

# **Bolstering Private Chinese Investments in Overseas Diverse-led Climate Funds**



**DEVELOPMENT  
REIMAGINED**

# CONTENTS

<b>1</b>	<b><i>Introduction</i></b> .....	<b>1</b>
1.1	China’s domestic climate policies and climate finance .....	3
1.2	Definition of Climate Investment .....	7
1.3	Methodology .....	8
1.4	Limitations of our analysis .....	11
<b>2</b>	<b><i>Analyzing global trends in climate investment</i></b> .....	<b>13</b>
2.1	Outbound investment of China vs other regions .....	13
2.2	Barriers to overseas Chinese climate investment .....	15
2.3	China’s foreign exchange controls .....	16
<b>3</b>	<b><i>Identified trends in chinese overseas climate investments</i></b> .....	<b>18</b>
3.1	Overall trends .....	19
3.2	Drivers of investment.....	22
3.3	The role of China-led Development Finance Institutions .....	37
<b>4</b>	<b><i>Conclusions and recommendations</i></b> .....	<b>40</b>

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However, our opinions, insights, conclusions, recommendations and errors are ours alone.

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## EXECUTIVE SUMMARY

Between 2020 and 2060, the global shift to net-zero will require an estimated \$22 trillion. For China, the world's 2nd largest economy, this translates to an annual investment gap of about \$170 billion. This shortfall comes both as a challenge and an opportunity for private Chinese and international investors and asset owners.

In line with net-zero targets, an additional gap in the climate transition is the gap in knowledge concerning if and to what extent Chinese private investors invest in overseas climate projects or funds with private equity and/or venture capital.

This report represents the first ever attempt at providing an in-depth analysis of Chinese investment into overseas climate funds, and to what extent justice, equity, diversity and inclusion (JEDI) is a key consideration for private Chinese investment in climate funds. In other words, this report sets out to test whether Chinese private climate investment is going to where it is most needed and most transformational in terms of climate action, and to what degree a JEDI-lens is having a positive influence in this respect.

All content and recommendations have been collated through a quantitative and qualitative methodology involving examination of 11 different international and Chinese existing data terminals and databases, as well as 29 interviews with key Chinese stakeholders and experts. Through an extensive literature review covering the period 2012-2022 and manual identification and tracking of investment trends within the same window, this report maps the current landscape of private Chinese investment in climate funds. For the purposes of this research, climate investment is defined as financing from asset owners to address and to respond to climate changes within the scope of renewable energy, clean technology, clean transportation, and other climate-friendly solutions.

Additionally, and with the support of insights shared by industry experts from China and internationally, the extent to which China-based funds support locally-managed climate funds in other low- and middle-income countries (LMICs) brought to light. By adopting a justice, equity, diversity and inclusion (JEDI) lens throughout the research and analysis, the level of support offered by China-based funds to underrepresented fund managers, such as women and people of colour in high-income countries, is also identified.

There are five key drivers of investment for both public and private sector investment, including domestic policies, host country policies, established local presence, perceptions of risk and diverse investment preferences.

As the first attempt at comprehensively provide an in-depth analysis of Chinese investment into foreign private climate funds, key insights drawn from research conducted are:

- Chinese climate investments are happening, although to a lesser degree than the US but nevertheless they are significant.
- Asian countries dominate Chinese renewable energy and clean transportation investments, and there is more to be done to diversify such investment destinations – e.g. to African and LAC markets.

- Chinese investments in clean technology and other climate-friendly solutions are mainly directed towards mature markets, and the US in particular – meaning again there is more to be done to diversify such investment destinations.
- JEDI is not something that is considered in the business strategies of Chinese SOEs. For the private sector, JEDI investment is an emerging trend, especially for those funds with female leaders.

Looking ahead, conclusions and recommendations are broken down for Chinese policy makers, public sector investors and private sector stakeholders. The report explores ways to create more and stronger practical platforms to bolster and support Chinese investment in JEDI overseas climate funds.

Despite the clear conclusions and recommendations outlined in our research, it is important to be clear that this is just a first stage. A more complete picture of Chinese investment in overseas climate funds, as well as the evidence to encourage the use of a JEDI-lens will only be possible if data and analysis like this is regularized, and consistent, comparable global data is also provided, including through consistent definitions. The JEDI-lens has a strong potential future in driving Chinese climate investment, especially from the private sector.

# CHAPTER ONE:

## 1 INTRODUCTION

### Part 1 at a Glance

- The ambitions and activities of Chinese overseas private climate funds sit within a context of China’s domestic climate change policies and “going out” policy, both of which have evolved considerably over time.
- Overseas Chinese investment trends can be analysed based on four categories of climate investments:
  - Renewable energy
  - Clean technology
  - Clean transportation
  - Other climate-friendly solutions (including regenerative food and agriculture)
- Overseas Chinese investment trends are analysed through the lens of justice, equity, diversity and inclusion (“JEDI”) in order to understand whether China-based funds support locally managed climate funds in emerging and low- and middle-income countries (LMICs) and underrepresented fund managers in high-income economies.
- All content and recommendations have been collated through a quantitative and qualitative methodology involving examination of 11 different international and Chinese existing data terminals and databases, as well as 29 interviews with key Chinese stakeholders and experts.
- The analysis has faced some key limitations including a lack of data, inconsistent definitions of “climate investment,” and issues of “greenwashing.”
- Nevertheless, this report comprehensively represents the first ever attempt at providing an in-depth analysis of Chinese investment into foreign private climate funds.

Climate change is one of the most important challenges faced by countries across the globe. Rising temperatures have resulted in effects such as rising sea levels, increased flooding and more extreme and unpredictable weather patterns. Governments, multilateral organizations, the private sector and other actors have understood the need to tackle climate change and its impacts by setting global goals and transitioning to carbon neutral or net-zero economies. To achieve the targets of reducing emissions by 45% by 2030 and reaching net zero by 2050, global and industry-wide action is necessary immediately. Reaching net zero by 2050 at the latest will require investors to invest approximately \$3.5 trillion annually. Investments currently total just \$600 billion per year.<sup>1</sup>

China, as one of the world's top polluters, has committed to peaking GHG emissions by 2030 and reaching net-zero emissions by 2060. These goals necessitate a "green revolution" in both domestic and international activity. The shift to net-zero energy would require around \$22 trillion between 2020 and

<sup>1</sup> Climate Finance Fund, 2022, Mobilizing Capital for Climate Solutions, Available [here](#)

2060, spanning industries such as power, steel, transportation, construction, and real estate. However, the current financial gap for China's transition to carbon neutrality is almost \$170 billion per year.

At the same time, the trillions of dollars required for the low-carbon transition in sectors such as energy, manufacturing, buildings, and transportation present a substantial opportunity for investors.<sup>2</sup> And Chinese and international private investors and asset owners have been seizing these opportunities. For instance, between 2010 and 2019, China accounted for most renewable energy investments, totaling \$818 billion, surpassing the sum of all European nations combined. Furthermore, despite a drop from \$145.9 billion in 2017 to \$91.2 billion in 2018, China has invested the most in domestic renewable energy since 2010.<sup>3</sup>

While there has been much analysis of what non-Chinese private investors – for instance from the European Union or the United States – are doing to invest in overseas climate projects or funds with private equity and/or venture capital, little is known about whether and to what scale Chinese investors have been doing the same.

The growing need for a 'green revolution' both in China and overseas thus requires a more thorough understanding of the current landscape of overseas private climate investment for Chinese investors.

The purpose of this report is to 1) fully understand this current landscape of private Chinese investment in climate funds and 2) understand to what extent China-based funds support locally-managed climate funds in other low- and middle-income countries (LMICs) and support underrepresented fund managers, such as those led by women and people of color, in high-income economies. In essence, the report seeks to understand whether Chinese private climate investment is going to where it is most needed for transformational climate action. This will be done by adopting a justice, equity, diversity and inclusion (JEDI) lens when analysing the current landscape of private Chinese investment in climate funds.

Justice, equity, diversity and inclusion investing, also known as 'JEDI' investing, includes incorporating aspects such as racial and ethnic justice in the analysis of investments.<sup>4</sup> The JEDI lens seeks to highlight the importance of diversity as a key driver of innovation in climate investing. It also seeks to highlight that a lack of diversity in investment companies only helps to maintain a cycle of exclusionary investment that does not ultimately help the groups most affected by climate change.<sup>5</sup>

This JEDI lens highlights the importance of gender diversity and representation of traditionally underrepresented racial and ethnic groups across the globe, including but not limited to racialized communities in Europe, Black, Indigenous, and other people of colour (BIPOC) in the US, and Indigenous and Afro-descendant communities throughout the Americas. Despite collectively accounting for the 'global majority', these groups remain largely underrepresented in the climate investment management space.<sup>6</sup> This lack of representation in the climate investment management space is reflected in the broader investment management space. For example, in 2021 59% of the Financial Times Stock Exchange (FTSE) 350 company boards did not have any ethnic minority representation.<sup>7</sup> JEDI investing therefore acknowledges the crucial role that frontline communities can play in fighting climate change and its

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<sup>2</sup> Climate Bonds Initiative, 2022, Transition Finance in China: latest development and future outlook, Available [here](#)

<sup>3</sup> Larsen, Mathias Lund & Lars Oehler, 2022, Why China Funds Renewable Energy at Home, but Invests in Gossial Fuel Projects oversea, The Jamestown Foundation, *China Brief*, Volume:22 Issue: 8, Available [here](#)

<sup>4</sup> Gender Smart, 2022, Justice, Equity, Diversity & Inclusion, Available [here](#)

<sup>5</sup> Canary Media, 2021, Climatetech's inclusion problem with Elaine Hsieh from Third Derivative, Available [here](#)

<sup>6</sup> PGM ONE, 2023, Our Vision, Available [here](#)

<sup>7</sup> Aviva Investors, A time for action: race, ethnicity and investing, Available [here](#)

impacts.<sup>8</sup> Climate justice, which refers to an approach to net-zero that centers itself around the contributions of those most affected by climate change, is no longer just the morally right thing to do but is also a more effective way of addressing the climate issues we face.<sup>9</sup> The centering of justice in climate investment trends will require new investment approaches that place gender and racial diversity at the forefront of investment practices.<sup>10</sup> By turning more towards those who have been disproportionately affected by climate change, the climate investment landscape can highlight more innovative ways of fighting climate injustice and the climate crisis.<sup>11</sup>

A JEDI lens is therefore employed when analysing trends in Chinese investments in overseas climate funds to highlight the current landscape of JEDI investing from China to overseas emerging and mature markets.

Firstly, climate financing and projects qualifying as climate-friendly are clearly defined, both for emerging and high-income markets. An in-depth analysis of the barriers and opportunities that Chinese investors face in "going out" is provided, as well as insight into the best way forward for current investors and those looking to invest in the future. The ultimate aim of the analysis will be to stimulate ways to create more and stronger practical platforms to bolster and support Chinese investment in JEDI overseas climate funds.

This report is the first of its kind – and its outcomes could play a crucial role in both increasing and improving Chinese investments in overseas climate funds. More broadly, the report will also support both China's and the global community's goals to reach net-zero GHG emissions and build more climate-resilient societies.

Before delving into China's overseas climate investment, it is important to understand China's climate change policies, as these policies - either a deterrent or a catalyst – can have the most direct impact on Chinese investors. It is also important to understand whether JEDI investing is currently a priority in domestic discourse around climate investment. These domestic climate policies also provide important context into the possible barriers and opportunities that Chinese investors face when investing in overseas climate markets.

## 1.1 China's domestic climate policies and climate finance

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In general, China has been improving its domestic climate change policies over the past decade. **Figure 1** below shows China's major domestic climate policies since 2012, indicating China's growing attention towards climate change. These policies are closely linked to China's climate finance both domestically and internationally.

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<sup>8</sup> Global Endowment Management, 2022, Leading with Justice: Net Zero Investing & Conversations on Climate Justice, Available [here](#)

<sup>9</sup> Ibid

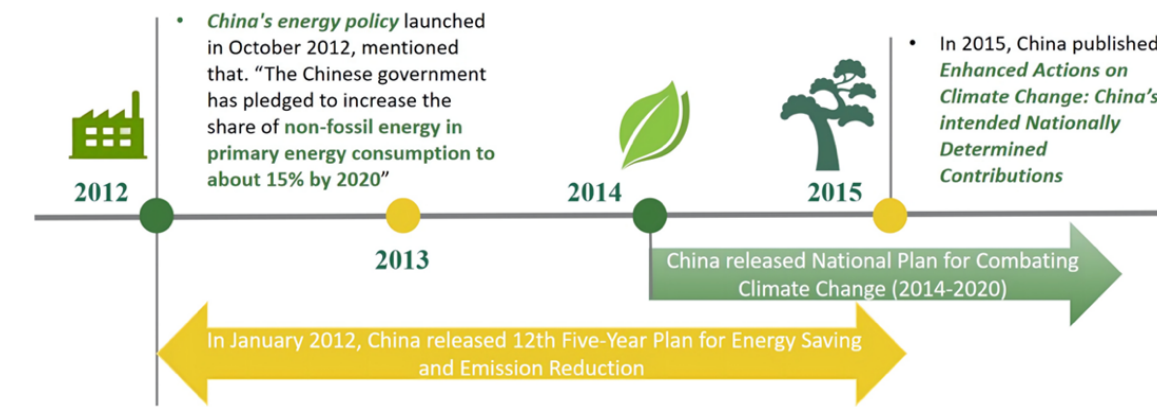
<sup>10</sup> Waite, Marilyn, GreenBiz, 2021, When it comes to climate investment funds, diverse management is imperative, Available [here](#)

<sup>11</sup> Jansen Reventlow, Nani, 2022, Project Syndicate, The Climate Movement's Racial Blind spots, Available [here](#)



Figure 1: China's domestic policies on climate issues since 2012<sup>12</sup>

### The 12th Five Year Plan (2011-2015)

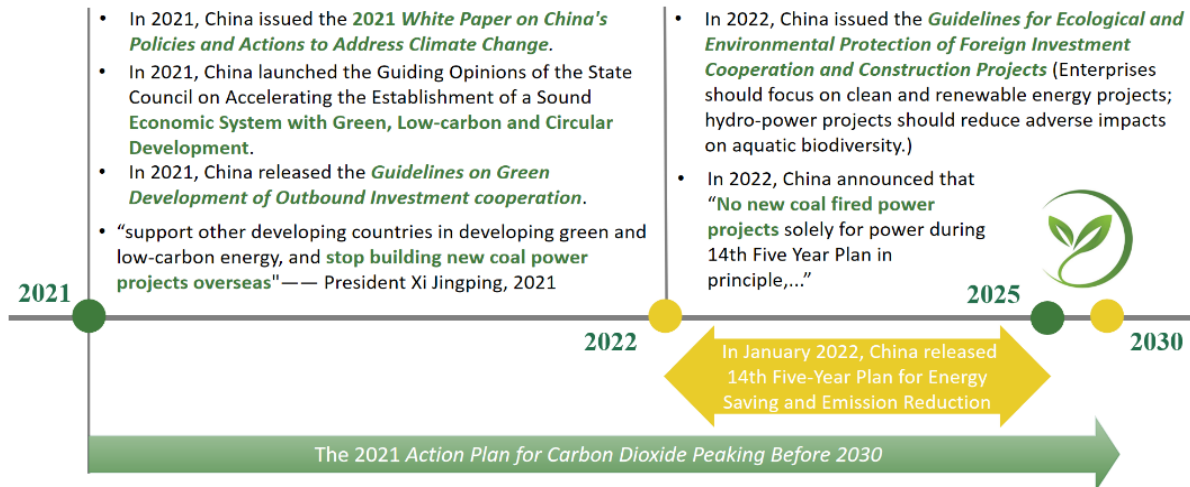


### The 13th Five Year Plan (2016-2020)



<sup>12</sup> The State Council Information Office of the People's Republic of China, 2012, China's Energy Policy (2012), Available [here](#); The State Council Information Office of the People's Republic of China, 2014, National Plan for Combating Climate Change (2014-2020), Available [here](#); The People's Republic of China, 2015, Enhance Actions on Climate Change: China's Intended Nationally Determined Contributions, Available [here](#); The People's Republic of China, 2016, 13th Five Year Plan (2016-2020), Available [here](#); The People's Republic of China, 2017, 13th Five-Year Plan for Energy Saving and Emission Reduction, Available [here](#); G20 Sustainable Finance Working Group, 2016, Available [here](#); The People's Bank of China et al., 2016, Guideline for Establishing the Green Financial System, Available [here](#); The People's Republic of China, 2017, Guiding Opinions on Promoting the Construction of Green Belt and Road, Available [here](#); The People's Republic of China, 2019, Guiding Catalogue for the Green Industry (2019), Available [here](#); The People's Bank of China et al., 2021, Green Bond Endorsed Projects Catalogue, Available [here](#); The State Council of the People's Public of China, 2021, Action Plan for Carbon Dioxide Peaking Before 2030, Available [here](#); The State Council of the People's Public of China, 2021, White Paper on China's Policies and Actions to Address Climate Change, Available [here](#); The State Council of the People's Republic of China, 2021, Guiding Opinions of the State Council on Accelerating the Establishment of a Sound Economic System with Green, Low-carbon and Circular Development, Available [here](#); The Ministry of Commerce et al., 2021, Guidelines for Green Development in Foreign Investment and Cooperation, Available [here](#); H.E. Xi Jinping, 2021, Bolstering Confidence and Jointly Overcoming Difficulties to Build a better World, Ministry of Foreign Affairs of the People's Republic of China, Available [here](#); Ministry of Ecology and Environment of the People's Republic of China, 2022, Guideline for Ecological and Environmental Protection of Foreign Investment Cooperation and Construction Projects, Available [here](#); The State Council of the People's Republic of China, 2022, 14th Five Year Plan for Energy Saving and Emission Reduction, Available [here](#)

## The 14th Five Year Plan (2021-2025)



Despite its infancy, China has become the world's second largest market for climate funds after the European Union, driven by accelerating capital inflows and new fund launches. The overall assets of China's climate fund record at \$46.7 billion, an 149% increase compared with 2020. Clean energy and tech funds are favoured by investors, accounting for almost 60% of the assets in the Chinese market at the end of 2021.<sup>13</sup>

President Xi Jinping's declaration at COP26 of achieving carbon neutrality by 2060 and peak carbon emissions by 2035 has given a boost to China's domestic climate technology sector. In 2021, venture capital companies invested a total of \$8.7 billion, an increase from \$5.6 billion in 2020. Sequoia China is the largest venture investor in China and participated in 11 climate technology deals in the first half of 2022.<sup>14</sup>

Our expert interviews highlighted the high levels of interest in domestic climate investment, compared to overseas investments. There are several reasons for this high interest, and why it is often easier for investment to remain in the domestic market instead of being invested in overseas markets. Firstly, as several interviewees put it, Chinese policies around goals such as achieving carbon neutrality by 2060 have created a 'vibrant' domestic market in the field of climate finance by encouraging Chinese institutions to make pledges and therefore guide green investments.

According to our interviews, these government-led pledges have several key impacts on the investment environment. Firstly, due to their nature, Chinese SOEs have the responsibility to complement the government in key reforms, and they were set with performance indicators, for example how many new clean energy projects have been built and how many coal-fired stations have applied clean coal technology, regarding "double carbon" goal, so they are more pressured to level up such investment. Furthermore, almost all local governments in China grant approval for clean energy projects. This can be because of indicators such as total carbon emissions, carbon emissions per capita GDP, and phasing out

<sup>13</sup>Morningstar, 2022, Behold: China, the ESG Giant, Available [here](#)

<sup>14</sup>GreenBiz, 2022, Government policy spurs investment in Chinese climate tech, Available [here](#)

fossil fuel energy that are important for the performance assessment for local governments. Most subnational governments have issued their masterplans on "double-carbon". Also, as our interviews highlighted, some projects have the possibility of receiving additional subsidies from the government, thus encouraging their development.

In addition, it is often easier to obtain information from the strong domestic market. If there is little knowledge of overseas markets, then the perceived risk of investing in these markets may encourage investors to continue investing domestically. The travel restrictions imposed by the Covid-19 pandemic have meant that obtaining necessary information about overseas markets has become even more difficult for potential investors. One interviewee asserted that the lack of interest in investing overseas also applies to asset owners from private sectors.

### CHINESE DOMESTIC POLICIES AND JEDI

Despite the current situation in China, the issues of diversity and inclusion are nevertheless growing in importance. A recent study by academics at the City University of Hong Kong showed that 72 percent of mainland respondents noted diversity in the workplace, and 46 percent of them believed that diversity was conducive to promoting innovation.<sup>15</sup>

JEDI in China can be reflected in the topics of common prosperity, justice, equality, pluralism, and inclusion mentioned in government documents. Among them, common prosperity is widely mentioned in China. It was firstly proposed in 1955 and was the main political and economic content of Deng Xiaoping's period and continues as a dominant policy to this day. The basic goals of the policy are to end extreme poverty, eliminate polarization and improve standard of living.

In the 10th meeting of China's Central Finance and Economics Commission in 2021, it was emphasized to improve the balance, coordination, and inclusiveness of development. This implies co-development among ethnic groups and regions, which also drives the development of women's groups.<sup>16</sup> Specifically, China is actively committed to the reduction in the number of women suffering from poverty, and has taken a series of policy measures in economic development, employment and entrepreneurship, culture and education, social security, health and charity, and has achieved remarkable results. Women have accounted for more than 60% of China's rural labor force, and they have played a major role in the development of diversified industries such as agricultural products processing, leisure agriculture, rural tourism and e-commerce, and the majority of women have become the driving force in starting businesses to increase income and move towards common prosperity.<sup>17</sup>

While the percentage of female employees has increased in China, the number of women in management is still lower than in many high-income countries. Data show that in 2020, women accounted for 12.6% of board directors in China, with an average of 1.3 female directors per board. In contrast, other high-income countries, such as Germany, have been enforcing a minimum of 30 percent women on supervisory teams.<sup>18</sup>

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<sup>15</sup> David, Emily, 2020, *Evolving Diversity Dynamics in China*, China Europe International Business School, Available [here](#)

<sup>16</sup> Sina News, 2021, 习近平主持召开中央财经委员会第十次会议, Available [here](#)

<sup>17</sup> National Working Committee on Children and women under State Council, (2022), 实现包容性发展, 促进妇女走向共同富裕, Available [here](#)

<sup>18</sup> Fidelity International, 2022, *The smaller half of China's sky: Fidelity International China Gender Diversity Report*, Available [here](#)

However, disability and diseases in China still carry stigma. For example, in 2017, only 28% of people with an official disability certificate were working.<sup>19</sup>

This background on China's domestic climate policies and climate finance provides an insight into domestic trends and experiences. It therefore also provides important context to the report's subsequent analysis into China's overseas climate investments, and whether these domestic trends will prove similar or different to Chinese climate finance flows to overseas markets. Before turning to these overseas climate investment trends, more information is provided on the scope, methodology, and limitations of the analysis.

## 1.2 Definition of Climate Investment

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'Climate investment' or 'climate finance' has been defined in many ways. According to the United Nations Framework Convention on Climate Change (UNFCCC), climate finance refers to financing from public, private, transnational, and other alternative designed to support mitigation and adaptation actions that address climate change.<sup>20</sup> The international community does not have a common list of actions that is considered to have a positive response to address climate change. For example, the Climate Investment Funds (CIF) under the International Finance Corporation, focuses on "accelerating climate action by empowering transformation in clean technology, energy access, climate resilience and sustainable forests."<sup>21</sup>

In this project, we define that climate investment involves financing from asset owners to address and to respond to climate changes impacts. The focus is on four categories of investments: renewable energy, clean technology, clean transportation, and other climate-friendly solutions. The following provides a further explanation about what are key sectors included in each category:

**Renewable energy** looks at investment activities in hydropower, wind, solar, biofuels, biomass and waste, marine, and geothermal.

**Clean technology** looks at investment activities that reduce negative environmental impacts through energy efficiency improvements, including energy storage (batteries, solar panels, LED lighting and compressed air and hydrogen), grid management, sustainable materials, and other technologies that measure, report, and improve substantiality impact (artificial intelligence, machine learning, and software development).

**Clean transportation** looks at investment activities in the sales and manufacturing of electrified vehicles (cars, buses, and railways), high-speed railway, and hydrogen vehicles, as well as other emission reduction in intermodal shipping.

**Other climate-friendly solutions** look at projects not mentioned in the previous categories, including environmental-friendly agriculture projects, climate smart cities, forest investment, waste management and food-tech.

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<sup>19</sup>Yang, K Lisa & Hock E.Tan, 2018, Disability in the Workplace in China: Situation Assessment, Institute on Employment and Disability at Cornell University's ILR School, Available [here](#)

<sup>20</sup> United Nations Framework Convention on Climate Change, 2022, Introduction to Climate Finance, Available [here](#)

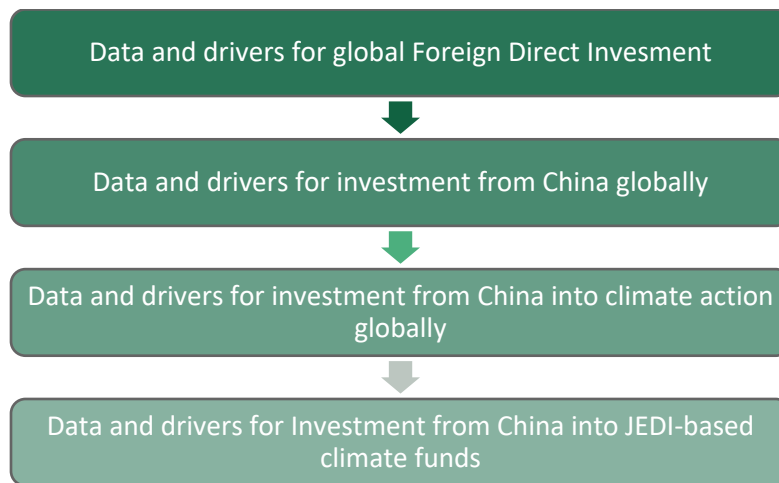
<sup>21</sup> Green Climate Fund, 2022, Areas of work, Available [here](#)

### 1.3 Methodology

A quantitative and qualitative research approach are combined to understand the current landscape of Chinese investments in overseas climate markets both in emerging and mature markets.

First, a detailed desk research and literature review is used to understand and identify Chinese key investors who, in the past ten years, have invested in overseas climate markets. As shown in **Figure 2**, the research also provides an overview of climate investment on a global scale, and then dives into China’s own climate market as well as domestic and overseas climate investment.

Figure 2: Approach to analysis



Second, three main databases were used to manually identify and track Chinese overseas climate investment activities in this report. **Figure 3** below shows the characteristics of each database. The data provides trends in Chinese overseas climate investment between 2012-2022 as well as a list of top active investors from both public and private sectors with such investments.

Figure 3: Databases used for analysis



### 1.3.1 CRUNCHBASE

Crunchbase mainly records investments from the private sector in China. Regarding the search logic of “climate and renewable energy related deals”, Crunchbase contains more industry verticals’ classifications such as Water Purification, Waste Management, Electric vehicles, and Sustainability, etc., compared to the PitchBook database. The financing round recorded in CrunchBase includes seed rounds, Series A, B, C, post-IPO, angel rounds, etc. However, it does not disclose enough information on investments from Chinese limited partners in overseas funds, including climate-related funds.

### 1.3.2 PITCHBOOK

PitchBook discloses relatively more data on Chinese investors as limited partners in overseas climate-related funds, providing "relevant keyword research" for deal industries under the search logic of "general partner-fund-deal". Under the search logic of "general partner location (overseas) - fund location (overseas) - deal location (overseas) - deal industry (with climate-related keywords)," PitchBook provides more than 50 climate-related keywords in deal industry research, such as "clean energy, renewable energy, clean technology, climate technology, climate data, electric vehicles, weather, wind and solar , photovoltaic, car sharing, shared mobility, clean and sustainable, alternative energy tools, state of the environment .....". Based on the above search logic, any overseas fund (operated by an overseas general partner and also located overseas) that conducts transactions related to these keywords will be captured. As specific funds are identified, their limited partners can be tracked, and those located in mainland China can be filtered out.

### 1.3.3 AMERICAN ENTERPRISE INSTITUTE (AEI)

The data retrieved from the AEI<sup>22</sup> database broadly captures investments from Chinese state-owned enterprises into overseas climate projects, with few investments from Chinese private companies. Investments in overseas funds such as start-ups, venture capitals, angel rounds, or investment in seeds are not included in the AEI database.

### 1.3.4 OTHER DATA SOURCES

There were other data sources that were carefully examined for their applicability to this analysis but did not choose to include in our data collection for various reasons, but in particular because their coverage of the two types of investors from China mainland to other regions was matched by the sources set out above. Nevertheless, below is a useful list of other potential further data sources and their coverage (as the authors of this report understand them). In future analysis these could in particular be useful for verification purposes.

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<sup>22</sup> American Enterprise Institute, 2022, China Global Investment Tracker, Available [here](#)

## FDI INTELLIGENCE

Has significant detail related to incoming investment into China. However, is less informative regarding private asset owners from mainland China to other regions, though there is some relevant data from 2019 to 2021 with major focus on capital from Hong Kong.

## CHINA OVERSEAS FINANCE INVENTORY DATABASE

*China Overseas Finance Inventory Database*<sup>23</sup> covers Chinese equity and debt foreign investments in the power-generation - with a major focus on countries that have participated the Belt and Road Initiative (i.e., it therefore excludes most of Europe, North America, etc.).

## BLOOMBERG

The Bloomberg terminal has very strong coverage of incoming investment into China. However, the terminal has some limitations relating to data on African markets, and coverage of private asset owners from China mainland appears to match that of other databases.

## LONDON STOCK EXCHANGE GROUP

*London Stock Exchange Group's* workspace (formerly Eikon). Particularly good coverage of African markets versus others. However, may be limitations related to private asset owners from China mainland to other regions.

## S&P GLOBAL'S CAPIQ

*S&P Global's CAPIQ* has significant strengths pertaining to data on M&A (buyers and sellers), investor information, and also on ESG performance. However, may be limitations related to private asset owners from China mainland to other regions.

## WIND

Win.d (万得)<sup>24</sup> is a financial information service platform in China that provides information on Chinese investments such as stocks, bonds, funds, foreign exchange, financial derivatives and commodities. However, Win.d's data focuses on China's domestic investment activities, while data on China's overseas investments, especially climate investments, is limited.

Third, insights on the topic are shared by interviewees with diverse backgrounds, including VC/PE, private sector funds, government-back funds, research institutions, investment banks, as well as founders of start-ups focused on tech-related and climate investment. Their experiences and perspectives fill in gaps that could not be directly found in the literature review and data.

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<sup>23</sup> World Resources Institute, 2022, China Overseas Finance Inventory Database, Available [here](#)

<sup>24</sup> Win.d, 2022, Available [here](#)

## 36KR (36 氦)

36Kr (36 氦)<sup>25</sup> is an information sharing platform in China that publishes a Chinese “Double Carbon (Shuang-Tan or 双碳)” Investor Listing to assemble investment events that will help China achieve its 2030 carbon peak and 2060 carbon neutrality goals. The Listing covers PE, VC, CVC, and government-led funds, and focuses on 18 sectors, including new energy vehicles, PV, hydrogen, wind, biotechnology, and energy storage. However, this Listing only records institutions that have carried out “Shuang-Tan” investment activities in domestic China, and there is no information on overseas investment activities.

### CLIMATE FRIENDLY INVESTMENT PRODUCT

Climate Friendly Investment Product<sup>26</sup> is a database in China that focuses on climate-friendly attributes and covers nearly 300 “climate-related” thematic funds and 1600+ green bonds. However, the platform only records funds and bond products in the mainland of China.

## 1.4 Limitations of our analysis

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Our analysis, while comprehensive and the first ever attempt, has the following two limitations that highlight the need for further data collection and analysis in this field of study.

### 1.4.1 LIMITATION 1: DATA LIMITATIONS

There is no database specifically designed to collect the data on overseas climate-related investments by Chinese investors, including government-backed institutions and the private sector. Thus, there is a significant gap, which this report has attempted to fill, through in-depth manual database searches and analysis. Additionally, inconsistent terminology as well as definitions of “climate investment” and ESG have created gaps in literature and databases. As a result of these gaps, it is challenging to present a holistic, accurate picture of the current state of climate investment globally. However, the following are the specific limitations in terms of our findings from the existing information available.

#### Data Covers Both Public and Private Investments

As shown in **Figure 2** above, data on government-backed and private investment are available in all three databases that are the focus of this report. This makes it difficult to separate the data and, indeed, to better understand the investments of overseas private market climate funds. This is because in China, some investment companies held by the private sector are also partially backed or funded by the public sector.

#### Potential For Overestimation

Overestimation may occur because of linkages between investment deals from government-backed organizations and the private sector. In addition, it was also difficult to identify some investment transactions that were part of debt or direct investments from SOEs. Meanwhile, some announced “deals”

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<sup>25</sup> 36Kr, 2022, Chinese Shuang-Tan Investor Listing, Available [here](#)

<sup>26</sup> Climate Friendly Investment Product, 2022, Available [here](#)



do not actually go ahead, especially in low- and middle-income countries. Additionally for some private investments, those are the committed investment amounts, which may differ from actual investment amounts. Although we removed the obvious nonrelevant data as comprehensively as possible, there was still the possibility of overestimation in the remaining ones.

In addition, the databases used to extract data for this analysis do not provide further detail on the *exact quantity* invested by Chinese investors in overseas climate funds. Rather, the database provides an overall figure that combines investments from all the parties involved. It is therefore not possible for this report to disclose exactly how much Chinese investors have contributed to these climate deals. It must therefore be noted that our estimations used for our graphs are almost certainly over estimations. In addition, our conclusion is that data on low and middle-income markets is more difficult to find than data on investment trends in high-income countries.

### **Lack Of Data of Low and Middle-Income Countries**

The data for low and middle-income countries, especially regarding international and domestic private sector actors, is more limited than elsewhere. Part of this is due to language differences, in particular non-English speaking markets. Second, many data agencies have at best small offices in these countries to track relevant information, as they assess the return on gathering such data beyond partial coverage as fairly limited. This lack of information can itself reinforce existing investment trends.

#### **1.4.2 LIMITATION 2: RISK OF GREENWASHING**

“Greenwashing” is a term that refers to a lack of integrity when it comes to the process of providing impressions or information about how a company’s products or another stakeholder’s actions are environmentally sound.<sup>27</sup> Greenwashing can pose a significant issue to investors when it comes to understanding “climate investment ”or performing “due diligence” of climate funds. A recent expert report by the UN’s High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities<sup>28</sup> on this issue suggested that lack of integrity comes about when non-state actors: do not follow their climate or environmental pledges with action; or underestimate the tasks required; or interpret pledges differently; or announce but never intend to achieve stated goals. Some argue that there is little evidence of actual greenwashing.<sup>29</sup> Nevertheless, it remains possible that stakeholders listed in the databases we have used have engaged in greenwashing.

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<sup>27</sup> Kenton, Will, 2022, What is Greenwashing? How it works, Examples, and Statistics, Investopedia, Available [here](#)

<sup>28</sup> United Nations’ High Level Expert Group on Net Zero Emissions Commitments of Non-State Entities, 2022, Integrity matters: Net Zero commitments by businesses, financial institutions, cities and regions, Available [here](#)

<sup>29</sup> Kenton, Will, 2022, What is Greenwashing? How it works, Examples, and Statistics, Investopedia, Available [here](#)

# CHAPTER TWO:

## 2 ANALYZING GLOBAL TRENDS IN CLIMATE INVESTMENT

### Part 2 at a Glance

- In order to understand Chinese climate investments, it is important to understand Chinese FDI trends compared to global FDI trends.
- Overall, China is the 4<sup>th</sup> largest source of FDI, at similar levels to Germany and Japan, both of which are significantly smaller investors than the US.
- Several barriers to overseas Chinese climate investment are related to the difference in domestic and foreign investment policy guidance.
- A key specific reason why China lags overall in FDI flows is foreign exchange controls, which place strict rules and regulations on the outflow of capital.

We have identified the outbound investment trends of China compared to other regions, as well as the common barriers to overseas climate investments in both the public and private sectors. We set these out below, and later based on our data and interview insights review whether they are or are not applicable to Chinese investors investing overseas - and if there are differences what those differences look like.

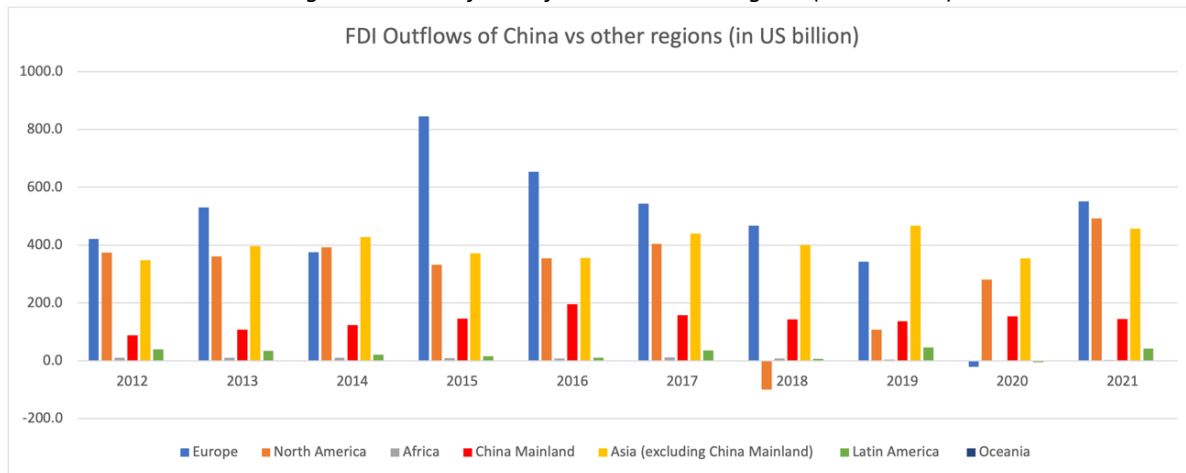
### 2.1 Outbound investment of China vs other regions

Global foreign direct investment (FDI) flows were \$1.58 trillion in 2021, a 64% increase from 2020. In general, FDI flows to low and middle-income economies grew more slowly than those to high-income regions in 2021, but still increased by 30% to \$83.7 billion. Asia led this growth, while flows to Latin American and the Caribbean and Africa also rose.<sup>30</sup>

The following section firstly addresses outbound investment by region and then compares China with global leaders in FDI flows, notably the United States, Germany and Japan. This analysis provides an important context of overall FDI flows that is crucial to understand before then analyzing climate investment flows.

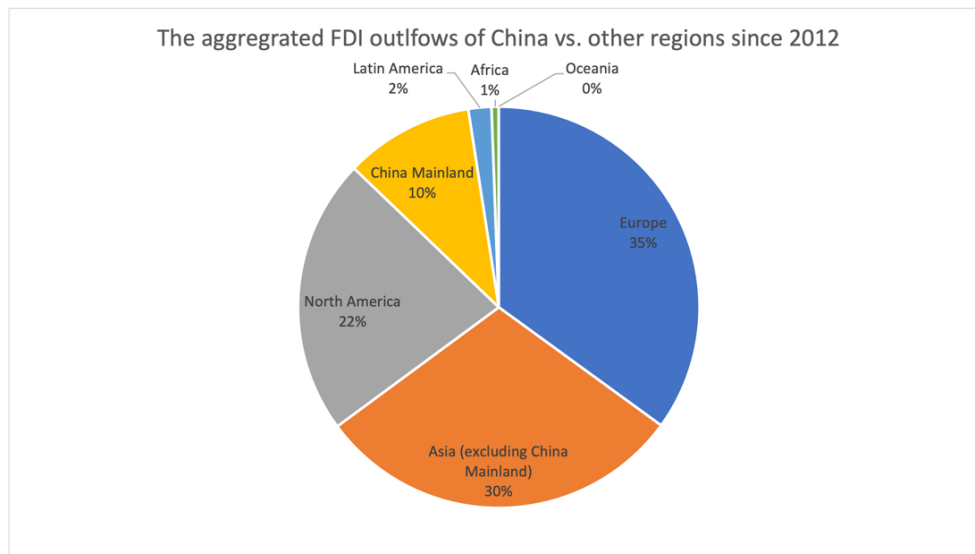
<sup>30</sup> United Nations Conference on Trade and Development (UNCTAD), 2022, World Investment Report 2022, Available [here](#)

Figure 4: FDI Outflows of China vs. other regions (in US billion)<sup>31</sup>



As **Figure 4** shows above, over the past decades, Europe has led in outward investment, but there has been a downward trend since 2015, followed by North America (especially the US). Asian countries, particularly Japan, South Korea and Singapore, also play a role in FDI outflows. FDI from mainland China has been increasing since 2012 and peaked in 2016 but has declined slightly since then. One reason for this decrease is due to higher internal barriers to outbound capital flows as well as a more difficult regulatory environment outside.<sup>32</sup>

Figure 5: FDI outflows of China vs. Other regions since 2012, aggregated<sup>33</sup>



<sup>31</sup> United Nations Conference on Trade and Development (UNCTAD), 2022, World Investment Report, Available [here](#)

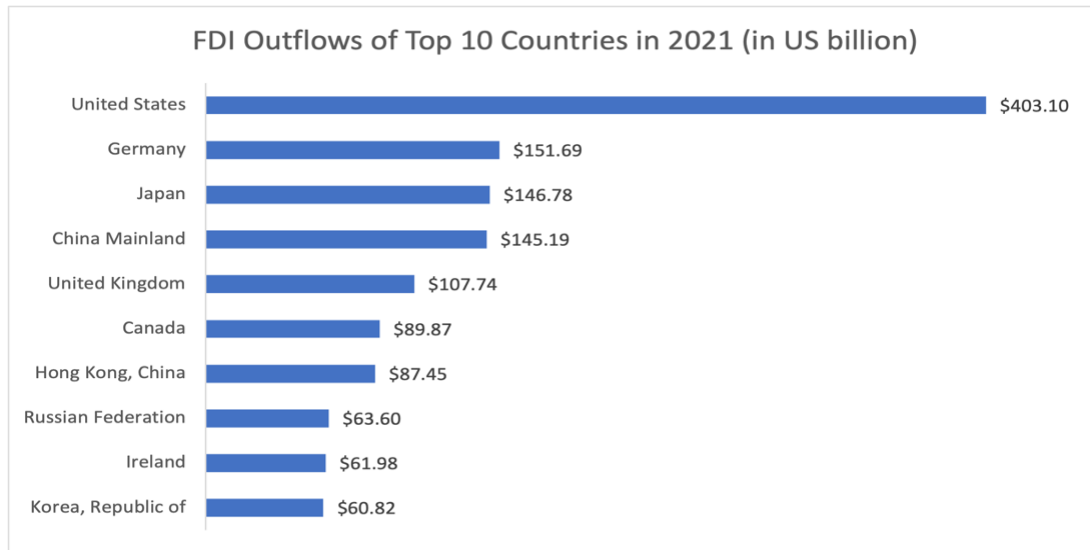
<sup>32</sup> Textor, C, 2022, Annual FDI outflows from China 2011-2021, Statista, Available [here](#)

<sup>33</sup> United Nations Conference on Trade and Development (UNCTAD), 2022, World Investment Report, Available [here](#) <https://unctad.org/topic/investment/world-investment-report>

<sup>34</sup> Ibid

As **Figure 5** shows above, during the past ten years, FDI from mainland China accounted for 10% of the world aggregated FDI outflows, and as **Figure 6** shows, by 2021 China was the fourth largest global investor in the world, with similar levels of FDI to Japan and Germany or the UK (I.e., importantly - not the scale of the US), proportionally affected by climate change.

Figure 6: FDI Outflows, Top 10 Countries in 2021 (in US billion)<sup>35</sup>



In terms of the destination, FDI flows from China largely went to Asia, with the amount of \$112.3 billion, accounting for 73.1% of the total outflows, followed by Latin America (10.8%), Europe (8.3%), North America (4.1%), Africa (2.8%) and Oceania (0.9%).<sup>36</sup> Hong Kong absorbs by far the most FDI from mainland China and plays a unique role due to its dual status as an international financial centre and a Chinese special administrative territory, spreading the majority of China's invested capital to places across the world.

This section has provided an overall context of FDI flows from China compared to other major international investors. The report now turns to the barriers experienced by Chinese investors, both public and private alike, when they decide to invest in overseas climate arenas.

## 2.2 Barriers to overseas Chinese climate investment

China's climate-related policies have promoted domestic and overseas climate finance investment. However, a divergence between domestic and overseas guidance also exists. Specifically, all China's high-tech and strategic industries, including next generation IT, energy efficiency, electric vehicles, new materials, renewables and biotech, are encouraged for investment both domestically and overseas. Categories such as "infrastructure that benefits BRI connections, investment cooperation with foreign high-tech and advance manufacturing enterprises, and carefully evaluated exploration and development of energy resources such as oil, gas and minerals" are only encouraged for overseas investments.<sup>37</sup>

<sup>35</sup> Ibid

<sup>36</sup> Ministry of Commerce of the People's Republic of China et al., 2021, 2020 Statistical Bulletin of China's Outward Foreign Direct Investment, Available [here](#)

<sup>37</sup> Gallagher, Kelly Sims and Qi Qi, 2021, Chinese Overseas Investment Policy: Implications for Climate Change, Global Policy Column 12, Issue 3, Available [here](#)

Many of the strategic industries in China mentioned earlier are, in fact, climate-related industries. The difference between domestic and overseas investment policies has led China to invest significant efforts to unlock and promote climate-related finance domestically. This in turn could theoretically lead to significant climate-focused overseas investment.<sup>38</sup> However, and as we will demonstrate and explain later, the fact that China's two policy banks and state-owned enterprises prefer to invest in hydropower and alternative energy projects rather than directly in climate-related industries may also be related to the difference in domestic and foreign investment policy guidance.

That said, China could significantly promote financial reform in the green industry, particularly through obtaining access to new markets and actor groups. State owned actors still have exclusive access to the pools of mobilized green capital.

## 2.3 China's foreign exchange controls

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There are strict rules and regulations in place in China for the outflow of capital for foreign investments. This is referred to as a closed capital account policy and it applies to any banks, companies and individuals that are moving money in or out of the country.<sup>39</sup> The troubles in the Chinese stock market during 2015-2016 led to an increase in capital controls that strove to discourage the outflow of currency and capital from China, and instead encourage domestic investment.<sup>40</sup> New controls and regulations were thus put in place by the government from 2016 to analyse outbound direct investment (ODI). The controls placed on these ODI depend on the target industry, the amount of money being transferred overseas, the destination country and the entity investing this money.<sup>41</sup> For example, in 2018, NDRC unadopted "Management Measures for Enterprises' Overseas Investment"<sup>42</sup> with the aim at making Chinese investors more competitive and encourage Chinese companies to re-focus on domestic business. This is in contrast to the Measures in 2014 focusing on simplifying the procedure for companies to invest overseas.<sup>43</sup>

Other external factors, including for example trade tensions between China and the US in 2018 led to the government restricting the outflow of currency via several main investment channels in order to avoid a massive outflow of capital.<sup>44</sup> These strict controls on the outflow of capital can thus be a barrier for entities looking to make overseas climate investments.

Several expert interviewees highlighted the difficulties surrounding capital outflows and the regulatory issues around cross-border transactions as a key barrier to Chinese overseas investments. It is thus crucial to understand the exact steps Chinese investors need to take in order to carry out overseas investments in climate funds.

To implement overseas investment now, as shown in **Figure 7**, a Chinese company has to go through at least three main formal steps for approval which involve three national departments, and the whole procedure may take 2~3 months. They are the National Development and Reform Commission (NDRC) (10~15 workdays), the Ministry of Commerce (MOFCOM) (5~10 workdays), and the State Administration

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<sup>38</sup> Ibid

<sup>39</sup> Government of Canada, 2021, Foreign Exchange Controls in China, Available [here](#)

<sup>40</sup> Central Banking, 2021, China's capital controls: here to stay?, Available [here](#)

<sup>41</sup> Ibid

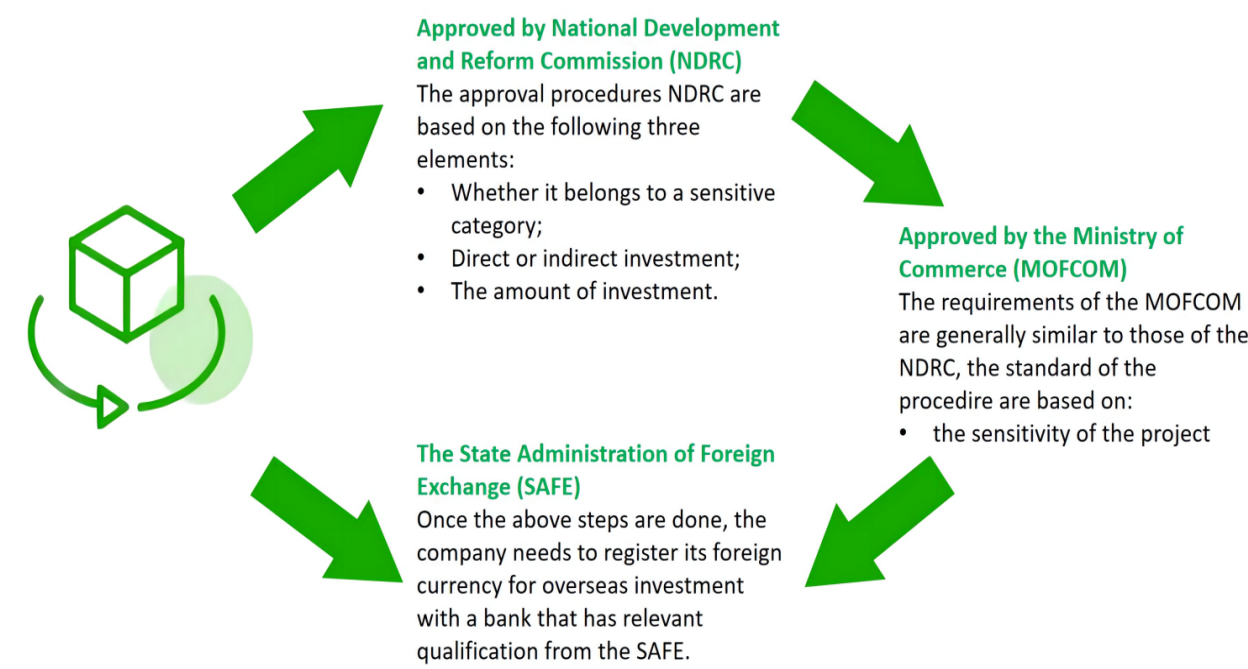
<sup>42</sup> National Development and Reform Commission, 2018, Measures for the Administration of Overseas Investment of Enterprises, Available [here](#)

<sup>43</sup> Deloitte Legal, 2018, China's Overseas investment: Refine the legal framework conditions for China's overseas investment, Available [here](#)

<sup>44</sup> Reuters, 2018, China constricts capital outflows with eye on yuan stability, Available [here](#)

of Foreign Exchange (SAFE).<sup>45</sup> The following figure shows what are the standards for the above subjects' approval.

Figure 7: Three main steps for Chinese companies to start overseas investment<sup>46</sup>



Although the 2018 update of the policy improved the measures for managing overseas investment, Chinese enterprises are now facing new procedural difficulties. For instance, the standards of the definition of sensitive and non-sensitive projects are very broad, making it very difficult to get sufficient information to clarify what is meant. Additionally, Chinese investors are not able to engage in legally binding agreements without the approval of the relevant Chinese government authorities, which can cause significant delays in the transaction process. If it is only a project that needs to be filed, it also can't start implementation without a filing notice.<sup>47</sup>

The analysis in this chapter of China's overall FDI versus other countries' FDI, as well as the explanation of overarching controls on Chinese FDI provide important context for understanding the similarities and unique reasons that Chinese investors do and do not invest in climate action globally. The report therefore now turns to an in-depth analysis of the values of Chinese climate investment Chinese over the past decade, where these investments have been flowing to, and what have been the key drivers for climate-related investments for both public and private actors.

<sup>45</sup> Tenbo International, 2021, Shenzhen ODI Procedure Timeline, Available [here](#)

<sup>46</sup> Authors' own analysis

<sup>47</sup> Deloitte Legal, 2018, China's Overseas investment: Refine the legal framework conditions for China's overseas investment, Available [here](#)

# CHAPTER THREE:

## 3 IDENTIFIED TRENDS IN CHINESE OVERSEAS CLIMATE INVESTMENTS

### Part 3 at a Glance

Chinese investment overseas falls into three categories:

1. Direct investment from Chinese **government-back institutions** in project finance and overseas companies
2. Direct investment from the **private sector** to overseas companies
3. Investment from **Chinese asset owners as limited partners** in overseas climate-related funds

Data analysis and information gathered during the expert interviews suggests the following key findings regarding Chinese climate investment:

1. Chinese climate investment overseas is happening, albeit at a lower scale than domestic climate investment, and likely lower scale than investors from other jurisdictions (although similar data is not available).
2. Investment is estimated to have reached a maximum total US\$247 billion over the 2012-2022 period with SOEs playing key roles in overseas renewable energy projects.
3. Asia attracted the highest overall amount of investment from Chinese climate investors, accounting for 38% of the value of climate investment.
4. Chinese climate-related investment peaked in 2017, reaching US\$35 billion.

There are five key drivers of investment for both public and private sector investment, including domestic policies, host country policies, established local presence, perceptions of risk and diverse investment preferences.

JEDI investment is sometimes a factor for of private sector investors when making investments, while it is not something that is considered in the business strategies of Chinese SOEs.

Below is an analysis of Chinese climate-related investments during the period 2012-2022. The data encapsulates analysis in relation to sectors, years and regions. This insight is a combination of our own data analysis, as well as insights from our expert interviews.

The analysis on Chinese overseas climate investment focuses on the three major types of investment below and the major trends of investment across each type of investment, as well as the drivers of these trends:

1. Direct investment from Chinese government-back institutions in project finance and overseas companies

2. Direct investment from private sector to overseas companies
3. Investment from Chinese asset owners as limited partners in overseas climate-related funds

The analysis employs a JEDI lens to the identified drivers of investment in order to understand whether justice, equity, diversity and inclusion are key factors of consideration for Chinese investors when investing in overseas private climate funds.

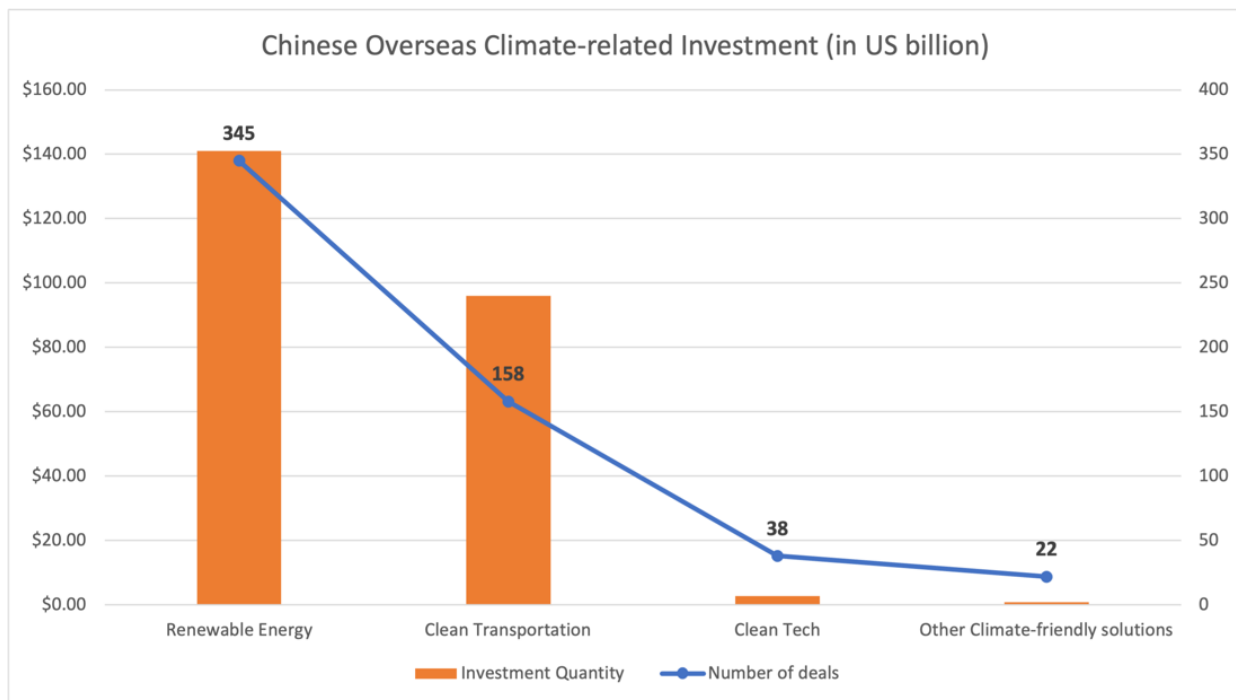
### 3.1 Overall trends

There are several key overall trends in Chinese climate-related investment that encapsulate the key sectors of climate investment, the fluctuations of investment during the period 2012-2022 and the regions where these investments have been flowing into during the period of analysis.

#### 3.1.1 INVESTMENT REACHED US\$242.77 BILLION DURING 2012-2022

Overall Chinese climate-related investment reached US\$242.77 billion during 2012-2022. **Figure 8** shows that renewable energy investments were the highest category out of the four main categories, accounting for US\$143.11 billion – almost 59% of overall investments. The dominance of renewable energy in Chinese overseas climate investment is also reflected in global trends in climate investments.<sup>48</sup> Renewable energy was followed by clean transportation, which accounted for US\$96.02 billion of overall investment – almost 40% of overall investment.

Figure 8: Chinese climate-related investment by category 2012-2022



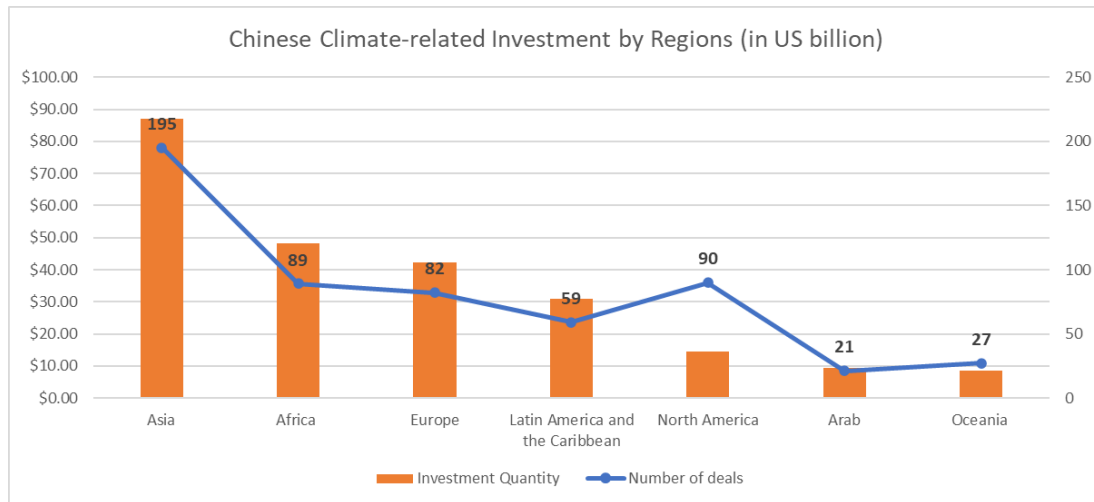
<sup>48</sup> United Nations Conference on Trade and Development, 2022, World Investment Report 2022, Available [here](#)



### 3.1.2 ASIA ATTRACTED THE HIGHEST OVERALL AMOUNT OF INVESTMENT

As seen below in **Figure 9**, investment in Asia reached US\$86.92 billion with 195 deals, accounting for approximately 38% of overall investments.

Figure 9: Chinese climate-related investment by region 2012-2022

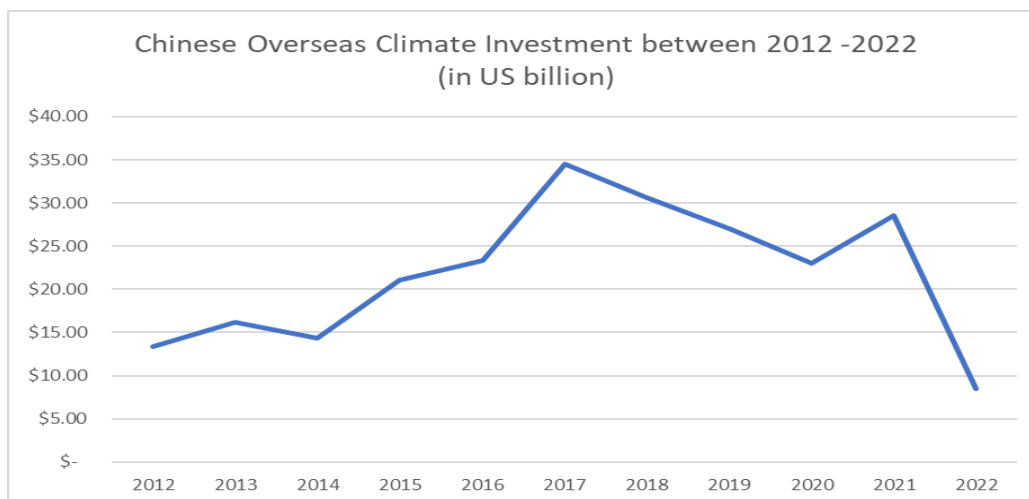


Note: North America includes the United States and Canada; Latin America and the Caribbean includes Mexico, countries in South American and the Caribbean. Mexico’s classification as part of Latin America and the Caribbean is based on the World Bank classification of Mexico as part of Latin America.<sup>49</sup>

### 3.1.3 CHINESE CLIMATE-RELATED INVESTMENT PEAKED IN 2017

When looking at investments over time, **Figure 10** demonstrates that Chinese climate-related investment peaked in 2017, reaching \$34.49 billion.

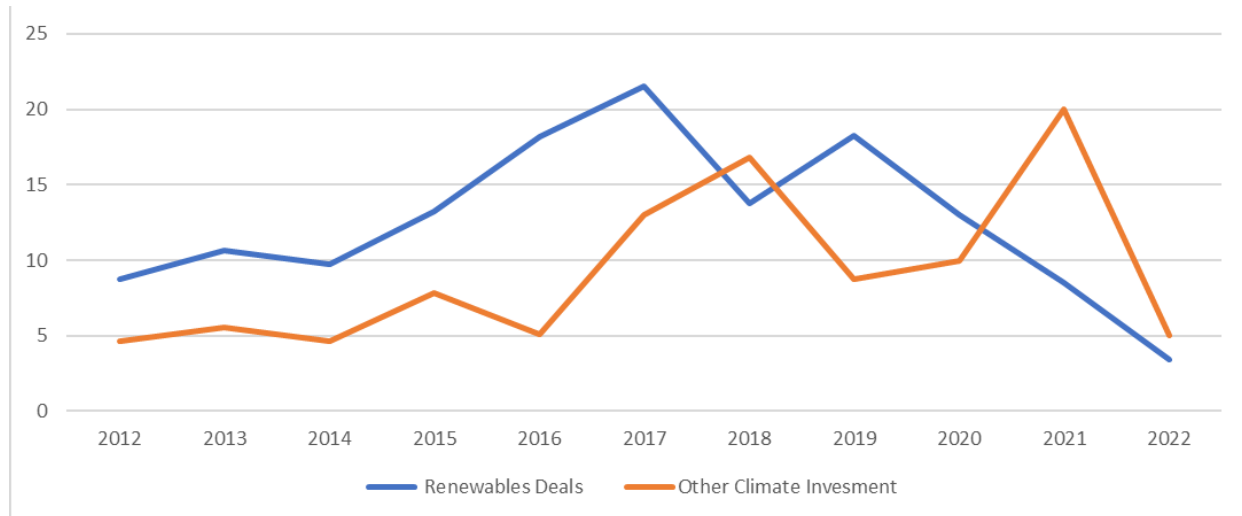
Figure 10: Chinese overseas climate investment 2012-2022



<sup>49</sup> World Bank, 2022, The World Bank in Mexico, Available [here](#)

Investment in renewable energy also peaked in 2017, with \$21.5 billion worth of deals during that year. While renewable deals have experienced a steady decline since 2019 as seen in **Figure 11**, ‘other climate investment’ experienced an increase from 2019 to 2021. This reflects trend two identified in part 1 of this report, which identified growing investments in areas such as climate technology into markets such as North America.

Figure 11: The comparison between Chinese investment in renewable deals and other sectors between 2012-2022



### 3.1.4 PUBLIC AND PRIVATE SECTOR INVESTORS FOCUSED ON DIVERSE CATEGORIES OF CLIMATE INVESTMENT

Firstly, Chinese SOEs investments have focused on the categories of ‘Renewable Energy’ and ‘Clean Transportation’, as can be seen in **Figure 12** below. In particular, Chinese SOEs have played a key role in the provision of finance and the development of overseas renewable energy projects. This is evidenced in our data analysis, which highlights 324 renewable energy projects with Chinese SOEs involvement of a total 345 projects. SOEs provide integrated services that revolve around the turnkey project model. The high level of Chinese investment in renewable energy projects reflects the global trend in renewable energy projects, which have dominated international mitigation and adaptation investment projects over this time period.<sup>46</sup> While there are private sector actors increasingly involved in the renewable energy sector, their overall shares remain small compared to the dominance of SOEs.<sup>47</sup> Along with renewable energy projects, SOEs have worked on clean transportation projects such as metro systems and railway construction projects.

Second, the categories of ‘Clean Technology’ and ‘other Climate-Friendly Solutions’ have been dominated by private sector investment. Some investment from private sector, albeit minimal, has also been in ‘Renewable Energy’ and ‘Clean Transportation’. Third, Chinese asset owners have also been involved as limited partners to invest in overseas climate related funds.

Figure 12: Analysis of four categories



## 3.2 Drivers of investment

This section focuses on the identified major drivers of investment for both public and private sector investment in order to explain these identified major trends above. Several drivers are shared by SOEs and private sector investors, while some are unique to specific actors. Finally, JEDI is analyzed as a factor for these investment drivers.

### 3.2.1 DRIVER 1: CHINESE DOMESTIC POLICIES & DOMESTIC ENVIRONMENT

The first major driver of Chinese climate investments to overseas markets, from both SOEs and the private sector, is Chinese domestic policy. There was a steady increase in Chinese overseas climate investment from 2014, followed by a rapid increase from 2015. This trend is strongly linked to global climate change investment trends, with investment increasing after the Paris Agreement was signed in 2015 and the introduction of the Sustainable Development Goals (SDGs)<sup>51</sup>, as well as China’s domestic policies on climate action. President Xi Jinping spoke at the Paris Conference and committed to the work on global climate action.<sup>52</sup> In 2015 China’s UNFCCC Nationally Determined Contribution aimed to peak carbon dioxide emissions by around 2030, with the ambition to peak before 2030. These policies were reflected in the domestic energy sector. For example, China’s new coal-fired power capacity decreased from 65.8 GW in 2015 to 41.4 GW in 2020.<sup>53</sup> In addition, China has increased its proposition of solar and wind power generation from 4% in 2015 to 10% at the beginning of 2020. There has been significant financial support from Chinese banks to promote both domestic and overseas climate-related investments.

#### CHINESE SOES DO NOT CURRENTLY PLACE A STRONG EMPHASIS ON GENDER AND ETHNIC REPRESENTATION

For most of Chinese SOEs and policy banks, there is no current emphasis on diverse gender and ethnic

representation in their management team. For example, Power China, a Chinese SOEs with strong expertise in building hydropower projects overseas, has an all-male leadership team, although information on whether they are racial and ethnic minorities is not clear.<sup>50</sup> Similarly, China Development

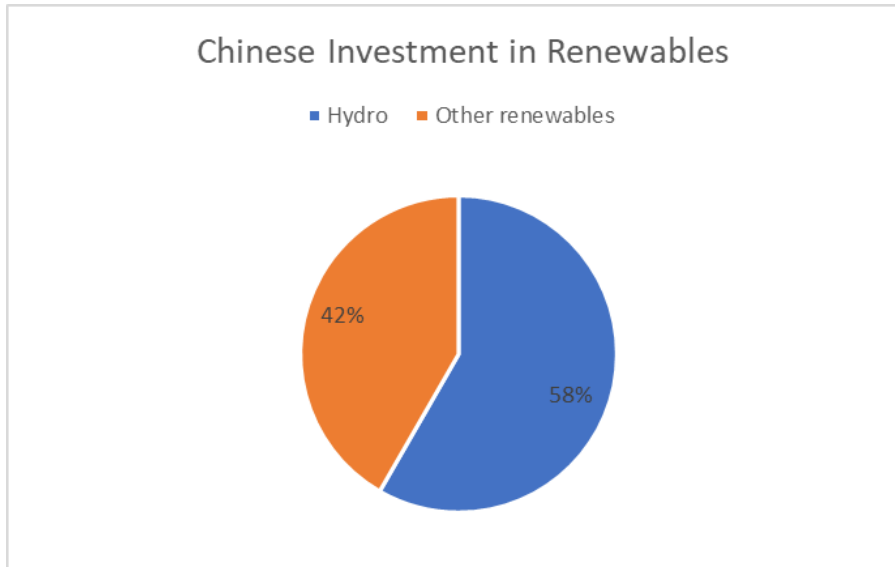
<sup>50</sup> PowerChina, 2022, Management Team, Available [here](#)

Bank, one of the two Chinese policy banks that finance SOEs going abroad, has no women or non-Han ethnicity on its leadership team.<sup>51</sup>

### CHINESE SOES HAVE USED THEIR EXPERTISE IN HYDROPOWER TO DEVELOP PROJECTS OVERSEAS

**Figure 13** below highlights that hydro-related projects accounted for 58% of overall Chinese investment in renewables. The other renewables that account for the remaining 42% of Chinese investment in renewables include solar, geothermal, wind and portable energy.

*Figure 13: Chinese investment in renewables*



Chinese state-owned enterprises have extensive expertise in developing and executing hydropower projects with advanced technologies. China is the world’s leading hydropower producer, with an installed capacity of over 370 GW in 2021.<sup>55</sup> In addition, China was responsible for almost two-thirds of global growth in hydropower capacity in 2020, adding 13.8 GW to its overall capacity.<sup>56</sup> Chinese state-owned enterprises are then able to transfer their skills and expertise to overseas hydropower projects.

### HYDROPOWER PROJECTS DO NOT REQUIRE LARGE AMOUNTS OF CAPITAL AND TECH TO MAINTAIN

In addition, hydropower projects, although sometimes limited by the natural environment, do not require particularly large amounts of capital and technology to maintain after being built. Hydropower plants can earn sufficient profits for every kWh of electricity generated. This can be compared to fossil fuel-based power, which bears the costs of purchasing these fossil fuels. In addition, these costs are often subject to price fluctuations.

Nevertheless, some of the limitations of hydropower projects, such as hydrological constraints exacerbated by climate change, long completion times, and high costs, have led Chinese investors to increasingly focus on solar and wind projects.

<sup>51</sup> China Development Bank, 2022, Management Team, Available [here](#)

### CHINESE DOMESTIC PRODUCTION CAPACITY AND ECONOMIC DOWNTURNS ALSO ENCOURAGE INVESTORS TO LOOK TOWARDS OVERSEAS MARKETS

Chinese SOEs often search for markets for renewable energy outside of its country since its production capacity exceeds local demand. Another interviewee stated that economic downturns have resulted in ‘renewed motivation for investors to look out for international investment opportunities’.

### FOR PRIVATE SECTOR INVESTORS STRONG GOVERNMENT SIGNALS TO ENCOURAGE INVESTMENT OVERSEAS COULD PLAY A MAJOR ROLE

Private sector investors pay attention to and conduct research government-backed funds, such as the Silk Road Fund, and understand that these overseas investments are linked to China’s national policy priorities. However, there have not yet been clear incentives for private sector actors to play a driving role in investing in these priority areas. Strong signals from the government to encourage private sector investment could help increase private sector investments in overseas markets.

## 3.2.2 DRIVER 2: HOST COUNTRY POLICIES & INCENTIVES

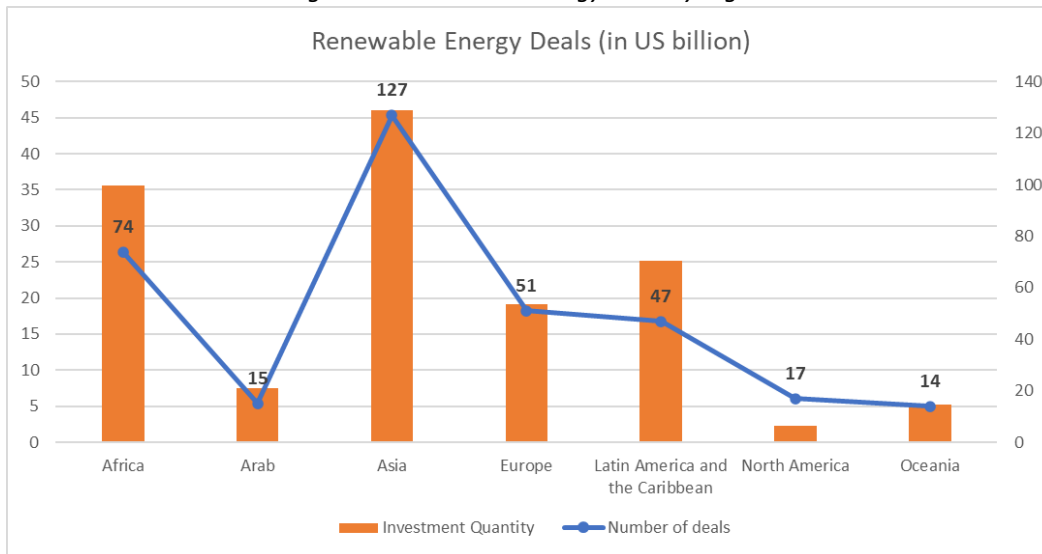
Another major driver of investment flows for both public and private investors is the policies of host countries, and the incentives that are offered to encourage investment flows. For Chinese SOEs, this has led a large amount of investment to flow to Asian countries. For private sector investors, the mature markets of North America and Europe have also provided attractive environments for markets.

### ASIAN COUNTRIES HAVE SHOWN A DEMAND FOR RENEWABLE ENERGY TRANSITIONS

*Asia was the biggest destination for investments in renewable energy, in terms of value and quantity of projects*

Looking at the regional distribution of renewable energy deals in **Figure 14**, Asia attracted \$46 billion in renewable energy deals, accounting for 33% of overall deals. This reflects the global trend of Asia as the major destination for climate investments and renewable energy as the main sector for investment, as identified in Part 2 of this report.<sup>46</sup> Hydropower was the leading renewable energy sub-category.

Figure 14: Renewable energy deals by region



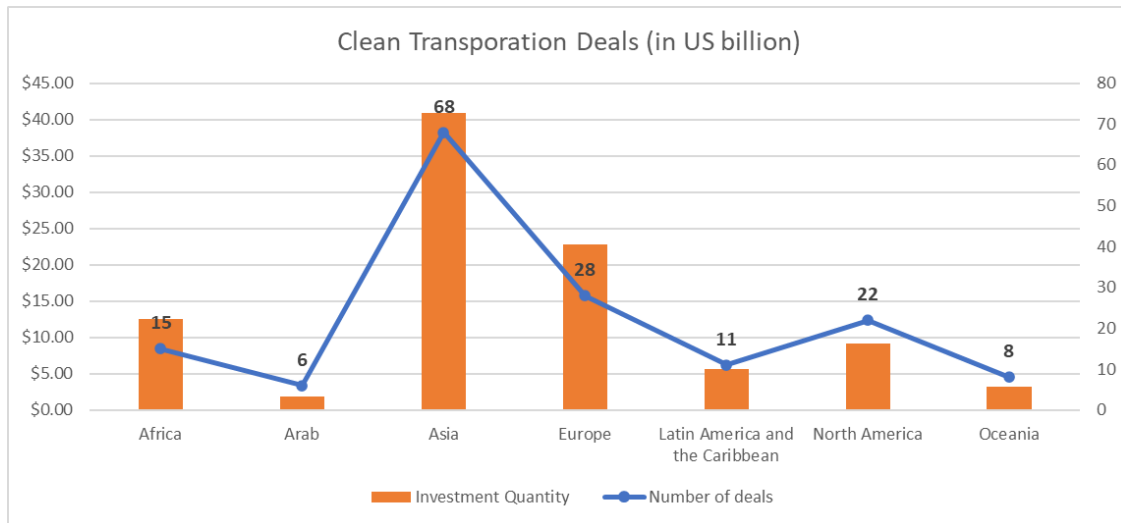
Renewable energy accounts for almost 59% of overall investments. The dominance of renewable energy projects reflects global trends in international climate investments. According to UNCTAD, between 2011-2021 climate mitigation projects accounted for more than 95% of global climate investments, with investments in renewable energy accounting for the majority of 95%.<sup>49</sup>

One interviewee highlighted the importance of long-term investment in the renewable energy industry: *'start-ups in other industries can become mature in 6-8 years, but in the renewable energy industry, they need at least 10-15 years and can consume a large amount of capital even at the very beginning stage'*. Another interviewee stated that *'Chinese investors are looking for opportunities arising from the clean energy transition'* and that *'demand for electricity in emerging markets is growing rapidly – presenting high investment opportunities'*. To seize these opportunities, the interviewee added that governments need to design *'coherent policy frameworks that can guide the transformation of energy industries'*. This demand for energy transitions is coupled with the renewable energy potential in Asian countries.

*Asia was also the leading destination for clean transportation deals*

Turning to the clean transportation category, Chinese SOEs have also dominated the number of deals in this area. **Figure 15** shows that Asia attracted \$40.86 billion in clean transportation deals, accounting for approximately 43% of overall clean transportation deals. SOE investments in clean transportation are largely into developing metro and railway projects overseas.

Figure 15: Clean transportation deals by region



### THE PROXIMITY OF ASIAN COUNTRIES MAKES IT EASIER FOR KNOWLEDGE GATHERING AND PROJECT PLANNING

One interviewee stated that it was essential for investors to ‘understand the definitions and frameworks in host countries to make investing easier’. The proximity of markets in Asia make it easier for Chinese investors to travel to investments destinations for the collection of local information, as well as project design. Additionally, countries in Southeast Asia such as Vietnam and Indonesia have greatly benefited from the proximity with supply chains in China that have been developed by Chinese SOEs for renewable energy projects. This is more challenging for regions such as Africa and LAC.

### SOES ARE ABLE TO USE DEVELOPED SUPPLY CHAINS AND EXPERTISE TO TAP INTO HYDROPOWER POTENTIAL ACROSS THE GLOBE

Moreover, China has a complete supply chain system for building such projects, which is one of the reasons why hydropower projects have become China’s leading overseas renewable projects. Thus, Asia countries, like Vietnam and Indonesia, have been benefited greatly from the proximity with the supply chains in China. Also, while China has almost capped its hydropower, there is a lot of potential overseas, especially in emerging markets where the demand for hydropower is high.

### UNFAMILIAR AND TIGHT REGULATIONS IN SOME REGIONS DETER CHINESE INVESTMENTS

Similar to trends for other FDI investors, understanding of political and economic rules, incentives and overall circumstances in other countries can facilitate climate investments.

The relative cultural similarities that often exist between China and other Asian countries in comparison to Europe, and how these similarities can encourage partnerships in climate action.

One interviewee stated that the political environment can hinder overseas investments in the field of climate. They gave the example of the US markets, where ‘[Given the tensions between the US and China, American start-ups are not willing to accept funds coming from China, even though these are US Dollar

funds’ [...] because there are a bunch of local US Dollar funds in the US, why bother?’. In addition, there may be certain restrictions on investments from funds such as the Silk Road Fund that are politically related and thus may be limited by their specific agenda.

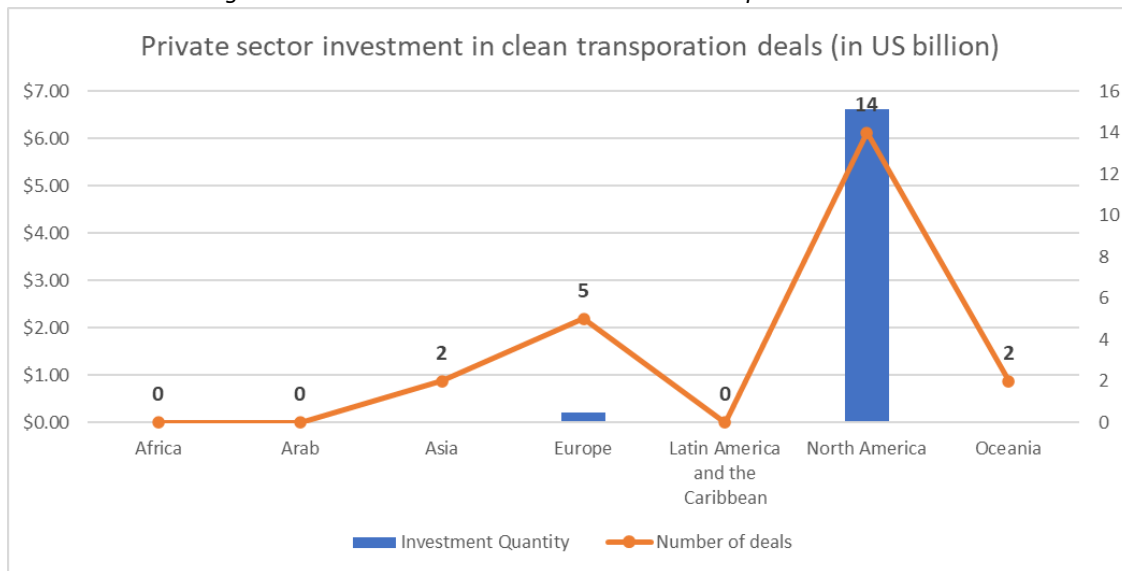
Furthermore, tight investment screening regulations or environmental standards (“taxonomies”) in certain markets such as Europe may decrease the appetite for investment and encourage Chinese investors to turn to more open regions such as Asia for investment opportunities.<sup>50</sup> Both in the Nordic and broader European region, legal constraints are a significant barrier holding back investments from China.

### FOR THE PRIVATE SECTOR, THE NORTH AMERICAN AND EUROPEAN MARKETS HAVE CLEAR POLICY FRAMEWORKS THAT FACILITATE INVESTMENTS

*For private sector investment in clean transportation, North America is the major destination.*

SOEs dominate the clean transportation deals but the private sector also plays an active role in clean transportation. If we analyse private sector deals alone, **Figure 16** shows that North America attracted the largest number of deals, reaching approximately \$6.6 billion from 2012-2022 out of an overall \$6.8 billion for all regions combined. Two of the main active investors in North America included NIO capital and Tencent.

Figure 16: Private sector investment in clean transportation deals



One interviewee, when discussing ideal local conditions for climate investments, referred to the European market when stating that ‘The policy framework on clean transportation, even at city level, is very clear in terms of funding for startups, plans to develop clean transportation and what is needed’. This simplifies the often-complicated process of investing overseas and allows Chinese investors to effectively plan and develop projects in international markets.

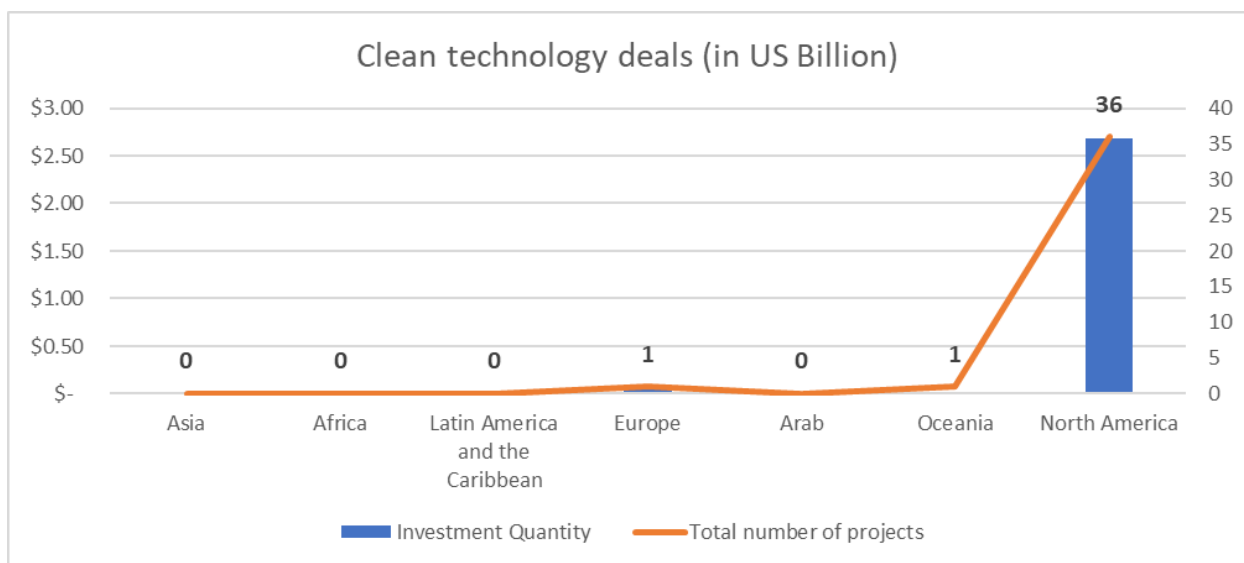


## THE UNITED STATES AND CANADA PROVIDE AN ATTRACTIVE ENVIRONMENT FOR CLEAN TECHNOLOGY INVESTMENTS

### *The U.S. was the main destination for clean technology deals*

Clean technology deals reached an overall value of \$2.76 billion between 2012-2022. **Figure 17** demonstrates that U.S. accounted for \$2.68 billion. However, in 2021, China cleantech startups received nearly \$8.7 billion from VC investment across 211 deals.<sup>47</sup> The focus of Chinese investments in the U.S. market, or more specifically in the US, reflects the global trend of the US as the main market for climate technology investments, as identified in trend 4 of Part 2.<sup>48</sup>

Figure 17: Clean technology deals by region



The United States and Canada have been a major destination for clean technology deals. As detailed in the literature review, the United States and Canada have been at the center of growing investments in climate technology. Major Chinese technology companies such as Tencent and Alibaba are actively investing in start-ups that are closely linked to their business strategies.<sup>49</sup> While there have been some recent political tensions, for example the trade tensions between the US and China in 2018<sup>50</sup> and the controversy of Huawei in Canada during 2021<sup>51</sup>, these tensions do not seem to have impacted the level of attractiveness of the U.S. and Canadian markets for Chinese investments.

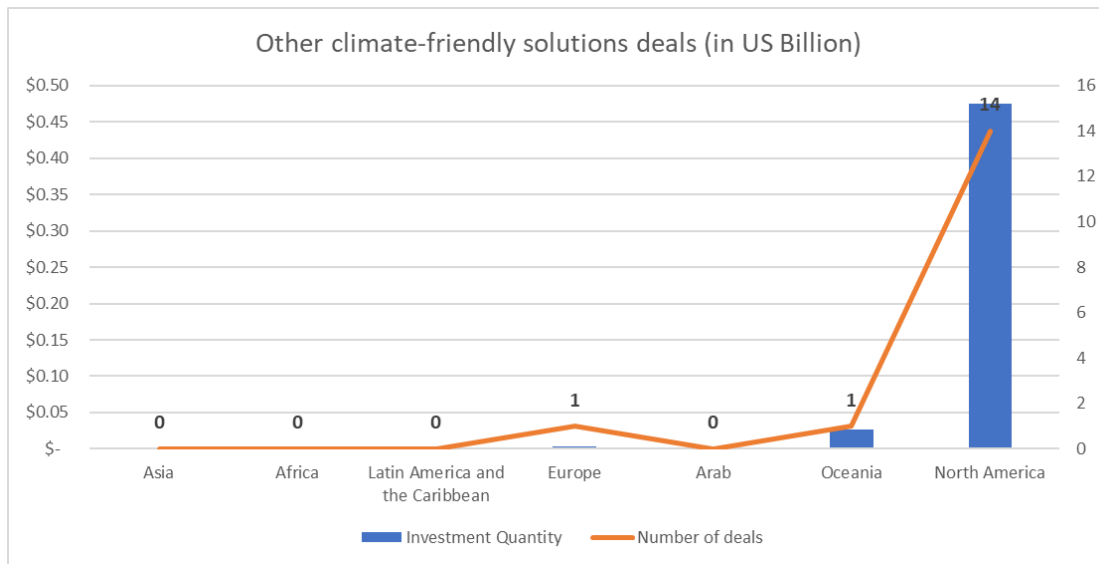
## MATURE MARKETS PROVIDE ACCESS TO CUTTING-EDGE TECHNOLOGY AND PROVIDE AN ATTRACTIVE ENVIRONMENT FOR THE DEVELOPMENT OF INFRASTRUCTURES

With reference to the European market, it allows Chinese investors to get closer to cutting-edge climate technology that they would otherwise not have access to.

### *North America was by far the main destination for other climate-friendly solutions deals*

As can be seen in **Figure 18**, North America received \$0.47 billion worth of investments into other climate-friendly solutions from 2012-2022, with all regions combined receiving \$0.5 billion in investments.

Figure 18: Other climate-friendly solutions by region



Other climate-friendly solutions deals in the United States have focused on developing tech-enabled platforms in areas such as waste management and recycling solutions, software systems working to streamline critical supply chains, and AI systems that capture energy data and employs big data analytics. The quantity and scale of recycling and waste practices in North America for example allow for the generation of efficiencies through the use of climate-friendly technologies. These levels of quantity and scale may not be as present in other world regions as they are in mature markets such as the U.S.

### FUND INVESTMENTS HAVE A PREFERENCE FOR MATURE MARKETS

The geographic preference of fund investments is mainly in mature markets, such as North America, Europe and Japan, and a few in emerging markets, such as South America. Some funds are also investing back in China, indicating China’s domestic climate-related market is still attractive to investors.

Host country policies and investment environments are therefore a key driver for public and private investors. However, aspects such as the Covid-19 pandemic have affected the flow of investments outside of China in several ways.

### THE COVID-19 PANDEMIC HAS MADE TRAVEL OVERSEAS INCREASINGLY DIFFICULT, THUS AFFECTING THE AMOUNT OF CLIMATE INVESTMENTS BEING MADE OVERSEAS

There has been a decline in climate-related investment over the past several years. One interviewee highlighted the Covid-19 pandemic and its impacts on overseas investments. Many investors have faced restrictions when travelling overseas, and the option of having a strong local presence for projects has become increasingly complicated. According to one interviewee, because of Covid-19 and travel restrictions ‘Chinese investors are more cautious to invest overseas’ and that ‘restrictions will make due diligence and money flows more difficult’.

## IT IS OFTEN EASIER TO OBTAIN INFORMATION ABOUT THE DOMESTIC MARKET

During the interviews, several interviewees mentioned that the domestic energy market in China is large enough and that there is a lot of energy-related investment. One of the main reasons for this is easier access to domestic information. One interviewee mentioned that *‘Chinese investors do not have much knowledge about overseas markets, so they are not as willing to take risks.’* This lack of knowledge includes areas such as local rules, compliance with local regulations, local legal systems, and human resources with expertise in relevant fields. Also, due to travel restrictions caused by COVID, it is more difficult to conduct field research and have due diligence overseas.

## HOST COUNTRY POLICIES MAY ENCOURAGE CHINESE INVESTORS TO ADOPT A JEDI INVESTMENT LENS

Transition by Chinese businesses towards use of a JEDI investment lens is likely to shift for regulatory compliance purposes or in response to global pressure as opposed to intentional acknowledgement of the need for a JEDI approach.<sup>52</sup>

Global initiatives such as the IFC’s Sustainable Stock Exchanges lay a foundation for JEDI investments in capital markets.<sup>53</sup> Furthermore and in the case of developed markets such as the New York Stock Exchange, new board of director diversity statistical requirements become mandatory in 2023, aligning opportunities for Chinese capital to back JEDI initiatives.<sup>54</sup> Considering the empirical merits of adopting a JEDI investment lens as well as China’s leading role in the fields of artificial intelligence and machine learning, a framework already exists for Chinese businesses to leverage technological advances in order to make data-driven investment decisions internationally.<sup>5556</sup>

### 3.2.3 DRIVER 3: PERCEPTIONS OF RISK AND THE POLICIES OF DESTINATION COUNTRIES

When asked to identify the major drivers of Chinese investment in overseas climate-related funds, one interviewee stated that *‘the return on investment is and has been a key consideration, as well as risk management, especially when there is none or limited previous investment experience abroad’.*

Risk considerations, including the policies of the receiving country, the business environment, and the level of activity in the climate market, are among the most important factors for investors to consider when deciding whether to invest. Interviews indicated that mature markets are less “risky” for private sector investment. For example, low- and middle-income countries, such as those in Africa, often default on payments when they face economic downturns. Given that private sector investment is commercially driven and seeks high returns, this will discourage private sector investment in these countries. However, the company’s strategy also matters. For example, Transsion’s business strategy is to target emerging markets, especially in Africa.

In addition, another interviewee highlighted that *‘investor education might be helpful to crowd in more investment from private sector’*, which can allay their concerns over political risks in foreign countries. For

<sup>52</sup> SAGE Publications Ltd, Thousand Oaks, 2014, International Human Resource Management: An Employment Relations Perspective, Available [here](#)

<sup>53</sup> IFC, 2022, How exchanges can advance gender equality, Available [here](#)

<sup>54</sup> Gibson Dunn, 2021, SEC Approves New Nasdaq Board Diversity Rules, Available [here](#)

<sup>55</sup> AASHE, 2022, Earning Justice: The Returns on Equity, Diversity, and Inclusion in Investing, Available [here](#)

<sup>56</sup> Taylor & Francis Group, 2022, Driving Justice, Equity, Diversity, and Inclusion, Available [here](#)

example, founders of ZhenFund and Asia Green Fund both have experience of being educated in countries such as the US and Canada.

### 3.2.4 DRIVER 4: EXISTING LOCAL PRESENCE IN DESTINATION COUNTRIES

Existing local presence and collaboration has been identified as a driver of continued or indeed further investments for public and private sector investors.

#### EXISTING INVESTMENTS AND COLLABORATION HAVE MEANT THAT A LARGE NUMBER OF SOE INVESTMENTS HAVE GONE INTO THE ASIAN REGION

Another reason for the dominance of the Asian region in Chinese climate investment is the strong presence Chinese SOEs already have in many Asian countries. This is particularly in comparison to other low- and middle-income country investment destinations.

One interviewee stated that *'if there's already some good investment, collaboration and projects going on the ground, then as with any other investor, Chinese investors are also interested in doing a project in that country [...] The project preparation costs would just be much lower if those Chinese investors already experienced in a specific country'*. The interviewee continued by stating that projects that provide profit are key for Chinese investments.

#### HAVING A LOCAL PRESENCE HAS BEEN KEY TO INVESTMENTS IN OVERSEAS CLIMATE MARKETS FOR PRIVATE INVESTORS

As one expert interviewee informed us, ZhenFund has local offices in North America and has built up a lot of cooperation programs with universities in the US, therefore there is little to no information gap for ZhenFund in the North American market. For Chinese private equity and venture capital firms that are seeking direct investment opportunities, ZhenFund's overseas sourcing strategy can be a good example. The establishment of local offices and cooperation programs with higher educational institutions can help to reduce the information gap in sourcing in the overseas market.

### 3.2.5 DRIVER 5: INVESTMENT PREFERENCES

Some interviewees suggested that there have not been many private sector Chinese investors interested in investing overseas, and few have expressed a willingness to invest in climate investment or impact investment overseas. Investments are rather focused on domestic energy-related investments at the domestic level, where there are fewer restrictions and it is easier to obtain information about the domestic market. Overall, most asset owners do not have much interest in climate change concern points. However, there were also several private sector institutional investors who stated that they had a strong interest in learning more about foreign climate investment opportunities, and obtaining reliable information and resources to facilitate foreign investments. These private sector institutional investors also highlighted the importance of having accountable local partners when entering foreign markets. This demonstrates that there are differing opinions amongst Chinese private sector actors when it comes to interest in investing in overseas climate markets.

## SEVERAL PRIVATE SECTOR INVESTORS ARE ‘MISSION-DRIVEN’ AND CONSIDER JEDI IN THEIR APPROACH TO INVESTMENT

### CASE STUDY: PACT VC

Pact is a new seed VC fund led by three female partners; Tong Gu, Mobassaleh Wyndham and Monik Pham. Tong Gu grew up in China and previously grew a data analytics startup in Shanghai. The fund describes itself as ‘mission-driven’ and will support startups that promote Access (economic inclusion), Betterment (personal and professional well-being) and Climate.<sup>57</sup> The fund is approximately \$36 million and believes there should not be a ‘trade-off between socially sustainable, environmentally sustainable and commercially sustainable outcomes’.<sup>58</sup> Yeming Wang, former head of EMEA at Alibaba, is one of the limited partners of Pact VC.

## FUND INVESTMENTS HAVE A PREFERENCE FOR MATURE MARKETS

PitchBook records 39 investment transactions that meet the program criteria of Chinese investors investing as limited partners in overseas climate-related funds. As shown in **Table 1** below, most of the destinations for investments are concentrated in high-income countries with the US being the destination country that received the most investments, followed by Israel. Only two (upper) middle-income countries – Mexico and Brazil – have such investments.

In terms of trends by year, 2014-2018 was the five most active years for Chinese investment in overseas climate-related, including 12 committed investments in 2018. This was largely due to the fact that while investors were less affected by regulatory hurdles in the broader context of the US-China trade war in 2018.

Table 1: Overview of Chinese investors investing in overseas climate-related funds between 2012-2020

	Australia	Brazil	Canada	Cyprus	Ireland	Israel	Japan	Luxembourg	Mexico	South Korea	UK	USA	Number of deals committed
2014						3			1			1	5
2015						3	1					2	8
2016						1						1	4
2017				1								1	3
2018		1			2	1						1	12
2019		1							1			1	3
2021										1		1	2
2022												1	1
Unclear year												1	1
<b>Number of deals committed</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>17</b>	<b>39</b>

However, the slowdown in China's technology sector and the expansion of U.S. screening to include certain venture capital deals have put up resistance to Chinese outbound venture capital investments, making such investments already start to decrease in the second half of 2018.<sup>59</sup>

Among these Chinese investors, as shown in **Table 2**, the majority are companies in internet and

<sup>57</sup> Pact, 2023, Available [here](#)

<sup>58</sup> Techcrunch, 2022, Anne Hathaway backs Pact, an all-women led VC for mission-driven startups, from West to East, Available [here](#)

<sup>59</sup> Hanemann, Thilo et al., 2019, Net Negative: Chinese Investment in the US in 2018, Rhodium Group, Available [here](#)

technology like TenCent, Baidu, Alibaba, which is in line with the trend of active participation of Corporate Venture Capital (CVC) in renewable energy related investments. A majority of the overseas funds invested by Chinese investors are located in the US (17 out of 40), followed by Israel (7 out of 40), and the UK (5 out of 40), which is indicative of where most of the startups are located.

*Table 2: The Institution type of Chinese investors invested in overseas climate-related fund as limited partners*

Institution Type	Count
Corporation	14
Banking Institution	3
Sovereign Wealth Fund	3
Insurance Company	3
Funds of Funds	2
High New Worth Individual	2
Venture Capital Firm	2
Private Investment Firm	1
Economic Development Agency	1
Investment Management Company	1
Multilateral Development Bank	1

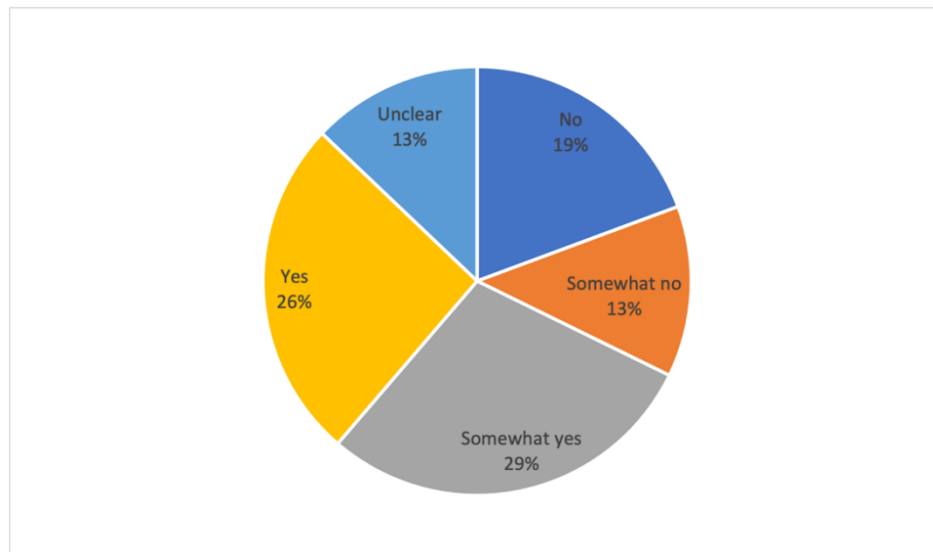
The geographic preference of fund investments is mainly in mature markets, such as North America, Europe and Japan, and a few in emerging markets, such as South America. Surprisingly, some funds are also investing back in China, indicating China’s domestic climate-related market is still attractive to investors.

### DIVERSITY OR INCLUSION IS NOT SEEN AS A MAJOR CONSIDERATION FOR CHINESE INVESTORS

Interviews did not suggest that the diversity of general partners (GP) managing funds is a key factor influencing Chinese investors to make investments nor the type of investments they make. Nevertheless, as shown in the **Figure 19** below, based on our data capturing a total of 31 GPs managing climate-related funds invested in by Chinese investors, one-third of the GPs are *not diverse-led*.<sup>60</sup> Their leadership is predominantly male, or there are either no women or no underrepresented racial and ethnic groups on the management team. 26% of GPs are identified as diversity-led teams, while 29% are considered “somewhat yes” because they have female leaders but no underrepresented groups.

<sup>60</sup> The methodology to identify whether diverse-led or not: no female or underrepresented groups in the management team is a “No”; the percentage of female or underrepresented groups in the management team is less than 20% were identified as “Somewhat No”; 20%-50% was identified as “Somewhat Yes” and larger than 50% was a “Yes”.

Figure 19: Diversity level of GPs managing funds invested by Chinese investors<sup>61</sup>



This result is closely related to the current situation within China, where, for instance, there is a general lack of urgency in promoting gender diversity among the country's largest public companies, and there are very few diverse racial and ethnic groups represented in senior management.

However, some Chinese investors at the current stage does not have a strong focus on the diversity level of the GP in which they invest their funds. Of the 31 GPs managing climate-related funds mentioned before, some are diversification-driven and focuses on JEDI, for example, Cathay Innovation and The Carlyle Group.

#### CASE STUDY: CATHAY INNOVATION

Cathay Innovation manages Cathay Innovation Fund, which was launched with a target of EUR 200-250 million, of which EUR 100-150 million will be raised from BPI France and China Development Bank (CDB) Capital. CDB committed the investment in 2017. Cathy Innovation is a venture capital firm based in San Francisco, California. The firm prefers to invest globally in seed, early and later stage companies in the areas of advanced manufacturing, artificial intelligence and machine learning, B2B payments, cleantech, digital health, e-commerce, fintech, health technology, and seeks ESG investments. Cathay Innovation is a global team of diverse people from various background. Of the 30 members of the leadership team, 18 are women and 21 are from underrepresented racial or ethnic backgrounds.

#### CASE STUDY: CARLYLE GROUP

The Carlyle Group, was founded in 1987 and is a private equity firm based in Washington, D.C. It manages Carlyle Europe Partners IV and Anbang Property & Casualty Insurance, a Chinese insurance company, is one of the fund's limited partners. The fund is located in London, United Kingdom and invested in Europe with the targeted investments in the commercial service, TMT, and manufacturing sectors. The Carlyle Group prefers to invest in sectors such as aerospace, financial services, healthcare, infrastructure, industrials, technology and transportation. The firm values diversity, equity and inclusion (DEI) in all of its work and believes that "diverse team asks better questions and inclusive

<sup>61</sup> Data collected from Pitchbook with the authors' own filtering

teams find better answers.”<sup>62</sup> At Carlyle, approximately 50% of total assets under management are managed by women. 66% of new hires in 2021 in the U.S. are women or from underrepresented racial and ethnic groups.<sup>63</sup> In 2018, Carlyle established their Global DEI Council, which meets at least three times a year to review and refine the firm-wide DEI strategy.<sup>64</sup>

### INVESTING AS LIMITED PARTNERS RATHER THAN DIRECT INVESTORS

For Chinese corporate venture capital (CVC), especially those that are technology-intensive and government-backed, investing as the limited partners of the overseas fund rather than direct investors would be more likely to increase the possibility of successful deals due to the tightened rules in the transaction reviewing process in both the U.S. and Europe (Germany).

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<sup>62</sup> Carlyle Group, Diversity, Equity & Inclusion, Available [here](#)

<sup>63</sup> Carlyle Group describes ethnic minorities in the US as Asian, Black, or African American, Hispanic, or Latin, American Indian, or Alaska Native, Native Hawaiian, or Other Pacific Islander, Two or More Races

<sup>64</sup> Ibid



## CASE STUDY: TENCENT

While the global capital market is moving towards a new investment paradigm concerning long-term climate risks and solutions, as shown in the dataset of the investment transactions this report compiled, the Chinese technology giants that have yielded huge gains during the tech-sector boom in the past decade are among the active investors in overseas funds. Also, over the past two years the tech giants (including Tencent, Baidu, Alibaba, Geely, Lenovo in the list of transactions we collected) have made carbon neutrality roadmaps or ESG management reporting as core competency criteria in responding to China's ambition in "dual carbon" goals and the government's pledges to deploy high-tech solutions.<sup>1</sup>

Taking Tencent as an example, there are two general pathways to tackle climate challenges summarized from its Roadmap Report.<sup>1</sup> On the one hand, Tencent aims to cut emissions in its operations and supply chains through deployment of energy-efficiency technologies and procurement of renewable energy. For example, one of the actions took place overseas was its second data center in Japan which uses 100% renewable energy power in May 2021.<sup>1</sup> On the other hand, to generate more spillover effect, Tencent aims to explore related market and technological innovations in order facilitate the low-carbon transition of multiple sectors. Besides the overseas investments and merges that focus on its specialized products like games and social media, some investments in recent years show Tencent's intensive interests to diversify its portfolio and strategically expand into cutting-edge sectors including green infrastructure, smart transportation, AI and renewable energies, which also enabled the company to establish partnerships abroad ahead of competitors.

1. In November 2020, Tencent joined as an investor in the Series-A funding round of Finland's IQM Quantum Computers' superconducting system which claims to have substantially different architectures and will provide solutions to find innovative plans to tackle climate change.<sup>1</sup> At the Commercialising Quantum 2022, Tencent's chief European representative shared views on the potential of quantum technology and Tencent's incentives in exploring the sector.<sup>1</sup>
2. In May 2022, Tencent joined the Series-D funding round of an Israeli unicorn that applies AI in optimize public transportation planning for efficiency and sustainability.<sup>1</sup>

At the same time, the tech giant has also continued to utilize its advantages in network platform. On December 21, 2022, Tencent launched a platform TANLive to help connect stakeholders of low-carbon technologies, including entrepreneurs, investors and research institutions. It was co-developed with 10 other international and local partners including Impact Hub Shanghai and Plug and Play China, bringing together technical tools and insights to accelerate the implementation of climate solutions.<sup>1</sup>

While Tencent is focused on the sustainable development of society, JEDI is not well embedded in the company's overall strategy. While "inclusion and collaboration" is part of their culture, the sense of promoting diversity is still lacking. Specifically, the management team is composed entirely of men. Such a situation is common in many Chinese companies.

Having analysed the role of key direct investors as well as limited partners in overseas climate investments, the next section addresses the role of Chinese-led Development Finance Institutions (DFIs) in facilitating overseas climate investments.

### 3.3 The role of China-led Development Finance Institutions

DFIs and Multilateral Development Banks (MDBs) are often expected to play a catalytic role in scaling up climate-related investments and mobilizing private capital. Their support, directly through anchor investments and indirectly through market signaling, can contribute to addressing the climate financing constraints. They can also serve as critical enablers to policy agenda setting, knowledge sharing, institutional capacity building, and partnership forming.

DFIs and MDBs get involved in climate financing while make efforts to bring in private sector through various approaches, for instance:

- Serving as anchor investor for climate-related projects to enhance the perceived credibility of the investment and build investor confidence
- Direct investment in other climate-themed funds as limited partners. Examples include New Development Bank’s investment in Brazil’s private equity firm Patria, Silkroad Fund’s investment in TPG Rise Climate Fund, and AIIB’s investment in ADM Renewable Energy Fund, NIO and a few of other climate private equity funds
- Leveraging blended concessional finance to co-invest with private sector investors. In theory at least, de-risking financial facilities applied with other blended finance instruments can further boost capital flows into climate sector, which are essential for low- and middle-income countries with limited access to long-term, patient capital to safeguard against market volatility
- Provide capacity building, technical assistance and other knowledge or instruments needed to empower governments and private sectors with unique abilities to support green transition

China-led DFIs and MDBs possess great potential to lead outbound climate finance and enable sustainable development. For example, Asian Infrastructure Investment Bank (AIIB) – one of the youngest but also the most active MDBs in climate financing – has set the ambitious target to allocate at least half of its annual financing to projects that tackle climate change by 2025, with at least half of the approved regular financing to be channeled to private-sector operations by 2030. **Table 3** shows the selected investment projects of AIIB in climate-related funds in the past three years.

*Table 2: Selected AIIB’s investment projects in climate-related funds in the past three years.*

Approval year	Project name	Financing amount
2022	Multicountry: Rakiza Fund I	\$50 million
2022	Multicountry: Southeast Asia Women’s Economic Empowerment Fund	\$10 million
2022	India: Kotak Infrastructure Investment Fund	\$100 million
2022	Singapore: Asia Infrastructure Securitization Program II	\$80 million
2022	Multicountry: Everbright Infrastructure Investment Fund II	\$100 million
2022	Bangladesh: IDCOL Multi-Sector On-Lending Facility	\$200 million
2022	Brazil: BDMG Renewables and Asia Connectivity Facility	\$100 million
2022	China: NIO Capital Eve ONE Fund II	\$50 million

2021	Multicountry: STIC Asia Infrastructure Innovation Fund	\$60 million
2021	Multicountry: Keppel-Pierfront Private Credit Fund L.P	\$150 million
2021	Multicountry: Global Infrastructure Partners Emerging Markets Fund I (“GIP EM” or the “Fund”)	\$150 million
2021	Singapore: Asia Infrastructure Securitization Program	\$80 million
2021	Multicountry: Aberdeen Standard Investcorp Infrastructure Partners	\$90 million
2021	Multi-Country: ISQ Growth Markets Infrastructure Fund	\$150 million
2020	Multicountry: Keppel Asia Infrastructure Fund	\$150 million

### THE ROLE OF CHINA-LED DFIS & JEDI

Despite being in the early stages of a long-term diversity, equity, and inclusion (DE&I) journey, Chinese climate investors have already taken DE&I into account when making investment decisions at several China-led development finance institutes and policy banks. AIIB, for example, have invested in several overseas climate-thematic private equity funds which commit to “pioneer the innovative sustainability-linked incentive scheme to promote climate finance, gender diversity and ESG governance in the private equity fund industry”. The Shanghai-based New Development Bank (NDB) also share the value that “gender equality is important to successful and sustainable economic development” and have introduced NDB Diversity Policy to promote DE&I in their implementation and operation.

As mentioned previously, Chinese investors as limited partners prefer to invest in mature markets. And only two investments are considered to be in locally-managed funds in emerging markets, one in Mexico and the other in Brazil.

### PRIVATE SECTOR & JEDI

Despite being in the early stages of a long-term JEDI journey, there has been an emerging trend in the private sector in China to exercise decision making powers to support diverse entrepreneurs and investors based on our communication with Chinese investors:

1. Increasing signatories of UN Principles for Responsible Investment (PRI) among Chinese funds (both for LP and GP) to make commitments on DE&I;
2. Growing representation of women on investment committee (IC)/boards at top-tier investment funds who get involved in investment decision-making;
3. Raising awareness on women, racial and ethnic underrepresented and marginalized groups’ critical role in achieving climate targets.

#### CASE STUDY: SOGAL VENTURES

Even though DE&I has not been considered as a “must-have” investment assessment indicator in China, PE/VC (looking for LP investment) and start-ups (looking for GP investment) that encourage diversity are more likely to stand out among rivals. For instance, the women-led VC firm SoGal Ventures<sup>65</sup>, co-founded by Chinese venture capitalist Pocket Sun, have been investing in diverse founders with ESG

<sup>65</sup> SoGal Ventures, 2023, Available [here](#)

criteria and sustainability focus in Asia and North America. They have successfully distinguished themselves in the market by elevating the prominence of women and under-represented entrepreneurs.

These case studies demonstrate an emerging trend of increased emphasis on JEDI in investment assessments for private sector investors, with the aim of supporting diverse entrepreneurs. These case studies also serve as key examples for other investors on how to incorporate a JEDI lens into investment practices. Table 4 below provides a summary of the key drivers of overseas climate investment, and whether a JEDI lens has been identified as a factor in these drivers.

*Table 4: Drivers of overseas climate investment*

<b>Drivers</b>	SOE investment	SOE investment plus JEDI lens	Private Sector investment	Private Sector investment plus JEDI lens
<b>Domestic policy</b>	Yes			
<b>Host country policy</b>	Yes			
<b>Local presence</b>			Yes	Yes
<b>Perceptions of risk</b>	Yes			
<b>Investment preferences</b>			Yes	Yes

# CHAPTER FOUR:

## 4 CONCLUSIONS AND RECOMMENDATIONS

### Part 4 at a Glance

Four key findings:

1. Despite a range of China-specific and general impediments to international private climate finance flows, Chinese private climate investment is flowing overseas – to an increasingly wide range of markets and increasingly wide range of activities.
2. Chinese SOEs dominate Chinese investors, who do not have a JEDI lens, but because of business-orientation and government policy, Asian and high-income markets dominate Chinese investment destinations, as does renewable energy (especially hydropower). In this sense, Chinese investors show similar trends to investors from other jurisdictions.
3. Chinese private investors as limited partners are increasingly investing in climate action, including diverse-led investors, especially Chinese PE/VCs and funds. This can be expected to scale, especially in low- and middle-income countries.
4. There is therefore significant potential – for instance through the JEDI-lens being used in government policy and Chinese DFIs to influence both SOEs and private sector to do more climate action.

Given these findings, there is significant worth in continuing to track, as well as work to shape and scale Chinese private climate investment into where it is most needed and will be most transformational in terms of delivering green growth, for example African markets.

In this respect, key recommendations can be made for three major stakeholder categories: Chinese policy makers, public sector investors, and private sector stakeholders.

### 4.1 Conclusions

This report set out to test whether Chinese private climate investment is going to where it is most needed and most transformational in terms of climate action, and to what degree a JEDI-lens is having a positive influence in this respect.

The in-depth data and expert interviews suggest four key findings to this question. These are:

**1. Chinese climate investments are happening, although to a lesser degree than the US but nevertheless they are significant.**

China ranks the 4<sup>th</sup> largest FDI source globally behind the US, Germany, and Japan, mainly due to domestic regulations on Chinese outward finance. Furthermore, global FDIs flows fell 31% in the second quarter of

2022 from the first quarter of 2022 and were 7% lower than the quarterly average of 2021. This decrease in FDI flows is a result of several factors, including the war in Ukraine, rising inflation, a fear around the risk of recession. UNCTAD predicts that this downward trend in overall FDI flows will be reflected in international investments in both mitigation and adaptation.<sup>66</sup> However, the data shows that nevertheless Chinese climate investments is taking place, in renewable energy, transport, etc. (i.e. all sectors).<sup>67</sup>

## **2. While Chinese SOEs have not demonstrated a strong JEDI lens, Chinese private sector trends have shown a JEDI lens in investments**

To date, the data reveals that Chinese overseas investment has been dominated by SOEs, which do not have a strong JEDI lens themselves. Almost all leadership teams of Chinese SOEs are male and Han Chinese. However, SOEs have directed significant climate investments into renewable energy and clean transport investments, and Asia is the leading destination for these investments, which follows global trends in climate investments. The focus from SOEs has been partly due to attractive domestic and regional investment opportunities, as well as government direction, and not necessarily a JEDI-lens. In this case, the use of a JEDI-lens by investee countries as well as by the Chinese government could be useful areas to focus in order to drive more climate action by Chinese SOEs.

For the Chinese private sector, the data reveals a JEDI lens in the investment drivers ‘local presence’ and ‘investment drivers’. The approach to overseas investments from the private sector is more dynamic and open-minded. Chinese investors are also more willing to align with processes that developed countries are engaging in, such as ESG criteria and promoting diversity and inclusion. As a result, there has been an emerging trend of Chinese PE/VCs and funds making JEDI investments. As mentioned previously, Chinese women-led VCs have ESG criteria for their investments and empower women and underrepresented entrepreneurs. This trend will expand to the climate sector.

## **3. Chinese investments in clean technology and other climate-friendly solutions are mainly directed towards mature markets, and the US in particular – meaning again there is more to be done to diversify such investment destinations**

When it comes to mature markets, they are key destinations for clean technology and other climate-friendly solutions investments from Chinese private-sector investors. The attractiveness of the North American market, and the US in particular, is also reflected in global climate investment trends. Emerging markets require more financing from private sector investors, especially in the fields of technology and other climate-friendly solutions. Additionally, there is a perception that emerging markets do not provide market incentives for Chinese private sector investment. Such perceptions are tied to short-term outlooks and unsustainably high expectations for returns on investment, often at the expense of societal concerns such as social justice and inclusivity.

## **4. There is therefore significant potential – for instance through the JEDI-lens being used in government policy and Chinese DFIs to influence both SOEs and private sector to do more climate action.**

Given the limitations already explained – in particular the lack of reliable data on global overseas climate flows and an agreed framework for analyzing climate investment, these findings suggest there is significant worth in continuing to track this data regularly and consistently.

<sup>66</sup> UNCTAD, 2022, Global Investment Trends Monitor, No.43, Available [here](#)

<sup>67</sup> United Nations Conference on Trade and Development, 2022, World Investment Report 2022, Available [here](#)

It is also critical to work to shape government policies and scale Chinese climate investment into where it is most needed and will be most transformational in terms of delivering green growth, for example African markets, and a key way of doing so will be to encourage diversity and a JEDI-lens, which is already happening.

The conclusions above imply the following recommendations, directed towards three main stakeholder categories: Chinese policy makers, public sector investors, and private sector stakeholders.

#### 4.2.1 RECOMMENDED ACTIONS FOR CHINESE POLICY MAKERS

##### **Create an enabling policy environment for promoting overseas climate investment**

Climate investment should be a significant component of climate change policies, and they should convey the government's medium- and long-term political prioritization. Climate policy should also consider diversity and inclusion in investments. The difficulty lies in creating a coherent vision for domestic and overseas investments, under which different investment strategies, guidelines and initiatives can be aligned and mutually supportive, which requires:

- Introduce top-down policy frameworks to elevate commitments and coordination of all participants, enhance international collaborations in overseas climate investment through effective and targeted policies
- Promote social inclusion, gender equity and diversity in policy frameworks and the development of pre-set requirements for impactful outcomes
- Improve the consistency between domestic and international climate investment to create conducive environment, specifically in terms of policy incentives, prudential regulations, rule of law, financing standards, and good governance
- Advocate for innovative, coordinated, green, open and shared sustainable development with host country, to create clear transition pathway towards a low-carbon, climate-resilient economy
- Further expand Qualified Domestic Limited Partnership (QDLP) pioneer program to encourage pilot overseas investment

##### **Leverage climate investment's catalytic role to drive industrial structure upgrade and low-carbon, high-quality growth in a global context**

China's investment will also play a pivotal role in enhancing energy structure, upgrading industrial structure, building smart cities with advanced urban planning and waste management, and achieving green, low-carbon, high-quality growth. Aside from general policy guidelines promoting Chinese investors to invest in climate-related projects, focus should also be geared towards diversifying investment portfolios, incubating new business models, and exploring opportunities to move up the sustainable value chain, crucially:

- Expand climate-related investment in low-emission projects such as solar, wind, and other renewable energies, energy-saving technologies, high-tech industries, and green and low-carbon sectors
- Integrate international capacity cooperation into outbound investment capital architecture and international trade operations

- Proactively communicate and engage with host-country to ensure investment plans in line with both parties' international commitments

#### 4.2.2. RECOMMENDED ACTIONS FOR PUBLIC SECTOR INVESTORS

To bring in private sector's resources, it is essential for public sector stakeholders to address significant constraints faced by private sector climate mitigation and adaptation fundings, specifically the (1) long investment time frame with uncertain IRR; (2) high upfront capital and transaction cost; (3) high investment risks (including political and governance risks); (4) lack of formalized and specialized investment channels with limited investment cases; (5) Limited knowledge and understanding of certain geographics.

##### **Enhance SOEs' fundamental roles in mitigating political and commercial risk, while providing technical assistance and expertise for private sector investors**

SOEs could effectively influence private sector investments by overcoming some of the existing obstacles and providing further incentives, which has become even more critical when private money withdraws from low- and middle-income economies due to growing financial turmoil and economic downturn:

- Ensure public-led investment partnerships with macro-level investors are additive and focus on long-term goals, through the use of strong regulatory frameworks
- Promote tailored investment approaches that address societal concerns such as social justice and inclusivity, and other social aspects such as culture, which varies from country to country
- Increase public-led investment in climate-related infrastructure, R&D and cutting-edge technologies to pave the way for private engagement
- Leverage strong risk-resistance capabilities to guide private capital to solve bottlenecks and implement effective risk prevention and control measures
- Further explore mixed-ownership reform to collaborate with private capital for co-investment

##### **Ramp up China-led DFIs and MDBs' engagement to increase private and other investors' appetite for investing in climate-related sectors**

China-led DFIs and MDBs could significantly boost the availability of pooled resources and knowledge across various organizations, and develop scalable blended financing facility to facilitate risk-sharing and provide incentives for private sector investors:

- Further explore innovative financing mechanism – to combine concessional finance from donors alongside DFIs' normal own investment vehicles and/or commercial finance from other investors to improve capital allocation and project bankability
- Help with setting agenda, crafting strategies and roadmaps, sharing global best practice, and convening stakeholders for climate investment
- Address data gap challenges by tracking climate investment data, building up climate investment thematic database and advocating for open data-sharing
- Offer relevant technical guidance, instruments, diagnostic tools, capacity building, and surveillance to facilitate climate investment



- Improve the disclosure and exchange of climate and environment-related information to enhance market transparency
- Develop partnerships and channel climate finance towards overseas financial institutions that can then have an impact on the ground

#### 4.2.3 RECOMMENDED ACTIONS FOR PRIVATE SECTOR STAKEHOLDERS

##### **Chinese private sector could take a more proactive, inclusive and diverse approach in outbound climate adaptation and mitigation investment**

The private sector constitutes the largest pool of capital resources that could be mobilized for climate change. In addition to investment, they could also provide a wide range of industry experience, financial acumen, innovative and technology to help control costs, enhance efficiency, and promote innovation in the battle against climate change. The private sector should be more intentional in its promotion of diversity within climate investing, as this will drive innovation and leverage solutions from communities most affected by climate change. By demonstrating intentionality in support of diversity, Chinese private sector stakeholders can embed the JEDI scope into their business and investment strategies and promote the representation of women, BIPOC and other underrepresented groups in investment management. Chinese private companies and investors have begun to step up their presence in overseas climate investment and overseas diverse-led climate investment, but there is more that they can do to mark themselves out, and further shift from a “reactive” to a more “proactive” investment approach, including:

- Leverage innovative financing mechanisms and a combination of investment instruments/vehicles (e.g., a combination of both acquisition and greenfield investment) to mobilize resources and hedge risks
- Recognize the importance of partnerships with existing stakeholders (including SOEs, DFIs and local partners) to co-invest or co-operate
- Embrace inclusion and diversity in corporate culture and business models to stimulate innovation and drive better decision-making
- Factor in the significance of cultural and societal differences between and within markets to ensure inclusion of gender dynamics during investment considerations
- Utilise investment approaches to invest in frontline communities and leverage alternative solutions they offer to better tackle climate change
- Create clear guidelines that guarantee the areas of impact expected ex-ante from climate investments, and guidelines that highlight what will not be invested in order to manage due diligence questions that may arise
- Highlight lessons learnt from mature market investments to prevent or minimise “earning at all costs” at the expense of the environment and other societal considerations – building *soft power* through impactful investments that prioritise long-term solutions over short-term gains
- Seek and establish cross-cultural and transnational relationships at an individual and corporate level for a more intimate appreciation of non-Chinese perspectives
- Seek opportunities to ‘link’ climate investments to existing Chinese business ideas and/or models to facilitate the scaling up of climate investments

- Deeper consideration of early-stage ventures in favour of more mature options to capitalise on unrealised growth opportunities, more so in times of global economic slowdowns where domestic investment opportunities are scarce or unattractive
- Prioritization of long-term gains over short-run returns on investment as a way of managing expectations, particularly in low- and middle-income countries (LMICs)

**Intermediaries are pivotal to build empowering climate-aligned investment ecosystem to encourage knowledge sharing, technology transfer, capacity building and commercial readiness**

Creating a high-functioning, empowering climate-investment ecosystem requires defining shared visions and priorities, building a coordinated and visible pipeline, and co-shaping an enabling community. Intermediaries, both domestic and international, are indispensable in this process, notably in:

- Advocate for increasing the flow of capital towards climate mitigation and adaption, and ensuring the resources are most effectively deployed
- Provide financial, commercial and legal advice on managing climate risk, capturing climate investment opportunities, and mainstreaming climate considerations into investment approaches
- Develop relevant standard, certification scheme, policy engagement and market intelligence
- Incubate and encourage start-ups and SMEs to accelerate the development of practical climate tech solutions
- Empower partner organizations with the tools and knowledge needed to navigate, influence and instigate changes
- Create awareness and encourage actions among relevant stakeholders about the opportunities and risks associated with climate change and net zero investing

While these clear conclusions and recommendations would be beneficial, it is important to note that this is just a first stage. A more complete picture of Chinese investment in overseas climate funds, as well as the evidence to encourage the use of a JEDI-lens will only be possible if data and analysis like this is regularized, and consistent, comparable global data is also provided, including through consistent definitions. Having conducted an in-depth analysis of Chinese climate investment, it is clear that JEDI-lens has a strong potential future in driving Chinese climate investment, especially from the private sector.