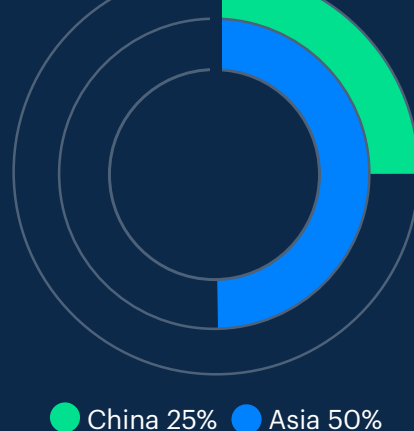


As the chemicals industry in Asia moves towards a more sustainable future, what are the challenges?

Carbon emissions

The chemicals industry in Asia, as elsewhere, is recalibrating to meet net zero goals. Asia accounts for over 50% of global carbon emissions (China alone accounts for over 25% globally) and is home to several of the most emissions-intensive global chemical producers.



The majority of countries in the region are aiming for carbon neutrality by 2050, although China is targetting 2060 and India, 2070. But the chemicals industry in Asia faces unique challenges in addition to the global pivot towards a circular economy and ‘reuse, reduce, recycle’.

The three key challenges in Asia

1. Balancing the needs of a fast-growing population and rapid urbanisation with net-zero emissions targets

Asia’s incremental consumption of plastics is expected to total 60m tonnes between now and 2032. As its population grows from 4.7bn to a projected 5.25 billion by 2055, governments and producers will need to manage demand for new products and resources in a sustainable way.

With India now the most populous country in the world, and with a population expected to peak in the 2060s, its relatively low per capita plastics consumption (18kg per year) is likely to continue growing for many years. (For comparison, that figure is c.100kg for the US and UK.) Demand for chemicals in India is expected to triple by 2040.

2. Reducing emissions in a region still heavily reliant on fossil fuels

Coal and oil are by far the largest fuel sources throughout Asia, accounting for 77% and 83% of energy consumption in China and India, respectively. Chemicals/petrochemicals are the third-largest industrial subsector in terms of direct CO2 emissions. Given that half of the subsector’s energy input is consumed as feedstock, finding alternative sources of energy poses a unique challenge for chemicals producers in Asia.

3. Coordinating efforts internationally, given that current environmental regulations, legislation and targets vary considerably between countries

Single-use plastics are still permitted for use throughout Asia, and post-consumer recycled content (PCR) is not yet mandatory in packaging in any Asian country. Net zero requires a cohesive approach, but Asia lags far behind the EU.

Tangible commitments

Asian leaders are committed to taking concrete action to tackle climate change, and the pace of change is increasing. By 2030, Japan aims to reduce greenhouse gas emissions by 46%; India by 30-35%; Malaysia by 45%; Singapore by 36%, South Korea by around 27%; Taiwan by 50% and Thailand by 20%. China is aiming for emissions to peak by 2030.

Target reduction in greenhouse gas emissions by 2030

Japan	46%
India	30-35%
Malaysia	45%
Singapore	36%
South Korea	27%
Taiwan	50%
Thailand	20%

Initiatives are already underway, e.g. in Thailand, the chemicals industry is collaborating with PPP Plastics and the Alliance to End Plastic Waste (AEPW) on a project to develop product prototypes, new ways to reuse plastics and prevent those plastics from leaking into the environment. A code of practice is also being developed for the control of volatile organic compound (VOC) emissions from chemical industrial processes.

Conclusion

The chemicals industry in Asia is committed to a sustainable future and the agenda for change is gathering momentum. While the challenges are significant, given the international desire for collaboration and the targets in place, the regulatory and trading landscape across the region will be completely transformed by 2030.

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