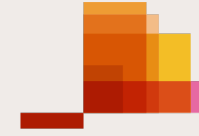




AIGCC
ASIA INVESTOR GROUP
ON CLIMATE CHANGE



pwc

Nature Risk in Asia Pacific Economies

Preliminary findings from the forthcoming report
Nature at a Tipping Point

Background

Economic production is reliant on nature

Healthy ecosystems provide:

- Clean air & water,
- Fertile soil,
- Pollination,
- Disease control, and more.

Increasing risk profile:

- Nature decline is at the fastest rate of any time in human history.
- The Asia Pacific's ecosystem health has declined 55% since 1970¹

Regulators are increasingly focusing on nature

Global frameworks:

- COP15's Kunming-Montreal Global Biodiversity Framework – signatory governments to ensure companies report nature exposures.
- The TFND provides best practice for reporting.

Asia's major trading partners, EU, UK & USA:

- EU Regulation on Deforestation Free Products (EUDR),³
- the UK Environmental Act on due diligence on forest risk commodities,⁴
- US Forest Act of 2023.⁵

Asia Pacific governments, including:

- Indonesian carbon trading scheme for forestry and land use,
- Singapore's carbon tax,
- Malaysia's tax incentives for reforestation and conservation.⁶

Refer to the full report for methodology, background, expanded case studies and more.

1 WWF, 2022, A Deep Dive into the Living Planet Index
 2 PwC Malaysia, Centre stage: Budget 2024 overview, 2023.
 3 Regulation (EU) 2023/1115 on deforestation-free products
 4 UK DEFRA, Due diligence on forest risk commodities, 2020.

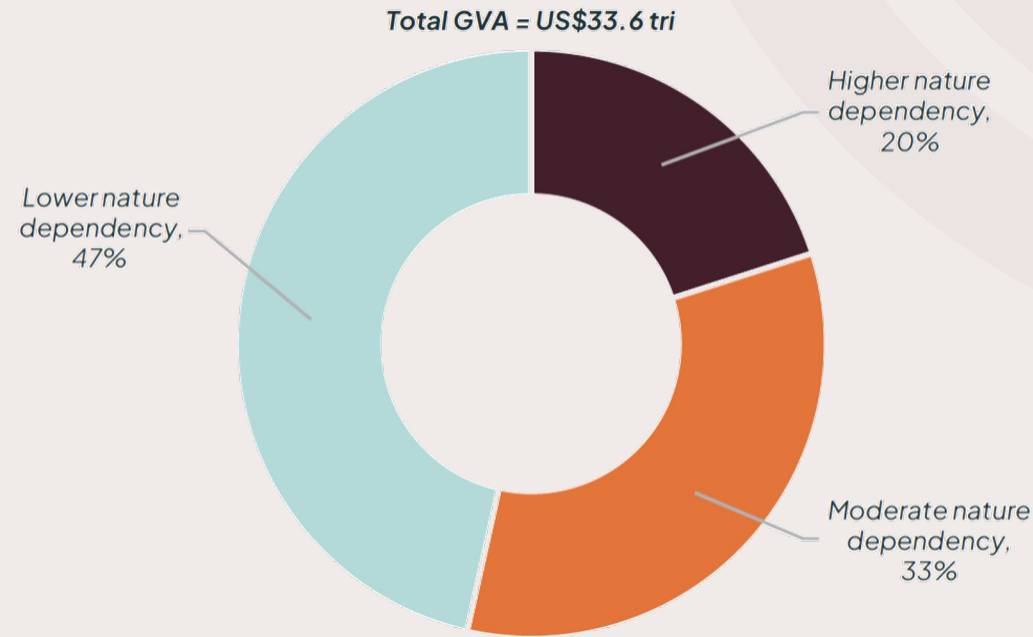
5 Library of Congress, S.3371 – FOREST Act of 2023, 2023
 6 PwC Malaysia, 2023, Centre stage: Budget 2024 overview.

Key Insight 1

Nature Dependency in the Asia Pacific

53% of the Asia Pacific’s gross value added has a higher or moderate direct dependence on nature.

This includes reliance is on fertile soils, clean water, pollination, and climate stability.



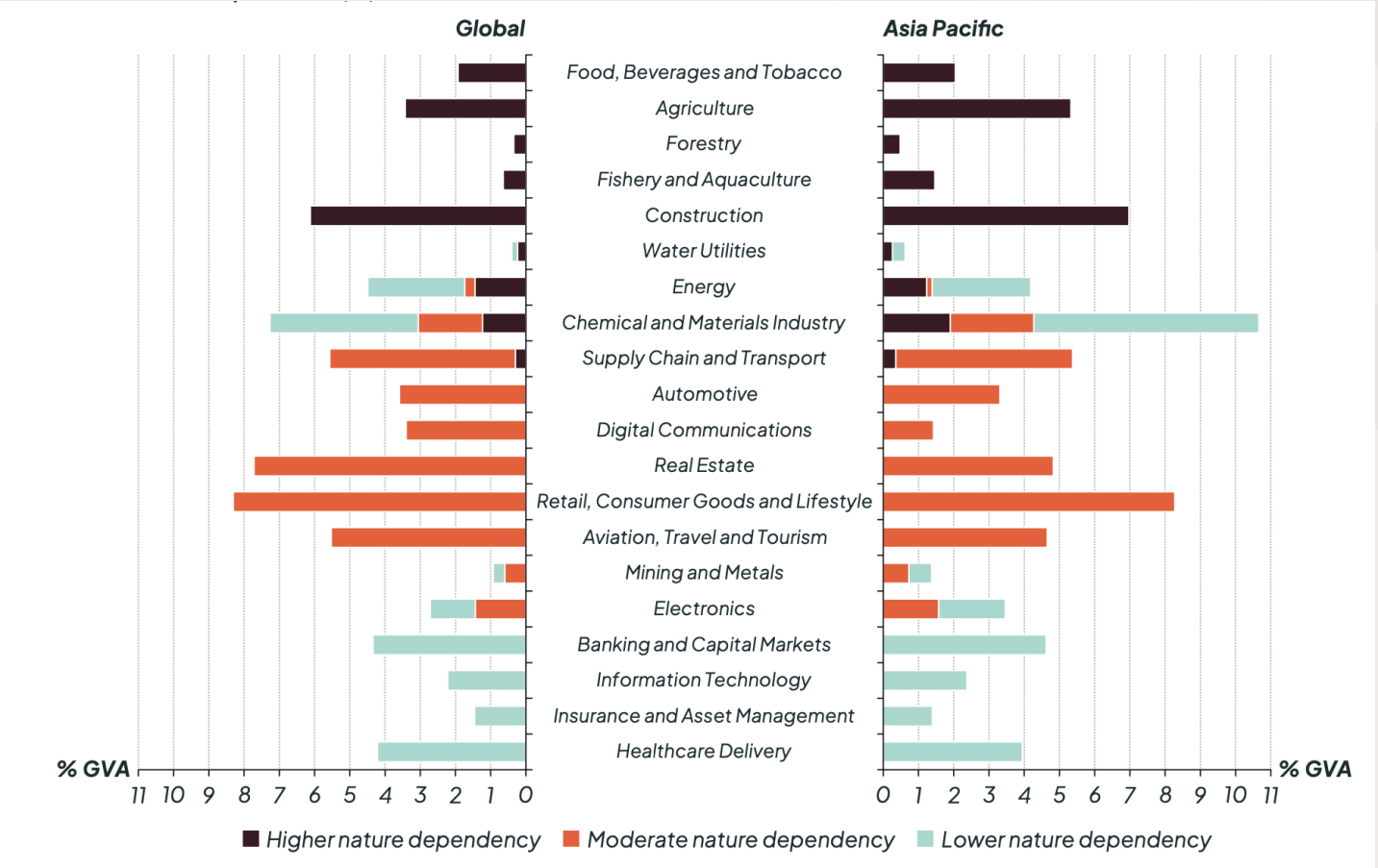
At 20%, the Asia Pacific’s rate of “Higher” nature dependency sector is higher than the global rate of 16%

Refer to the full report for methodology, background, expanded case studies and more.

Key Insight 2

Sectors' Exposure

Agriculture, construction, food & beverage, fisheries and aquaculture have higher dependency.



Refer to the full report for methodology, background, expanded case studies and more.

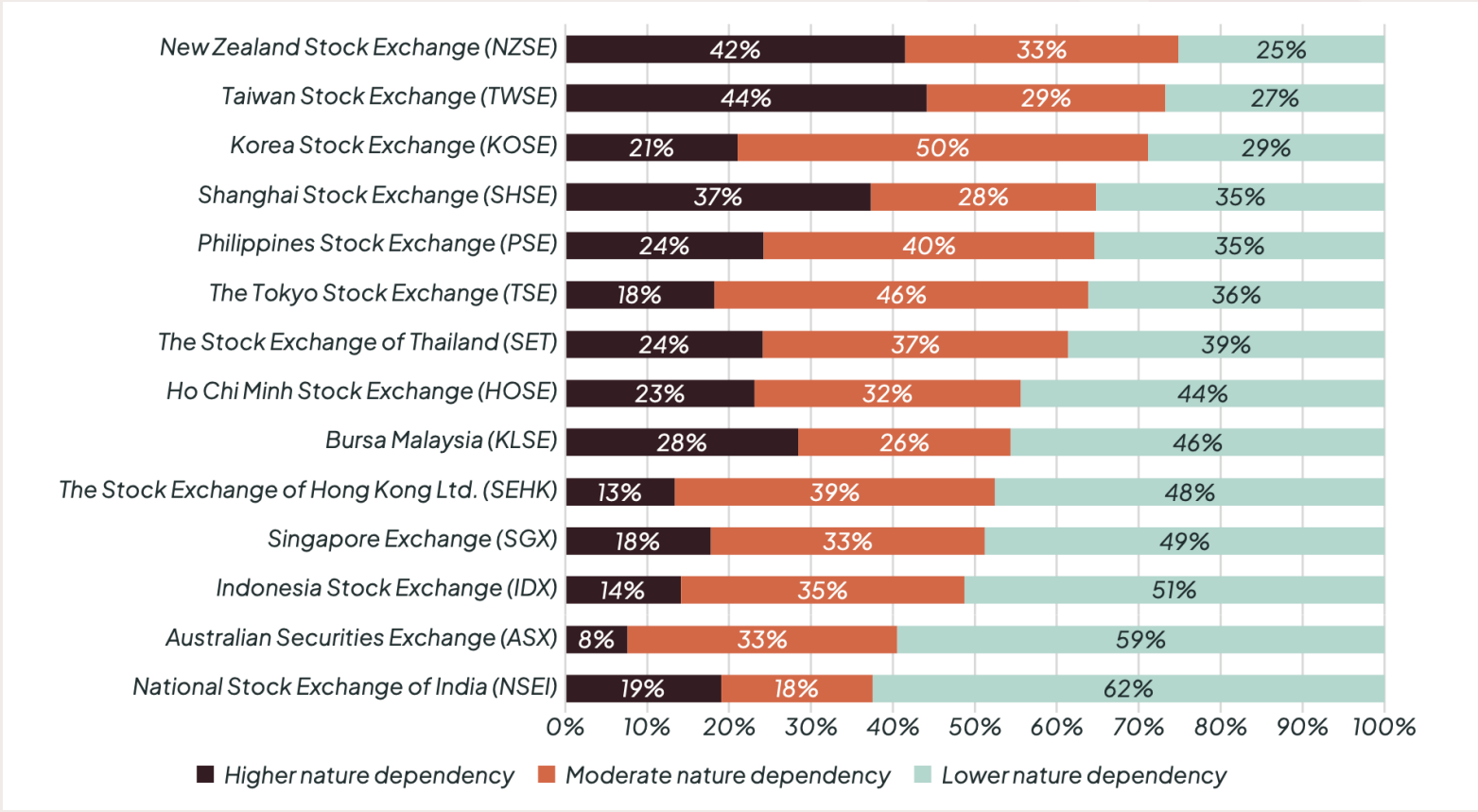
Note: Asia Pacific territories covered: Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, Singapore, South Korea, Thailand, Taiwan, Vietnam. 2) Sectors in this chart exclude other unassigned WEF industry sectors.
Sources: EXIOBASE, ENCORE database, PwC analysis.

Key Insight 3

Capital Market Exposure

58% of regional market capitalisation is either moderately or highly directly dependent on nature.

11 out of the 14 Asia Pacific stock exchanges have more than 50% of market cap with higher or moderate direct dependency on nature.



Refer to the full report for methodology, background, expanded case studies and more.

Investor Case Study 1 (part 1) AM One

Japan headquartered asset manager
US\$460 billion AUM

Pilot Analysis of Equity Portfolio For Nature Risk

Using the LEAP Approach: Locate, Evaluate, Assess, Prepare, to analyse dependencies and impact.

Locate – Example Interactions:

Significant Potential Deforestation Risk

- Palm oil from Indonesia's Kalimantan province
- Soybeans from Brazil's Cerrado

Significant Water Dependency

- Five major Japanese companies with operations in high water stress areas

Evaluate – Dependencies:

40% of analysed securities potentially highly or very highly dependent on ecosystems. Particularly water, habitats, biology and genetics

90% of *Japanese* equities had potentially highly or very highly dependent on at least one ecosystem.

Assess Risks & Opportunities:

Diverse & Wide Risks

Significant Opportunities

Nature-positive transitions, including circular-economy , resource efficiency, regenerative agriculture.

60%+ in-scope equities in sectors related to innovations that could be nature-positive

Refer to the full report for methodology, background, expanded case studies and more.

Investor Case Study 1 (part 2) AM One

Japan headquartered asset manager
US\$460 billion AUM

Pilot Analysis of Equity Portfolio For Nature Risk

The Prepared Response

Prepare to Respond:

Setting Goals and Action Plans

Using the Global Biodiversity Framework (introduced at COP15)

Disclosures

AM one will include biodiversity initiatives in sustainability report, using Taskforce for Nature related Financial Disclosures (TNFD) framework.

Refer to the full report for methodology, background, expanded case studies and more.

Investor Case Study 2 (Part 1) Manulife

Asset manager active in Asia
US\$200+ billion AUM

Integrating Nature Risk Into Decision-Making

For equity and fixed income assets.

Type of Risk	Materialisation	Impact on Companies
Physical Risk to ecosystem 'services', from <ul style="list-style-type: none"> • Pollution • Invasive species • Etc.. 	Decline in <ul style="list-style-type: none"> • Air quality • Water security • Land productivity • Pollinator health • Etc... 	<ul style="list-style-type: none"> • Decreased production • Supply chain disruption • Price volatility • Reduced land value • Loss of revenue
Transition Risk As society responds to loss of nature	<ul style="list-style-type: none"> • New policy and regulation • Technological obsolescence • Adaptation of business operations • Shift in consumer and investor preferences • Etc... 	<ul style="list-style-type: none"> • Technology CapEx • Additional reporting • New purchaser requirements • Stranded assets • Etc...
Liability & Reputation Risk	<ul style="list-style-type: none"> • Litigation • Payouts and fines • Insurance costs • Reputational damage 	<ul style="list-style-type: none"> • Negative investor sentiment • Loss of market share • Loss of License to Operate • Ratings downgrades

Refer to the full report for methodology, background, expanded case studies and more.

Source: CISL⁶

⁶ Cambridge Institute for Sustainability Leadership (CISL), 2022, Integrating Nature: The case for action on nature-related financial risks

Investor Case Study 2 (Part 2) Manulife

Asset manager active in Asia
US\$200+ billion AUM

Integrating Nature Risk Into Decision-Making

For equity and fixed income assets.

Investment Management Actions:

Asset Allocation &
Selection

Investment Analysis &
Research

Stewardship

Target Outcomes:

Value Retention

Better Financial
Performance

New Market
Opportunities

Refer to the full report for methodology, background, expanded case studies and more.

Investor Case Study 3 (Part 1) MFS Investment Management

Asset manager active in Asia
US\$660+ billion AUM

Nature Risk Assessment: Food Industry supply chain

Assessing and managing nature-related risks in portfolio companies.

Step 1: Identify high-risk commodities in supply chains and understand their impacts on nature

	Soil degradation	Pollution	Water scarcity/ salinization	Biodiversity loss	Emissions from land use
Beef	High	High	High	High	High
Rice	High	High	High	High	High
Corn	High	High	High	Medium	Low
Sugarcane	High	High	High	Medium	High
Palm oil	High	Medium	Low	High	High
Coffee	High	Low	High	Medium	Low
Cocoa	Medium	High	Low	Medium	Low
Pork	Low	High	Low	Low	High

Step 2: Map the supply chain to natural capital hot spots and local resource stress

- MFS developed an internal natural risk framework. Material risks are geographically mapped onto supply chains.
- Framework is used to analyse the emissions reduction pathway of companies in addition to physical and operational risks to supply chains.

Refer to the full report for methodology, background, expanded case studies and more.

Investor Case Study 3 (Part 2) MFS Investment Management

Asset manager active in Asia
US\$660+ billion AUM

Nature Risk Assessment: Food Industry

For equity and fixed income assets.

Step 3: Identify areas of focus for stewardship efforts based on high-risk and high-impact commodities

Material Impacts

Based on

- types and scale of agricultural commodities
- Impact from production location and approach

Additional Factors, e.g.:

- Manufacturer's relationships with upstream suppliers
- Exposure to EU Deforestation Regulation (EUDR)

Target Outcomes: Develop Engagement Strategies Focussing on

Disclosure around risk management and governance

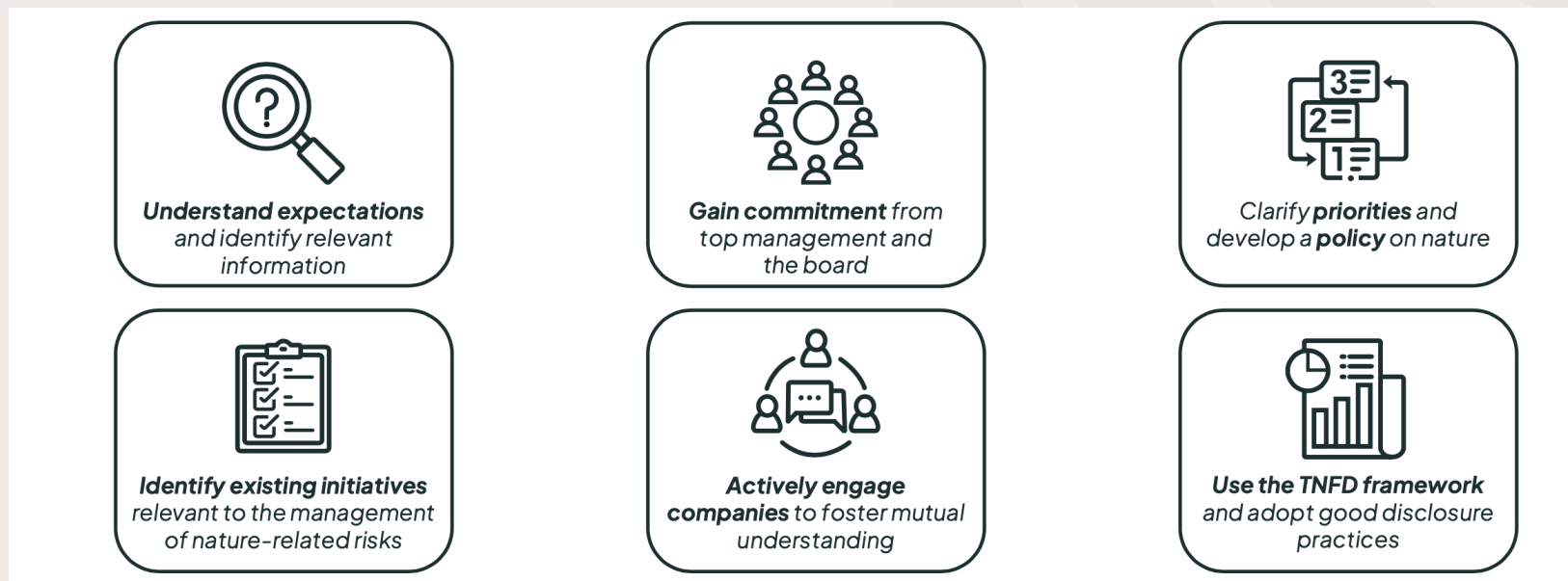
Improve supply chain resilience

Support long-term financial returns.

Refer to the full report for methodology, background, expanded case studies and more.

Investor Checklist

To help assess and manage nature-related risk



The Upsides

Look beyond risks to nature-related opportunities

Understanding risks can help investors explore opportunities to support nature restoration and regeneration, through:

- Adaptation and innovation,
- Transformation of business models and investments.

Refer to the full report for methodology, background, expanded case studies and more.

The Take Aways

53% of Asia Pacific's GVA has higher or moderate direct dependency on nature, highlighting the significance of nature risk.

The risks cannot be ignored or fully diversified from. They must be addressed.

Sectors which have higher dependency on nature include agriculture, construction, food & beverage and fisheries & aquaculture.

The actions in this report will help investors increase their financial resilience and improve transparency and disclosures in key sectors.

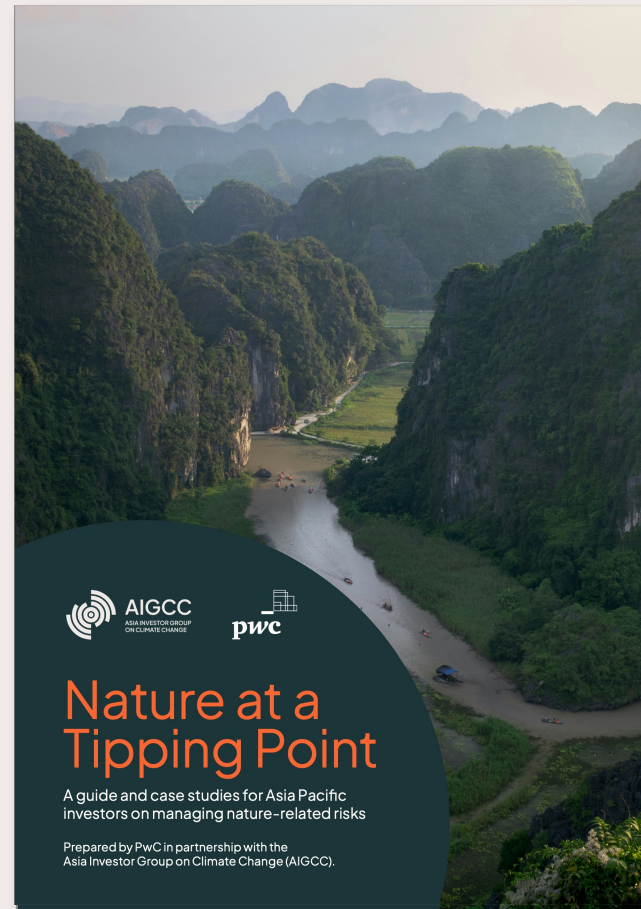
They leverage existing nature risk initiatives, helping investors to establish a knowledge base, access best practice and avoid duplicating work.

Addressing nature risk will support the flow of capital towards companies and projects that can support, and thrive in, a nature positive future.

Refer to the full report for methodology, background, expanded case studies and more.

Expanded Report Available Soon

Sign up to the AIGCC mailing list to receive the expanded report as soon as it is released.



- Expanded Analysis
- Investor Case Studies
- Company Case Study
- Investor checklist
- Methodologies

aigcc.net

Refer to the full report for methodology, background, expanded case studies and more.



AIGCC is the leading network of institutional investors in Asia mitigating climate risks and seizing the opportunities of net zero.

Together with our members, we activate investors, encourage high-emission businesses to transition to net zero, and advocate for policy that unlocks capital for climate solutions.

AIGCC connects members to resources, networks and forums to accelerate their climate practice. We also advocate on their behalf to business and political decision makers. Our members include some of Asia's largest pension funds, fund managers and other financial services providers.

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