

ARE's Study Reveals Urgent Need for Transition to Alternative Protein to Ensure a Climate-Safe Scenario in Asia

- *To align with Paris Agreement targets and a climate-safe¹ outcome in Asia, the region's production and consumption of protein needs to transition from business as usual.*
- *Findings demonstrate a minimum of 30-90% market share for alternative proteins is essential by 2060 to bring GHG emissions within climate-safe parameters in 10 Asian markets. This is on top of best case mitigations for industrial animal protein production, which must peak by 2030, or sooner to contribute to climate-safety.*
- *Asian banks, food companies and governments must help to enable the Protein Transition by integrating and scaling alternative proteins into sustainable business strategies and lending frameworks to most effectively deliver protein security, climate-safety and resilient business.*

SINGAPORE, 3 July 2023 – Asia Research and Engagement (ARE) has released a groundbreaking report on greenhouse gas (GHG) emissions related to protein consumption and production across the ten largest markets in Asia, including China, India, Japan, Korea, Vietnam, and Indonesia. Titled 'Charting Asia's Protein Transition', the landmark study has shed light on the significant impact of animal protein production on greenhouse emissions and modeled the pathways needed for protein security and climate safety in Asia, paving the way for a more sustainable, healthy and resilient food system.

The report revealed that certain mitigation measures are necessary to ensure climate-safety by 2060. This requires a market share of alternative proteins ranging from 30% to 90% (varies across markets studied), alongside eliminating deforestation among other mitigation actions with industrial animal production – irrespective of market variations in the consumption patterns and projected trends across the ten markets studied.

Another crucial component is the need to peak industrial animal protein production in these markets by 2030 or sooner. The report also spotlights that meat and seafood consumption per capita is excessive in several markets, often more than double the EAT-Lancet commission recommendations.²

"We are faced with a stark reality whereby this study demonstrates that the business-as-usual approach, even with generous mitigation measures modeled, will not lead to a sustainable future. The transformation of the protein system is not just a choice, but one that we need to embrace if we are to achieve the targets outlined in the Paris Agreement, along with many other sustainability targets" said Kate Blaszak, Director of Protein Transition for Asia Research and Engagement (ARE). "For example, we are witnessing environmental risks, animal exploitation, antimicrobial resistance, and disease outbreaks in these countries, driven by the rapid intensification of animal production. This proves that the transition to responsible but limited animal production, coupled with scaling alternative proteins, including plant-based, fermentation-derived and future cultivated options, is crucial for achieving climate-safety."

¹ A climate safe scenario is developed by projecting Science Based Target initiative emission intensities and 74% reduction from 2020 onwards for a situation well below a 2 degrees increase.

² This refers to 26kg of meat and seafood per person on a yearly basis.

About the Study

This study examined various factors to assess their impact on and from protein consumption of animal sources. These factors include emission intensities, production methods, as well as consumption-related aspects. Notably, changes in GDP per capita, age demographics and population were identified as the most significant determinants influencing the volume of meat, dairy, seafood and egg consumption.

Three key scenarios were examined in each of the markets studied: Business-as-Usual, Best Case Mitigation, and then Protein Transition. Across all the markets analysed, eliminating deforestation, peaking industrial production and scaling alternative proteins were identified with the highest mitigation potential which underscores their significance in achieving substantial progress towards sustainability.

The study employed the potential of various alternative proteins as a protein security and mitigation measure. Plant-based³ and fermentation products were identified as needing to scale from now, plus cultivated options, likely as hybrid products commercially after 2030. The capital expenditure for facilities to scale these alternative proteins were calculated for the biggest market, China, and found to be less than 3% of the value of capex typically spent in the Chinese animal production industry.

These insights emphasize the importance of prioritising protein diversification and limiting industrial animal production, as transitional actions towards achieving both protein security and climate safety.

Moving Forward

Achieving climate safety in the protein system requires transformation, as mitigating emissions from industrial animal systems is clearly insufficient. Food companies, investors and governments need to work towards the goal of *Protein Transition*, which requires responsible animal production and scaling alternative proteins. Some corporate case studies of Asian food companies diversifying protein are also included.

This research supports the Asia Protein Transition Platform, a collaboration between ARE and institutional investors representing around USD3tn, offering various tools to support the companies in their protein transition and related banks.

Climate safety requires enabling policy and corporate strategy to limit industrial animal production by 2030, if not sooner. This integrates recommendations and existing consumer leaning towards reducing meat and seafood consumption in several Asian markets, which also reduces health risks. In addition, limiting industrial animal production conveys other benefits, including helping to preserve land, biodiversity, natural capital, antibiotics, while reducing pollution, and other negative impacts.

By prioritizing alternative proteins as an addition and substitute for some animal protein, this study emphasizes the transition pathway to a more sustainable and healthy food system while ensuring the well-being of current and future generations.

³ Asian diets traditionally include many plant-proteins, including tofu, pulses and beans, which may certainly provide a good source of low cost, available and efficient protein source especially in certain markets. However, these are not calculated as alternative proteins as they do not primarily function as meat substitutes in Asian food cultures.



Note to Editors: Refer to the report on key findings for more details.

About ARE

ARE's mission is to catalyse corporate change through investor backed engagement to achieve our vision of a sustainable and compassionate Asia for future generations. We bring leading investors into dialogue with Asian listed companies to address sustainable development challenges. Our independent research, investor network, and engagement expertise provide corporate leaders and financial decision-makers with actionable insights on sustainability risks and opportunities. Our main themes are energy transition and its financing, protein transition, and sustainable real estate. ARE is a social enterprise headquartered in Singapore and was founded in 2013.

About the Protein Transition programme

This research supports the [Asia Protein Transition Platform](#) which launched in 2022 in collaboration with founding investor members, evolving from the prior ARE Sustainable Protein programme since 2017. The 2030 vision, scope and investor expectations of sustainability are detailed in various tools available for download.