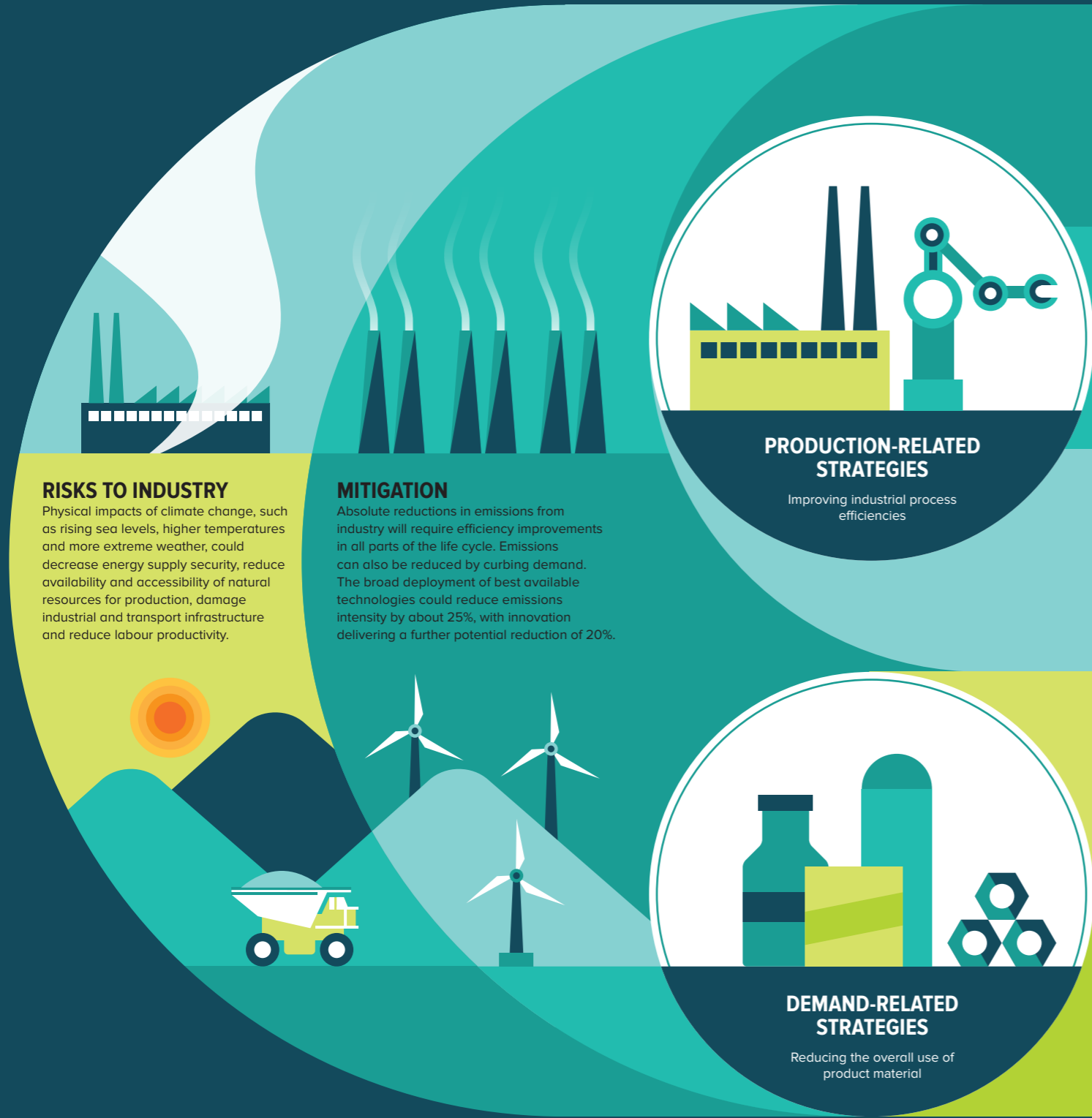


Risks and Opportunities for Extractive and Primary Industries

Climate change is likely to affect many aspects of natural resource exploration and extraction, and the production of industrial commodities. Investments necessary for adaptation and mitigation measures are in many cases cost-effective.

CASE STUDIES

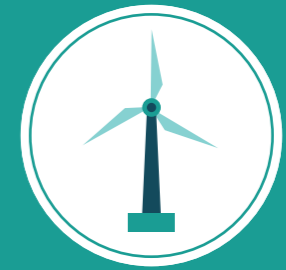


RISKS TO INDUSTRY
Physical impacts of climate change, such as rising sea levels, higher temperatures and more extreme weather, could decrease energy supply security, reduce availability and accessibility of natural resources for production, damage industrial and transport infrastructure and reduce labour productivity.

MITIGATION
Absolute reductions in emissions from industry will require efficiency improvements in all parts of the life cycle. Emissions can also be reduced by curbing demand. The broad deployment of best available technologies could reduce emissions intensity by about 25%, with innovation delivering a further potential reduction of 20%.



EMISSION EFFICIENCY
Reduced emissions per unit of energy used



MINING
Switching from diesel-powered machinery to low-carbon energy sources is an important GHG mitigation strategy for this sector.



ENERGY EFFICIENCY
Improving the ratio of energy consumption to production of materials



CEMENT
Carbon dioxide (CO₂) savings of 40% have been reported on projects using 'ultra high-strength' concrete.



MATERIAL EFFICIENCY
Reducing the amount of raw material needed to create a product



CHEMICALS
In the Netherlands, material efficiency measures in plastics manufacture could halve emissions associated with plastic packaging.



PRODUCT-SERVICE EFFICIENCY
Using a product for longer and more intensively



METALS
Modular product designs within the aluminium sector allow longer product lives and so drive an overall reduction in demand for new material.



DEMAND REDUCTION
Reducing overall demand for new product materials, by changing consumption patterns



PULP AND PAPER
Reducing paper weight for newspaper and office use could cut paper demand by 37%. Increased recycling, printing on demand, removing print to re-use paper, and substitution by e-readers could also reduce demand.