

Cheaper. Cleaner. Unstoppable.
Clean technologies that are delivering for the climate
UNEP Policy Brief

- Global warming is intensifying in scale and impacts. But positive tipping points are emerging as a counterforce to climate breakdown – signalling that the global economy may be closer to decarbonisation than often assumed.
- A positive tipping point occurs when a clean technology, policy or behaviour becomes more affordable, competitive and acceptable than the polluting alternatives. Such tipping points have been passed or are approaching across energy, transport, buildings and food systems.
- The 2026-2030 period is a critical window: decisions made now will shape whether clean solutions scale fast enough to meet climate and development goals.
- Positive tipping points typically do not occur in isolation; they reinforce one another, creating a systemic domino effect. Progress in one area, such as battery technology, can reduce costs for renewable grid storage and clean transport and other applications, accelerating low-carbon electrification across the entire economy.
- With renewable energy increasingly being seen as insulation against global fuel shocks, solar power now cheaper than new coal and natural gas in most of the world and electric vehicles (EVs) crossing affordability thresholds in leading markets, uptake of such technologies is booming.
 - Since 2015, over 50 per cent of global annual power capacity additions have come from renewables, and over 75 per cent since 2020.
 - Renewables are predicted to be the top source of electricity generation by 2026.
 - In 2025, EVs accounted for over a quarter of global new car sales, compared to only 3 per cent in 2019.
 - Norway has demonstrated that decisive policy can shift new car sales toward electric models; by 2025, 96 per cent of new car sales were EVs. In Africa, Ethiopia is leading with EVs making up 60 per cent of new sales. In Latin America, Uruguay leads with a 27 per cent EV sales share.
- While renewable energy has already crossed a positive tipping point in many markets, passive and nature-based cooling systems demonstrate positive tipping point potential, driven by rising heat risks, falling costs and clear economic returns.
 - Combined passive measures such as shading, reflective surfaces, insulation and ventilation can deliver 6-9°C reductions in indoor temperatures.

- Passive cooling in buildings delivers long-term energy savings, with payback periods ranging from around 2 years for external shading to around 14 years for green roofs.
- Reducing food waste is one of the fastest and most effective ways to cut greenhouse gas emissions while improving food security and conserving natural resources. With food systems responsible for around 30% of global emissions and a third of all food produced going to waste, cities are playing an increasingly important role in driving solutions.
 - Cities are implementing practical measures to reduce waste, including financial incentives in Bangkok, public awareness campaigns in Rio de Janeiro, and Yokohama's "SDG lockers" that redistribute surplus food.
 - New tools and approaches, such as improved food literacy, better waste tracking, and technologies that connect surplus food with consumers are helping to reduce waste and support more sustainable food systems.
 - As cities consume around 70% of the world's food supply, successful local initiatives have significant potential to be scaled and deliver global impact.
- Across Africa, Asia and Latin America, many countries are moving quickly to adopt clean transport and efficient buildings before high-carbon infrastructure becomes locked in. With the right conditions, developing countries can be decisive in driving key tipping points.
- The 2026 Gulf crisis has highlighted a critical inflection point: as countries seek more reliable and secure energy sources, renewables are set to scale faster, accelerating investment and electrification across key sectors. This shift could unlock cascading climate benefits as nations move away from traditionally fossil-dependent uses – from transport to cooking.
- Climate action requires urgent emissions reductions alongside strengthened adaptation efforts. Governments, financial institutions, the private sector, civil society and citizens all have a role in accelerating positive tipping points and ensuring the benefits are shared fairly – across and within countries, regions, and social groups.
- Embedding tipping point strategies into national climate plans and other policy reforms offers a powerful way to convert climate ambition into implementation.
- Policy certainty, targeted public and private finance, regulatory reform, and demand-side commitments and signals are key levers for moving technologies or sub-sectors past critical thresholds.
- Multilateral development banks and climate funds such as the Green Climate Fund and Global Environment Facility can prioritise tipping-ready sectors, reduce risk premiums and support green industrial strategies.

- The private sector and institutional investors can align capital expenditure with net-zero pathways, adopt science-based transition plans and reallocate capital toward emerging clean sectors.
- The choices of the wealthiest 1 per cent and high-income consumers can be instrumental in driving positive tipping points – including through shifting investment portfolios away from fossil fuel assets, early adoption of emerging technologies and using social influence to change behaviours.
- World Environment Day 2026 offers a moment to focus on these ‘tipping-ready’ sectors and help to accelerate the shift from incremental emissions reductions to a global economic transformation that improves the lives of everyone, everywhere.