

SUBMISSION

Submission to the Department of Foreign Affairs and Trade

Submission to the New Roadmap for Australia's Economic Engagement with India

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The Australian Academy of Technological Sciences and Engineering (ATSE) is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together Australia's leading thinkers in applied science, technology and engineering, ATSE provides impartial, practical and evidence-based advice on how to achieve sustainable solutions and advance prosperity.

The New Roadmap for Australia's Economic Engagement with India is an opportunity for Australia to strengthen relations with India and diversify our trade and to support our respective economic security interests. ATSE would support a strategic, long-term approach to building trade and investment networks. Ongoing partnerships would be desirable in areas of mutual interest including clean energy, agriculture and water, aerospace engineering and education building on existing ties between Australia and India.

ATSE makes the following recommendations for the New Roadmap for Australia's Economic Engagement with India:

Recommendation 1: Take a long-term approach to initiatives under the Roadmap for Australia's Economic Engagement with India.

Recommendation 2: Expand advice provision to Australian businesses working with India, and vice versa.

Recommendation 3: Strengthen trading partnerships for clean energy products and services.

Recommendation 4: Foster innovation partnerships for mutual benefit in agriculture, food and water management as a foundation for trade.

Recommendation 5: Facilitate collaboration on aerospace and aviation technologies.

Recommendation 6: Prioritise continued education sector ties between Australia and India.

Embedding a long-term vision into the Roadmap

ATSE would support a strategic, long-term approach to building trade and investment networks. There are significant opportunities to build trade with India, but the trading environment in India presents some challenges and risks for Australian companies. Critical relationship building can be supported by ongoing, proven partnerships and programs. Through ATSE's International Strategy Group, ATSE has developed relationships with key international science and engineering leaders and organisations. Additionally, many ATSE Fellows have experience with research and commercial activities with India. ATSE has elected several Foreign Fellows in India from the pharmaceutical and agrifood industries. These connections could be leveraged to establish initiatives under the Roadmap. The relationships that programs create have the potential to foster a stakeholder network to strengthen bilateral engagement.

It is important that any associated grant programs are consistent, as possible, in duration and scope, with a strategic, long-term approach to building trade and investment networks. The Roadmap can also extend upon existing programs that are showing promise. In the STEM sector, relevant programs include ATSE's [Global Science and Technology Diplomacy Fund](#), which will build strategic international research and industry collaboration on science and technology with key international partners; and the [CSIRO India Australia RISE Accelerator](#), which has a unique approach of supporting Indian and Australian technology startups in fast-tracking their cross-border impact, with a focus on environment and climate technologies.

On the Australian side, opportunities can be realised through engagement with stakeholders that provide access to networks (including ATSE, as well as organisations such as Engineers Australia, Ai Group, and the Australian Industry & Defence Network). It is important that partnerships are two-sided with engagement of appropriate Indian counterparts – an Australia-centric approach risks the development of functioning commercial, scientific and technological partnerships.

As part of this long-term approach, it will be important to address systemic barriers to trade and investment. The free trade agreement has addressed one barrier, but the legal and regulatory environment in India is complex. There is a need to support and advise Australian businesses to navigate this market. Similarly, Indian businesses would benefit from guidance on operating in Australia. Austrade and the state-based Trade and Investment Commissions provide some support, which could be extended upon.

Recommendation 1: Take a long-term approach to initiatives under the Roadmap for Australia's Economic Engagement with India.

Recommendation 2: Expand advice provision to Australian businesses working with India, and vice versa.

Fostering renewable energy trade

There are many opportunities for Australian industries to diversify export strategies by seeking to include or supply Indian markets.

As noted in the previous 2022 Roadmap, there are mutual interests in energy generation. There is an opportunity for Australia in India's forecast increased demand for energy, along with the need to decarbonise energy generation. India's goal to decarbonise energy by 50% and instal 500GW of net zero energy generation capacity by 2030, as announced at COP26 in 2021, telegraphs their ambition to decarbonise.

Making renewable energy trade a centrepiece of the new Roadmap, and exploring partnerships to support this activity, can unlock benefits for both Australia and India. With both nations having an interest in solar photovoltaics, it will be a strong area for mutual collaboration. Both nations also face similar challenges including large geographic size and the need to provide energy and water infrastructure to rural and remote communities.

With the Future Made in Australia industrial policy announced in April 2024, energy trade with India can be seen through a new lens – with India as a destination market for energy products as well as a partner in the value chain. [Export opportunities for Australia](#) to India include the critical minerals necessary for the energy transition, as well as green energy products such as hydrogen, ammonia, and green metals (including hot briquetted iron as an input to India's green steel industry). Exporting energy services to improve efficiency, as highlighted in the previous strategy, will continue to be an opportunity.

There is also an opportunity for India to support Australia's decarbonisation efforts. Exports from India include solar panels, wind turbines, batteries, hydrogen fuel cells, and steel products. While there is a desire to increase sovereign capability under the Future Made in Australia initiative, importing can be more cost-effective and diversifying import sources can provide additional security. India's manufacture of these products can also be complemented by Australian exports of critical minerals.

Trade opportunities in energy and other sectors will be bolstered by renewed efforts by India to optimise trade policy settings, while noting that there are complexities in the alignment between national and state policies in India. Dialogues between both nations and the continued presence of DFAT in India will support the continued development of favourable trade policy. This can include initiatives to support energy products such as a shared emissions accounting framework, and a bilateral guarantee of origin scheme for renewable energy products.

Ongoing engagement will be important for scaling up renewable energy trade. For example, the Australia India Institute recently hosted the inaugural [Australia India Renewables Dialogue](#) in Sydney, discussing key areas of bilateral interest including sharing experiences between Indian and Australian business leaders, considering how both nations can complement each other in delivering clean energy, and investigating how both nations can bring together experts to discuss issues of mutual interest. Relationships built through such dialogues will enable growth in the clean energy sector for both nations.

Recommendation 3: Strengthen trading partnerships for clean energy products and services.

Partnering on innovation in agriculture, food and water management

With deep expertise across agricultural sciences and water management, Australia is well-placed to work with India in adapting solutions and technologies for its context. Agriculture, food and water management are of interest to India as it seeks to support a rapidly growing population.

There are opportunities for Australian scientists and engineers to work with Indian counterparts to develop and translate technological solutions for water management. ATSE, through our network of leading engineers, scientists and technologists and our convening power, can act as a gateway to collaboration. Our recent essay series on the [Murray-Darling Basin](#) showcases expert perspectives on water management in the Australian context. This collection could provide a starting point for a dialogue.

The Australia-Vietnam Partnership for Climate-Smart Agriculture [Australia-Vietnam Partnership for Climate-Smart Agriculture](#), supported by DFAT, provides a good practice example for innovation partnerships. The multi-stakeholder platform will facilitate partnerships to improve rice and shrimp production with respect to adapting to climate change and reducing environmental impacts. Leveraging Australian expertise and forming lasting stakeholder relationships will be key to driving mutual benefits.

A climate-smart agriculture initiative between Australia and India could utilise technologies for spatial analysis and forecasting of weather and input, produce and carbon markets; and develop knowledge platforms for innovation sharing.

Sharing Australia's expertise in relation to agriculture and water can provide a foundation for enhancing trade in services. Through increased linkages, there is also capacity to boost Australian agricultural exports to India, such as wool and fresh fruit.

Recommendation 4: Foster innovation partnerships for mutual benefit in agriculture, food and water management as a foundation for trade.

Collaborating to boost aerospace and aviation innovation

Aerospace and aviation represents another area of mutual strength and interest. Promoting greater cooperation and collaboration would be of strategic benefit and could lead to commercial outcomes, with appropriate industry engagement.

Both Australia and India have significant capabilities in this sector including all aspects of aerospace vehicle design, manufacture, assembly, testing, certification, operations and maintenance. Opportunities for growth and partnership exist for substantially greater cooperation on research, development and commercialisation of dual-use technologies applicable to civil and military aerospace vehicles including autonomous flight vehicles, advanced air mobility, advanced composite materials and additive manufacture, hypersonics, space launch vehicles and satellites, and fleet operations and sustainment. It is noted that any activities must be compliant with the new Defence Trade Controls regime which places further restrictions on the transfer of dual-use technologies in order to support AUKUS implementation.

The Roadmap can facilitate opportunities to explore potential collaborations in the aerospace and aviation sector. Australian public sector organisations such as the Australian Space Agency, CSIRO and the Defence Science and Technology Group would be key stakeholders alongside industry leaders.

Recommendation 5: Facilitate collaboration on aerospace and aviation technologies.

Continuing Australia's education export

India remains a key market for the export of Australian higher education services. There is strong demand for high-quality Australian education for international students. It is important that the Roadmap recognises this and interfaces with reforms in the higher education sector to ensure policy settings remain appropriate. For example, the recent increase in visa fees for international students has trade implications. Further changes to international education should be carefully considered for not just economic but also strategic outcomes.

The export of education services also provides a fertile avenue for undertaking research and development partnerships, leveraging and strengthening connections between Australian and Indian universities. Sectors discussed above, such as clean energy and agriculture, will require research partnerships to tailor solutions to the Indian context. Engagement between universities supports partnerships to go beyond applying Australian innovation, instead engaging in long-term collaborative innovation for mutual benefit.

Recommendation 6: Prioritise continued education sector ties between Australia and India.

ATSE thanks the Department of Foreign Affairs and Trade for the opportunity to respond to the New Roadmap for Australia's Economic Engagement with India consultation. For further information, please contact academypolicyteam@atse.org.au.