartered in Beijing with offices in Shanghai, Guangzhou, Chengdu and Washington DC.

See more at: http://www.syntao.com

NOTES

CHINA WATER RISK

SynTao
Sustainability Solutions