

2030 Climate Solutions

Implementation Roadmap



Introduction

As world leaders convene at COP 28 to identify progress, gaps and opportunities for enhancing climate action and support as part of the Global Stocktake, the UN Climate Change High-Level Champions (HLCs) and the Marrakech Partnership for Global Climate Action present this document: 2030 Climate Solutions, an Implementation Roadmap. These are a set of solutions framed in specific actions, with insights from a wide range of non-Party stakeholders on effective measures being undertaken that need to be scaled up and replicated as well as current gaps that need to be bridged to halve global emissions, address adaptation gaps and increase the resilience of 4 billion people from vulnerable groups and communities to climate risks by 2030. The 2030 Climate Solutions highlight the specific actions that must be implemented on the seven-year sprint from now to 2030 to limit warming to 1.5 degrees Celsius, build resilience, implement adaptation actions and mobilize means of implementation (finance, capacity building and technology) at scale.

The 2030 Climate Solutions

The 2030 Climate Solutions represent an integrated framework refined by the Marrakech Partnership under the leadership of the HLCs, designed to bring together the existing 2030 frameworks and tools of the HLCs, the Marrakech Partnership and the extended network of partners and initiatives (i.e. [Climate Action Pathways](#), [2030 Breakthroughs](#), [Breakthrough Agenda](#), [Sharm-El-Sheikh Adaptation Agenda](#) and [Race to Zero](#) and [Race to Resilience](#) campaigns) into a comprehensive and coherent climate action roadmap to accelerate climate action through specific real economy and on-the-ground solutions by 2030.

It is an ambitious, holistic and integrated package of forward-looking solutions, opportunities, near-term milestones and clear actions across adaptation, mitigation and finance, highlighting key interdependencies between sectors (energy, transport, industry, human settlements, land, ocean and coastal zones, water, health, food and agriculture) and enablers (finance, technology, planning and capacity building).

This integrated framework breaks down entrenched sectoral categories and existing adaptation and mitigation silos, presenting consolidated climate change solutions that have dual mitigation and adaptation impacts. Furthermore, it identifies delivery actor(s), local or global initiative(s), and/or organizations relevant for supporting the solutions. The objective is to drive systems transformations towards net zero, climate resilient and nature positive development by 2030.



The High-Level Champions, the Marrakech Partnership and other leading non-Party stakeholders are committed to helping support and ensure an urgent and effective response to the first Global Stocktake. While the technical assessment conducted during the Global Stocktake shows with clarity that the world is not on track to meet the long-term goals of the Paris Agreement, we also see significant action, leadership and momentum in all sectors of the economy and segments of society. Nevertheless, the latter needs to be scaled up while the current gaps need to be bridged.

The 2030 Climate Solutions summarize what key actors must do to deliver the systems change needed by 2030 as pathways towards a global net-zero, resilient and nature positive world. They consolidate the practical steps to drive collaboration and cooperation, bringing

stakeholders to work collectively together, and helping to spur action, activating radical collaboration, effective partnerships and positive ambition loops between the public and private sectors.

The 2030 Climate Solutions also strengthen the links between climate action, the Sustainable Development Goals and the Kunming-Montreal Global Biodiversity Framework. They are a key resource for Parties and non-Party stakeholders to draw on, as they design and deliver their plans for their contribution to the transitions to low emission, climate resilient, and nature positive development. The principle of equity and climate justice is integral to achieving the 2030 Climate Solutions. Dimensions of equity include just transition, sustainable development, and common but differentiated responsibilities and respective capabilities.



The 2030 Climate Solutions and the existing climate action frameworks

Since the adoption of the Paris Agreement, non-Party stakeholders have stepped up to accelerate progress toward its goals, and under the leadership of the High-Level Champions have increasingly worked together to intensify and align their efforts to maximize impact. They have worked individually and collaboratively to identify what is required to stay within the 1.5 degree Celsius limit and adapt to the expected impacts of global warming, and how to collaborate to make progress, incorporating real economy insights and drawing on the best available science. Innovation and evolution of the non-Party action in recent years has led to focus on near-term action and implementation.

The 2030 Climate Solutions bring together existing Climate Action frameworks and solutions from the Marrakech Partnership underpinned by the large communities of practice mobilized in the flagship campaigns Race to Zero and Race to Resilience. The Climate Action Pathways, published in 2019, was the first comprehensive roadmap to achieve net zero and climate resilience by 2050, that outlined the transformations needed in supply, demand, finance, policy and civil society across nine systems. By 2021, as it became clear that halving emissions by 2030 was the only way to get to net zero by 2050, a subset of the targets in the pathways were republished as 2030 Breakthroughs, a set of clear, simple 2030 goals for 28 areas. They inspired the launch at COP 26 of the Breakthrough Agenda, a platform for international cooperation to boost the deployment of low-carbon technologies in the five highest emitting sectors, endorsed by 45 countries.

In 2022, the Sharm El Sheikh Adaptation Agenda was launched by COP 27 Presidency and High-Level Champions to set 2030 adaptation outcome targets that are critical to accelerate adaptation transformations

across systems and by elevating outcomes for finance and planning. Additional detail and information on the leading initiatives spearheading progress can be found in the 2030 Breakthroughs and the Sharm Adaptation Agenda. The High-Level Champions and the Marrakech Partnership will continue to update and develop the content, based on the best available science, equity and the priorities and needs of Parties and non-Party stakeholders.

The 2030 Climate Solutions and the priorities for COP 28

The 2030 Climate Solutions include, actionable and collaborative solutions for:

- **Just energy and industry transition:** decarbonizing power and heavy industry, tackling supply, demand, policy and investment, to ensure a just transition in all regions are top priorities to halve emissions by 2030. The 2030 Climate Solutions add new targets on electrification, methane reduction, energy accessibility, energy security, economic growth and resilience, coming from the Sharm-El-Sheikh Adaptation Agenda.
- **Equitable financial flows:** the finance solutions show practical ways for public and private finance to turn net zero and adaptation finance commitments into financial flows, especially in emerging markets to ensure a just transition, demonstrating that mitigation and adaptation projects and nature solutions are ripe for investment.



- **Nature and inclusion:** putting nature at the heart of climate solutions, emphasizing the importance of Indigenous People's in leading that stewardship, these solutions include a full set of 2030 targets for nature-based solutions, spanning across land, ocean, agriculture, food and water, both for adaptation and mitigation purposes.
- **Adaptation and resilience:** tackling the climate crisis requires both adaptation and mitigation. To change the reality of insufficient adaptation action, planning and finance, the work has been focused on showcasing that investing in adaptation solutions is not only a moral imperative but also it is economically savvy; offering investment opportunities and benefits to biodiversity, health and improved livelihoods.

The way forward

The 2030 Climate Solutions are a useful resource to focus and guide action by all stakeholders involved in the real economy, The High-Level Champions, with the support of the Marrakech Partnership, stand ready to facilitate increased Party and non-Party collaboration and engagement to implement these actions. They intend to continue developing these solutions and tracking the actions delivered, which can support the Parties and the UNFCCC process to better understand these achievements towards the next cycle of GST.

“The Global Stocktake must set off a seven year sprint of action on solutions. Achieving the needed transformations at the pace and scale required will not be possible without alignment and collaboration. The individual efforts of regions, cities, businesses and investors taking climate action is critical - but racing in their tracks alone will only get us part of the way. We need coordinated action from different players across economic systems to achieve a genuine step-change in progress, and we need Parties and non-Parties working together. We’ve created the 2030 Climate Solutions to facilitate these interactions in a holistic way.”

Dr. Mahmoud Mohieldin,
UN Climate Change High-Level
Champion of Egypt

“Amidst challenges, the accelerating momentum of real-economy climate action serves as a beacon of hope for our society's transformative journey to 2030. Businesses, investors, cities and regions, and communities worldwide are delivering action on the ground to make our lives and livelihoods greener, more prosperous, and more resilient. With a collective commitment to climate action, the real economy is demonstrating that it can lead the charge to halve emissions and increase resilience of 4 bn people globally by 2030.”

H.E. Razan Al Mubarak,
UN Climate Change High-Level
Champion of the UAE



Disclaimer

This report provides a catalogue of climate solutions, based on a high level summary of science, insights and contributions from a wide range of partners connected to the Marrakech Partnership, the Race to Resilience, the Sharm El Sheikh Adaptation Agenda, Race to Zero and the 2030 Breakthroughs. None of the UN Climate Change High Level Champions, the UNFCCC and their respective teams, agents, data or other third-party content providers make any representation or warranty, express or implied, in respect to the report's contents (including its completeness or accuracy) and shall not be responsible or liable for any actions taken or not taken on the basis of this report, or for any consequences of the use of, or reliance on, the report and its content.

The report will be updated on a regular basis to ensure the inclusion of new targets and organizations that are contributing to achieving them.


Contents

Energy	9	Land-Use	46
Clean Power.....	12	Nature-Based Solutions for Mitigation.....	49
Electrification.....	13	Resilient Natural Landscapes.....	50
Power pool integration.....	14	Halting deforestation, investing in Nature....	51
Grids and Battery storage.....	15	Sustainable and Resilient Agriculture.....	52
Justice and Affordability.....	16	Heathy and sustainable food for all.....	53
Clean Cooking	17	Reducing food loss and waste.....	54
Cooling.....	18	Financing the food systems transformation.....	55
Green Hydrogen.....	19	Ocean and Coastal Zones	56
Oil & Gas	20	Mangroves.....	58
Oil & Gas: Methane reduction.....	21	Coral Reefs.....	59
Energy Adaptation Planning.....	22	Ocean Renewable Energy	60
Transport	23	Aquatic Food.....	61
Road Transport (Pass. Vehicles & Vans).....	25	Marine Conservation.....	62
Road transport (Buses & HDVs).....	26	Water	63
Resilient Transport	27	Water and wastewater systems.....	65
Green Shipping.....	28	Freshwater.....	66
Resilient Shipping.....	29	Climate Resilient WASH.....	67
Aviation.....	30	Food-Water Nexus.....	68
Industry	31	Funding Water.....	69
Steel.....	34	Water Decarbonization.....	70
Cement / Concrete.....	35		
Aluminum.....	36		
Metals & Mining.....	37		
Chemicals.....	38		
Plastics.....	39		
Technology-Based Carbon Removals.....	40		
Retail / Consumer Goods.....	41		
Apparel.....	42		
ICT / Mobile.....	43		
Pharma / Med Tech.....	44		
Private sector resilient planning.....	45		

Key:  Adaptation and Resilience

 Finance

 Mitigation

 Biodiversity

Contents

Human Settlements	71
Built Environment.....	74
Housing access and affordability.....	75
Open Waste Burning.....	76
Early Warning Systems	77
Resilient Health Solutions.....	78
Universal access to risk information and solutions to build resilience.....	79
Cities and Regions resilient planning.....	80
Planning and Locally-led principles for Adaptation.....	81
Greening Urban Areas.....	82
 Finance	 83
Public Finance Adaptation.....	86
Private Finance Adaptation	87
Insurance Finance Adaptation	88
MDB Finance Adaptation.....	89
Finance for Net zero.....	90
Private Finance for Net Zero.....	91
Finance for Developing Countries.....	92
MDB Financing for Green Transition.....	93
Concessional Finance for developing economies.....	94

Key:



Adaptation
and Resilience



Finance



Mitigation



Biodiversity

Energy

The transition from fossil fuels to clean, more efficient energy sources is already happening faster than you might think - especially when it comes to solar and wind power.

By 2030 we must double energy efficiency, triple renewables capacity and increase the share of electricity over total energy consumption to 30%. We must also dramatically cut methane emissions, oil consumption and production, and the use of unabated gas for power, while increasing the resilience of global energy systems.








For this transition to be just, managed, financed and science-based, we need to enable developing economies to reach their true economic potential for a green industrial revolution, enhancing collaboration, accelerating action towards these shared goals while aligning them with the principles of equity, inclusion and climate justice.



Energy

2030 Targets


Source

<p>Clean power</p> 	<ul style="list-style-type: none"> • Clean power becomes the most affordable and reliable option for all countries to meet their power needs efficiently by 2030. • Solar and wind power make up at least 46%, and all renewables make up at least 68% of global electricity generation by 2030. • Installed capacity for renewable power generation is tripled in 2030 vs 2022 values. 	<p>Breakthrough Agenda</p> <p>2030 Breakthrough</p>
<p>Electrification</p> 	<ul style="list-style-type: none"> • The share of electricity over total final energy consumption reaches 30% by 2030 from the current 20%. 	<p>2030 Breakthrough</p>
<p>Power Pool Integration</p> 	<ul style="list-style-type: none"> • Regional power pool integration is scaled up to mitigate the potential negative impacts on supply and demand of hydropower due to increased precipitation variability, allowing for a growing complementarity of renewables sources. 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Grids and Battery Storage</p> 	<ul style="list-style-type: none"> • Global grid investment doubled by 2030 to over USD 600 billion per year, including 359 GW of battery storage capacity. 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Justice and Affordability</p> 	<ul style="list-style-type: none"> • Affordable, reliable, sustainable, and modern energy access to electricity for 675 million unconnected people and higher quality access for 1 billion underserved people through climate resilient energy systems. 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Clean Cooking</p> 	<ul style="list-style-type: none"> • 2.4 billion people with access to clean cooking through at least USD 10 billion in innovative finance each year for clean cooking action worldwide. 	<p>2030 Breakthrough</p> <p>Sharm El Sheikh Adaptation Agenda</p>
<p>Cooling</p> 	<ul style="list-style-type: none"> • Support grid infrastructure resilience by reducing electricity consumption for cooling by approximately 30% (1900 TWh per year) by 2030 	<p>Sharm El Sheikh Adaptation Agenda</p>

Key:  Adaptation and Resilience

 Finance





 Mitigation

 Biodiversity

Energy

2030 Targets

Source

<p>Green hydrogen</p> 	<ul style="list-style-type: none"> By 2030, at least ~430GW of operational electrolyzer capacity (cumulative) is required to align with a 1.5°C pathway. This corresponds to at least ~50Mt of renewables-based hydrogen deployed and operational by 2030. 	<p>Breakthrough Agenda</p> <p>2030 Breakthrough</p>
<p>Oil & Gas</p> 	<ul style="list-style-type: none"> Oil: 40% of oil production has been reduced by 2030, on a 2019 baseline Gas: Reduce the share of unabated gas in electricity generation to 17% by 2030 	<p>2030 Breakthrough</p>
<p>Oil & Gas: Methane reduction</p> 	<ul style="list-style-type: none"> Oil & Gas Methane emissions are 75% lower than 2020 levels by 2030 	<p>2030 Breakthrough</p>
<p>Energy Adaptation Planning</p> 	<ul style="list-style-type: none"> Adaptation of energy generation, transmission and distribution infrastructure is mainstreamed into national energy planning and scenarios at national and sub-national levels. 	<p>Sharm El Sheikh Adaptation Agenda</p>

Energy

Clean power



2030 Targets

- Clean power becomes the most affordable and reliable option for all countries to meet their power needs efficiently by 2030.
- Solar and wind power make up at least 46%, and all renewables make up at least 68% of global electricity generation by 2030. (*)
- Installed capacity for renewable power generation is tripled in 2030 vs 2022 values. (*)



Progress to date

We are heading in the right direction, but progress is slower than what is needed, and is uneven, with most of the investment being currently focused on developed countries and China (IEA, 2023; IRENA, 2023).

The power sector is not yet on track for net zero by mid-century, although the deployment and manufacture of key technologies have accelerated considerably in recent years (WRI, 2023). If current rates of growth in wind and solar generation continue, they are set to achieve more than half of what is required by 2030 to get on track for a net zero scenario (Breakthrough Agenda, 2023).

Currently solar and wind make up 12% of total energy - all renewables make up 30% currently (REN21, 2023).

The data from IRENA's World Energy Transitions Outlook 2023 highlights a notable surge in annual power capacity additions.

Acknowledging some of the organisations working towards this future

C40; ICLEI; Powering Past Coal Alliance; Under 2 Coalition Net-Zero Leaders Group; EP100 (Climate Group); Efficiency for Access Coalition; Global Energy Alliance; Breakthrough Energy catalyst; RE100 (Climate Group); Climate Action 100+; Net Zero Asset Owners Alliance; Global-PST Consortium; IRENA

(*) target updated in 2023 to reflect the best available science

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Accelerate investment pace in developing countries to guarantee an equitable transition.
- Include both mitigation and resilience considerations in decision-making of renewables projects.
- Phase out inefficient fossil fuel subsidies which distort markets and artificially increase competitiveness of fossil fuels vs renewable energy sources.
- Reduce capital costs, the key enabling factor to unleash the potential of renewables development in developing countries, including de-risking mechanisms, guarantees, concessional loans and direct investment.
- Increase mobilisation and provision of finance to reduce capital cost and foster renewable energy investment in developing countries, including grid infrastructure, digitalization and ancillary services.
- Transfer technology to developing countries for grid digitalization and storage/flexibility enhancement.
- Implement capacity building for workforce and regulatory/governance bodies.

Sources and references

IEA World Energy Investment, 2023; IRENA, WETO, 2023; IEA, IRENA, UNHLC, The Breakthrough Agenda Report, 2023; REN21, Renewables 2023 Global Status Report, 2023; WRI, State of Climate Action 2023; IRENA, Energy Investment Report, 2023

Energy Electrification



2030 Target

- The share of electricity over total final energy consumption reaches 30% by 2030 from the current 20%.(*)



Progress to date

In 2022 the share of electricity over Total Final Energy Consumption reached 22%, and needs to increase by more than 0.8 percentage points per year to achieve the 30% target by 2030, having grown by 3 pp in the 2010-2022 period and by 5 pp between 2000 and 2022, showing an acceleration but at a pace not fast enough to achieve 30% by 2030 (IRENA, 2023; WRI, 2023).

To achieve this goal, electricity use in the industrial sector needs to reach 25% by 2030 (20% in 2020), while it needs to reach 53% in buildings (vs 34% in 2020), primarily through the increased electrification of heating, and 7% in Transport from 1% in 2020 (IRENA, 2023).

Acknowledging some of the organisations working towards this future

IRENA, Breakthrough Agenda Power Breakthrough, WBCSD, IEA, Global Renewable Alliance, WEF, RMI, The Climate Group, Energy Transitions Council, Green Powered Future Mission

(*) new 2030 Breakthrough launched at COP28

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Increase finance to expand transmission and distribution grids, including emerging challenges for tariff-setting and remuneration of the capacity expansion. Additionally, finance is needed for the replacement of some end-uses assets which require large CAPEX disbursements.
- Apply technologies for the digitalisation of grids and appliances and the development of super efficient appliances to catalyse electrification.
- Scale and enhance management of transmission and distribution systems and produce systemic innovation to enable smart electrification and sector coupling.
- According to IRENA's WETO 1.5, the electrification of transport, heat and other end uses will need an average annual investment of USD 0.4 trillion by 2030 in addition to USD 0.6 trillion for electricity network expansion and modernization. Renewables-based electrification will require massively expanded and strengthened power grids as well as increased flexibility, with an annual investment of USD 605 billion by 2030 vs USD 274 billion in 2020, while investments in heat pumps need to reach 237 billion by 2030 from the USD 64 billion achieved in 2022.

Sources and references

IPCC, 2022. Contribution of WGIII to AR6; IEA, 2023. Net Zero Emissions by 2050 Scenario, 2023 update; IRENA, 2023. WETO 1.5 2023; IRENA, 2023. Innovation Landscape for Smart Electrification; COP28 Presidency, IRENA and GRA, 2023. Tripling renewable power and doubling energy efficiency by 2030; WRI et al, 2023. State of Climate Action 2023

Energy

Power pool integration



2030 Target

- Regional power pool integration is scaled up to mitigate the potential negative impacts on supply and demand of hydropower due to increased precipitation variability, allowing for a growing complementarity of renewables sources.



Progress to date

The integration of these renewable sources, along with enhanced interconnections among power pools, can contribute to a more stable and reliable energy supply.

The West African Power Pool (WAPP) exemplifies this strategy with its plans aiming to augment regional generation capacity by 2.4 GW and interconnect 14 countries with 6109 km of high voltage transmission lines by 2025, primarily focusing on hydropower projects.

This initiative alone could potentially reduce power system operating costs by USD 2.7 billion annually and cut carbon dioxide emissions by 70 million tonnes every year, illuminating the substantial benefits of such interconnections and renewable energy integration across the African continent (Energy for Sustainable Development, 2018).

Acknowledging some of the organisations working towards this future

IRENA, Green Grids Initiative

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Provide capacity building to increase the awareness of policymakers regarding the increased climate risks for power systems and for best regulatory and policy practices for interconnection.
- Increase finance to support the development of large scale infrastructure projects at national, bi-national and regional levels.
- Coordinate planning for the expansion of regional power systems, information exchange, and strengthened integration, both physically and in terms of market dynamics, leading to benefits that allow for a more efficient response to the implications of climate change, as a result of their complementarity (World Bank, 2023).

Sources and references

Adeoye, Omotola & Spataru, Catalina, Sustainable development of the West African Power Pool: Increasing solar energy integration and regional electricity trade, Energy for Sustainable Development, 2018; World Bank and OLADE, Informe final: Evaluación del Impacto del Cambio Climático en la Generación Eléctrica en los Países del Cono Sur, 2023

Grids and Battery Storage



2030 Target

- Global grid investment doubled by 2030 to over USD 600 billion per year, including 359 GW of battery storage capacity.



Progress to date

Grid investment in recent years has been steady, but is not increasing at the rate necessary for growth and increasing electrification of building, transportation, and industrial sectors.

Grid length has almost doubled over the past 30 years, driven by expansion of distribution networks. Overall grids have grown at a rate of about 1 million km per year. The majority of this expansion has occurred in distribution grids, which account for about 93% of the total length (IEA, 2023a).

In 2022 battery manufacturing throughput almost doubled compared to 2021, reaching 660 GWh from 340 GWh. 580 GWh of manufacturing capacity were added in 2022, up 85% from the capacity added in 2021. For the first time, announced projects for battery manufacturing capacity could cover virtually all of the 2030 global deployment needs of IEA's NZE Scenario (IEA, 2023). If growth in installed battery capacity continues, it is on track to reach 359 GW by 2030 (IRENA, 2023).

Acknowledging some of the organisations working towards this future

IRENA

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Double global grid investment by 2030 to over USD 600 billion per year, emphasizing digitalizing and modernizing distribution grids (IRENA, 2023).
- Double system flexibility until 2030 due to the increasing shares of variable renewables such as solar PV and wind. The adopted metric for this outcome is grid investment, which reached USD 274 billion during recent year (5 year average to 2021) and the target has been set at USD 605 billion per year by 2030. An additional metric for tracking the target of doubling flexibility is currently under consultation.
- Reach 359 GW of storage capacity, a significant increase from IRENA's WETO 1.5, which shows 17 GW of battery storage capacity for 2020.

Sources and references

IRENA, World Energy Transition Outlook 2023; IEA, 2023. Electricity Grids and Secure Energy Transitions. IEA, 2023. The State of Clean Technology Manufacturing An Energy Technology Perspectives Special Briefing.

Energy

Justice and Affordability



2030 Target

- Affordable, reliable, sustainable, and modern energy access to electricity for 675 million unconnected people and higher quality access for 1 billion underserved people through climate resilient energy systems.



Progress to date

Recent advancements are not on track to achieve universal access to electricity by 2030.

Globally, the percentage of the population with access to electricity increased by an average of 0.7% points annually between 2010 and 2021, rising from 84% to 91%; while the number of people without electricity nearly halved during this period, reaching 675 million in 2021.

However the rate of growth slowed to 0.6% points annually between 2019 and 2021. To bridge the gap, particularly for those in impoverished and remote areas, the annual growth rate in access should be 1 percentage point per year from 2021 onward, nearly twice the current pace.

Without additional efforts, approximately 660 million people, primarily in Africa, would remain without electricity in 2030 (SDG7, 2023).

Acknowledging some of the organisations working towards this future

IRENA

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Deploy increased amounts of concessional capital to energy access, with the aim of drawing in commercial capital. is needed to address the energy access deficit.
- Distribute concessional and commercial investment across off-grid and on-grid sectors, and include transmission and distribution investment to both improve reliability and incorporate new, variable renewable power generation.
- Support new technology and business model innovations through technology-agnostic funding and technical assistance.
- Extend energy access initiatives and funding to include 'solar plus' and 'productive use' applications for end-users to drive economic activity.
- Support capacity-building for regulators, planners, and utilities in markets working to address energy access challenges.

Sources and references

IRENA, UNSD, World Bank, WHO, Tracking SDG 7: The Energy Progress Report, 2022

IRENA, World Energy Transitions Outlook 2023: 1.5°C Pathway, 2023

UNEP, Adaptation Gap report, 2022

Sharm Adaptation Agenda First Implementation Report, 2023



2030 Target

- 2.4 billion people with access to clean cooking through at least USD 10 billion in innovative finance each year for clean cooking action worldwide.



Progress to date

Despite global advancements, nearly one third of the world's population, approximately 2.3 billion people, continue to cook with rudimentary means, using open fires or basic stoves that emit harmful smoke. This practice leads to 3.7 million premature deaths annually, disproportionately affecting women and children, particularly in Africa (IEA, 2023).

While Asia and Latin America have made progress in providing clean cooking access, Africa has seen an increase in the number of people without access to clean cooking. China, India, and Indonesia have made substantial efforts to reduce the population without clean cooking access, primarily through the distribution of free stoves and subsidized LPG canisters (IEA, 2023).

Despite the increase and record levels, clean cooking still shows a significant capital gap, particularly for technology development, business model refinement, and proof of concept.

Acknowledging some of the organisations working towards this future

Clean Cooking Alliance. SEfoAll, World Bank, AfDB, ADB, Spark+ Africa, UNCDF Gold Standard Global Platform of Action (GPA) ICLEI C40 AFR100 World Food Programme UNIDO National and local governments Clean cooking enterprises Norwegian Agency for Development Cooperation Ministry of Foreign Affairs of the Netherlands United States EPA International Coalition of Sustainable Infrastructure (ICSI) Sustainable Energy for All Spark+ Africa Fund Osprey Foundation BIX Capital

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Prioritize universal clean cooking access by 2030 by catalyzing USD 8 billion to reduce health challenges and foster economic benefits (IEA, 2023).
- Governments to enhance policies, regulations, public engagement and financial support for consumers.
- Government and NPS to strengthen education and grassroots efforts, particularly women-led initiatives.
- Deploy affordable concessional finance to support projects in the poorest regions (IEA, 2023).
- Replicate successful clean cooking models focusing on rural areas, where most of the underserved population resides, especially in Sub-Saharan Africa.
- Catalyze solutions like LPG, electric cooking, improved cookstoves, renewable cooking solutions, as well as renewables-based electric cooking among others (IRENA, 2022).
- Consider biogas-based solutions when in rural areas organic waste is abundant.
- Foster regional initiatives, such as the Alliance for the Biogas in West and Central Africa and enhance cooperation by creating a supportive environment for the expansion of household and institutional biogas solutions (IRENA, 2022).

Sources and references

IEA, A vision for clean cooking access for all: World Energy Outlook Special Report, 2023
IRENA, UNSD, World Bank, WHO, Tracking SDG 7: The Energy Progress Report, 2022
Sharm Adaptation Agenda First Implementation Report, 2023

Energy Cooling



2030 Target

- Support grid infrastructure resilience by reducing electricity consumption for cooling by approximately 30% (1900 TWh per year) by 2030 (*)



Progress to date

Several well-established collaborative R&D forums already exist, with success in major technologies, such as heat pumping technologies, superinsulation and ventilative cooling. These need to be strengthened and expanded to increase and accelerate the impact of research and innovation (Breakthrough Agenda, 2023)

Energy usage for space cooling has surged by over three times since 1990, and has surged by approximately 4% annually since 2000. Residential units in use have tripled since then, surpassing 1.5 billion by 2022. Increased energy usage for cooling significantly impacts peak electricity needs, possibly leading to power shortages (IEA, 2023).

2022 ranked as the fourth warmest year globally since the late 1800s, marked by numerous extreme heat events and soaring temperatures. Absence of indoor cooling facilities exposes a significant portion of the world's population to heat stress, leading to adverse effects on comfort, work output, and overall well-being.

UNEP has identified the potential to reduce 30% electricity consumption by cooling by 2030 (UNEP, 2023).

Acknowledging some of the organisations working towards this future

UNEP-Led Cool Coalition, Global Cooling Pledge, Global Cooling Efficiency Accelerator, Clean Cooling Collaborative, Mission Innovation SEAD, EP100, Mission efficiency, IEA Solar Heating and Cooling TCP

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Provide national and local cooling plans and regulations.
- Establish national and local building energy code models including market appropriate measures for buildings and support adoption of building energy codes at the sub-national level.
- Support increased market penetration of highly efficient air conditioning equipment and innovative technologies.
- Implement Minimum Energy Performance Standards (MEPS).
- Provide Guidance for high efficiency cooling technologies.
- Invest in collaborative research, innovation, and deployment such as renewable energy-based cooling solutions in off-grid locations.
- Invest in appliance efficiency and enhanced implementation of passive cooling measures.
- Expand district cooling, trigeneration and thermal storage to help manage peak load.
- Increase reliability and emergency planning for power and power-reliant systems during blackouts triggered by heatwaves.
- Integrate energy into urban planning to manage fast-growing power-loads.

Sources and references

IEA, Tracking Clean Energy Progress 2023: Space cooling. IEA, IRENA, HLC, Breakthrough Agenda Report, 2023
UNEP (2023). Global Cooling Stocktake report
COP28 Presidency and UNEP-led Cool Coalition (2023). Global Cooling Pledge



2030 Targets

- By 2030, at least ~430GW of operational electrolyzer capacity (cumulative) is required to align with a 1.5°C pathway.
- This corresponds to at least ~50Mt of renewables-based hydrogen deployed and operational by 2030.



Progress to date

The sector is making notable progress as of late 2023, but not at the pace required. Over 40 countries have released (or updated) their National Hydrogen Strategies. A substantial number of inter-regional partnerships have formed as net importers and exporters seek to meet their energy security requirements, or capitalize on favorable market conditions and the presence of natural resources for the lowest feasible levelised cost of hydrogen production.

Spending on electrolyser installations reached USD 600 million globally in 2022, double that of 2021 (IEA, 2023). This is a notable forward-looking indicator of projects moving to Final Investment Decision (FID). However, low-carbon hydrogen (of which renewables-based hydrogen is a subset) still represents less than 1% of total hydrogen production today (IEA, 2023). Government spending has increased in various forms (auctions, subsidies, tax credits, grants, etc.) at a rate of around 20% between 2020-2022 to a total of USD 435 billion in 2022 (BNEF, 2023). It is expected near or around USD 10 trillion of blended public/private financing is required (cumulative) to develop the global hydrogen supply chain by 2050 (Deloitte, 2023).

Acknowledging some of the organisations working towards this future

The Green Hydrogen Catapult; The Green Hydrogen Organisation; Clean Energy Ministerial Hydrogen Initiative, International Hydrogen Trade Forum, UNECE Hydrogen Task Force, H2LAC, GIZ, IEA, IRENA, The Breakthrough Agenda, Climate Catalyst, RMI, WBCSD

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Optimize technology and supply chains for electrolyzers and hydrogen or hydrogen derivative(s)-related technologies across the value chain.
- Address key finance gaps (especially in developing countries), in addition to increased investment in driving positive Technology Readiness Levels.
- Build capacity (specifically as it relates to implementation of national policies/roadmaps in emerging economies) in collaboration with MDBs.
- Adopt certification framework; and, in parallel, increase market adoption through the deployment of market-based mechanisms such as the Contracts-for-Difference approach.
- Target incentivization of “no regrets” end use applications (e.g., hard-to-electrify industry not residential/commercial heating and power).
- Push for cross-border carbon trade agreements as well as sector-wide regulation (i.e., IMO GHG Strategy).
- Collaborate at national, regional, and international level to incentivize the restructuring of hard-to-abate industry to areas with high renewables-based hydrogen potential - while integrating social justice theories into Global North-South partnerships.

Sources and references

IEA, IRENA, HLC, Breakthrough Agenda Report, 2023
WRI, State of Climate Action, 2023
BNEF, Hydrogen Economy Outlook, 2023
Deloitte, Green Hydrogen Energizing the Path to Net Zero, 2023
IEA, Global Hydrogen Review, 2023

Energy

Oil & Gas



2030 Targets

- Oil: 40% of oil production has been reduced by 2030, on a 2019 baseline.
- Gas: Reduce the share of unabated gas in electricity generation to 17% by 2030.



Progress to date

Investment in Fossil Fuels increased in 2022 (REN21, 2023) and oil production in 2022 was 2.7% below 2019 levels (OPEC, 2022). Meanwhile, fossil-fuel subsidies surged to a record USD 7 trillion in 2022 as governments supported consumers and businesses during the global spike in energy prices (IMF, 2023). Both explicit and implicit subsidies are currently well above 2019 levels (explicit: USD 1.3 Trillion , 2.6 times the 2019 value).

The global post-pandemic economic rebound ended conclusively in 2022, after unprecedented government stimulus and supply chain disruptions caused consumer inflation to soar (IEA, 2023). The expected pinnacle in oil demand for combustible fossil fuels results from peak post-pandemic consumption for gasoline by 2023, road transport by 2025 and total transport in 2026 (IEA, 2023).

Signals of peak-gasoline demand in China to be achieved in 2023 or 2025 (SINOPEC 2023).

The share of fossil gas grew from 18 to 23% of total electricity generation from 2000 to 2019. However, it has slightly decreased each year since then, including a decrease in 2022 to reach 22% (WRI, 2023).

Acknowledging some of the organisations working towards this future

SBTi; Carbon Tracker; Global Methane Hub; Fossil Fuel Non-Proliferation Treaty; Beyond Oil and Gas Alliance; Under2 Coalition Methane Project; RE100 (Climate Group); EV100 (Climate Group); Net Zero Asset Owners Alliance; Climate Action 100+; IEA, RMI, UNEP/IMEO & OGMP 2.0, CATF, WB's GGFR, RMI, EDF, Carbon Mapper; GMP, OGCI, Carbon Limits, Carbon Tracker, SBTi, IPIECA, WEF

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Phase out inefficient fossil fuel subsidies and increase clean energy access subsidies, providing targeted support for those who need it.
- Remove barriers for the development and construction of electricity transmission and clean power generation infrastructure, minimise market distortions and promote investment in flexibility and ancillary services.
- Set Energy Efficiency and Renewable Energy targets for power and final energy consumption.
- Embed Just Energy Transition mechanisms into NDCs and Climate Action Plans.
- Support a just, managed, and financed transition, enabling developing economies to reach their true economic potential for a green industrial revolution.
- Finance cost-effective and low-carbon energy technologies, which addressing energy poverty.
- Increase mobilization and provision of finance to reduce capital cost and foster renewable energy investment in developing countries, including grid infrastructure, digitalisation and ancillary services.
- Provide targeted support to countries and local communities to implement just energy transition strategies and diversify livelihoods through country and local platforms.

Sources and references

IEA Oil 2023
5th P Handbook Race to Zero 2023
WRI et al (2023), State of Climate Action 2023
OPEC Annual Statistical Bulletin 2023

Oil & Gas: Methane reduction



2030 Target

- Oil & Gas Methane emissions are 75% lower than 2020 levels by 2030 (*)



Progress to date

IEA's Global Methane Tracker found that the global energy industry was responsible for 135 million tonnes of methane released into the atmosphere in 2022, only slightly below the record highs seen in 2019 (IEA GMT 2023).

Methane emissions from oil and gas alone could be reduced by 75% with existing technologies at low cost (IEA GMT 2023).

Less than 2% of the income accrued by oil and gas companies worldwide in 2022 would be required to make the USD 75 billion investment in technologies needed to achieve this reduction (IEA GMT 2023).

Acknowledging some of the organisations working towards this future

GMH, IEA, RMI, UNEP/IMEO & OGMP 2.0, CCAC, CATF, WB's GGFR, RMI, EDF, Carbon Mapper GMP, OGCI, Carbon Limits, Carbon Tracker, SBTi, IPIECA, WEF, Carbon Limits, CSIS, IGSD

(*) new 2030 Breakthrough launched at COP28.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Provide capacity building to Global South producers so that such measures don't penalize those that still lack access to technologies, capital and know-how.
- Provide capacity building to CSOs and local regulators to use transparent and available MRV information to regulate and hold the industry accountable for its emissions.
- Guarantee strong public and philanthropic financial support for transparent and widespread MRV solutions such as UNEP's IMEO, with open data and public reporting of emissions.
- Establish strict financial disclosure requirements for financial services to O&G companies that include carbon footprint associated with investments and list GHG mitigation requirements that include methane abatement in line with OGMP 2.0 guidelines.
- Oil & Gas companies to rapidly deploy emissions reduction measures and technologies. Including measures that put a stop to all non-emergency flaring and venting, and universal adoption of monthly or continuous leak detection and repair programs.

Sources and references

IEA Global Methane Tracker 2023
IEA Oil 2023
5th P Handbook Race to Zero 2023

Energy Adaptation Planning



2030 Target

- Adaptation of energy generation, transmission and distribution infrastructure is mainstreamed into national energy planning and scenarios at national and sub-national levels.



Progress to date

The mainstreaming of adaptation strategies for energy generation, transmission, and distribution infrastructure into national and sub-national energy planning is pivotal for a sustainable energy transition. Given the high levels of investment required to drive the growth of renewables over the coming years, it is critical that these projects consider adaptation and mitigation efforts from the beginning in the planning, financing and execution phases.

The linkages between reliable, affordable, and modern renewable energy services with climate adaptation for other sectors are often overlooked in policy and practice.

In IRENA's WETO 1.5, by 2030, renewables are expected to account for 68% of electricity generation, rising to 91% by 2050. This necessitates significant renewable power capacity additions, projected at 975 GW/year by 2030 and 1066 GW/year by 2050. Investment needs for renewable energy generation are estimated at USD 1300 billion/year in 2030, escalating to USD 1380 billion/year in 2050, alongside an investment of USD 605 billion/year in 2030 for power grids and flexibility, increasing to USD 800 billion/year by 2050.

Acknowledging some of the organisations working towards this future

IRENA, IEA, OLADE, RETA

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Embed renewable energy technologies in adaptation policies and engage multiple stakeholders to identify synergies, reduce costs, and improve project success. (IRENA, 2021).
- Integrate adaptation and mitigation into the planning, financing, and execution stages, to open up opportunities for co-benefits (Adaptation Gap Report 2022).
- Foster win-win solutions by implementing renewable energy in energy-intensive uses (e.g. air conditioning, desalination, irrigation), to achieve net-zero emissions, avoiding trade-offs between mitigation and adaptation.
- Deploy renewable energy solutions, particularly in vulnerable communities to provide green infrastructure and enhance resilience to climate change impacts (IRENA, 2021).
- Consider technologies, such as hydropower and bioenergy, to provide additional forms of climate resilience (IRENA, 2021).

Sources and references

UNEP, Adaptation Gap report, 2022
IRENA, Bracing for Climate Impact: Renewables as a climate change adaptation strategy, 2021
Sharm Adaptation Agenda First Implementation Report, 2023

Transport

The just transition from fossil fuel-dependent transport across air, sea and land to renewable energy powered and low-carbon fueled modes is jump-starting and accelerating.

Electric Vehicle sales have boomed, rapidly scaling two and three wheelers and cars across markets. Aviation, heavy-trucking and maritime are in the emerging phase of their S-Curve transitions.

By 2030, we must shift Global Aviation and Maritime Shipping to sustainable, zero emission fuels. We must continue to electrify all Land Transport across vehicles (2/3 wheelers, cars & vans, buses and heavy-duty trucks) and rail systems. We must also leverage operational efficiencies across all modes, manage demand and increase the resilience of transport infrastructure networks and operations.





Transport Accessibility and Affordability is key to create healthy, equitable and resilient communities for people and workers. Business, industry, finance and governments must continue to work together to overcome regional disparities and keep the positive momentum.



Transport

2030 Targets

Source

<p>Road Transport (passenger vehicles & vans)</p> 	<ul style="list-style-type: none"> • Zero emission vehicles (ZEV) are the new normal – accessible, affordable and sustainable in all regions by 2030. • ZEV makes up 100% of total global passenger vehicles & vans sales by 2030 (in key markets). 	<ul style="list-style-type: none"> • Breakthrough Agenda • 2030 Breakthroughs
<p>Road Transport (Buses & Heavy Duty Vehicles)</p> 	<ul style="list-style-type: none"> • Zero emission vehicles (ZEV) are the new normal – accessible, affordable and sustainable in all regions by 2030 • Battery Electric Vehicles (BEV) and Fuel Cell Electric Vehicles (FCEV) make up 60% of global bus sales and 35-40% of global heavy goods vehicles sales by 2030. 	<ul style="list-style-type: none"> • Breakthrough Agenda • 2030 Breakthroughs
<p>Resilient Transport</p> 	<ul style="list-style-type: none"> • Transport infrastructure is resilient to climate hazards through adoption of new technology, design and materials. 	<ul style="list-style-type: none"> • Sharm El Sheikh Adaptation Agenda
<p>Green Shipping</p> 	<ul style="list-style-type: none"> • Zero emission fuels make up at least 5%, aiming for 10% of international shipping fuels and 15% of domestic shipping fuels by 2030 	<ul style="list-style-type: none"> • 2030 Breakthroughs (Maritime Progress Report)
<p>Resilient Shipping</p> 	<ul style="list-style-type: none"> • 450,000 Seafarers need upskilling and retraining by 2030 • 30% trade moving through climate adapting ports by 2030 	<ul style="list-style-type: none"> • 2030 Breakthroughs will be soon integrated in the Sharm El Sheikh Adaptation Agenda
<p>Aviation</p> 	<ul style="list-style-type: none"> • Sustainable aviation fuels (SAF) make up 13-15% of fuels globally by 2030. 	<ul style="list-style-type: none"> • 2030 Breakthroughs
<p>Avoid & Shift</p> 	<ul style="list-style-type: none"> • Target in development 	<ul style="list-style-type: none"> • 2030 Breakthroughs
<p>Transport Accessibility and Affordability</p> 	<ul style="list-style-type: none"> • Target in development 	<ul style="list-style-type: none"> • Sharm El Sheikh Adaptation Agenda • 2030 Breakthroughs

Key:  Adaptation and Resilience

 Finance

 Mitigation

 Biodiversity

Transport

Road Transport (Passenger Vehicles & Vans)



20

2030 Targets

- Zero emission vehicles (ZEV) are the new normal – accessible, affordable and sustainable in all regions by 2030.
- ZEV makes up 100% of total global passenger vehicles & vans sales by 2030 (in key markets).



Progress to date

In 2023, 26% of Light Duty Vehicles manufacturers by revenue had committed to the Race to Zero.

Electric car markets are seeing exponential growth as sales exceeded 10 million in 2022. A total of 14% of all new cars sold were electric in 2022, up from around 9% in 2021 and less than 5% in 2020.

Three markets dominated global sales. China was the frontrunner once again, accounting for around 60% of global electric car sales. More than half of the electric cars on roads worldwide are now in China and the country has already exceeded its 2025 target for new energy vehicle sales. In Europe electric car sales increased by over 15% in 2022, meaning that more than one in every five cars sold was electric. Electric car sales in the United States increased by 55% in 2022, reaching a sales share of 8%.

At this pace, EV sales will be between 62% to 86% by 2030, with China enjoying an EV market share of 90%. There are now policy targets to ban the sale of ICE cars by 2035 in those three major car markets.

To reach the 2030 breakthrough target of 100% EV sales in major markets, some key challenges need to be solved: weak electricity infrastructure, sketchy charging networks, and the problem of battery recycling (SoCA 2023 and IEA 2023).

Acknowledging some of the organisations working towards this future

C40; Accelerate to Zero (A2Z); ZEV Alliance; ZEV Community; CERES; The Climate Group EV 100; Zero Emissions Urban Fleets (ZEUF); Climate Action 100+; RouteZero.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Invest in the necessary charging infrastructure, e-mobility technology, and a sustainable electricity grid to lower upfront costs for users.
- Deploy fast and ultra fast charging to extend range.
- Countries to identify mechanisms to reduce the cost of capital, leveraging various funding streams and strengthening international collaboration to address upfront costs.
- Governments to agree a timeline by which all new road vehicle sales should be zero-emission, with interim targets taking into account each country's level of economic development and ability to scale up infrastructure. In addition, they should put effective and legally binding policies in place to implement these commitments.
- Businesses to increase efforts and investments to further drive efficiency and to lower upfront costs.
- By 2030, USD 130 billion per year of investment in road charging and refueling infrastructure with high dependence on technology, improving battery range and also absorption of the costs directly by consumers.

Sources and references

The Breakthrough Agenda Report 2023; X-Change Cars 2023; RMI Report 2023; State of Climate Action Report (SoCA) 2023; IEA Global EV Outlook 2023; Energy Transition Commission, Financing the Transition: How to make the money flow for a net zero economy 2023.

Transport

Road Transport (Buses & Heavy Duty Vehicles)



2030 Targets

- Zero emission vehicles (ZEV) are the new normal – accessible, affordable and sustainable in all regions by 2030
- Battery Electric Vehicles (BEV) and Fuel Cell Electric Vehicles (FCEV) make up 60% of global bus sales and 35-40% of global heavy goods vehicles sales by 2030.



Progress to date

In 2022, nearly 66,000 electric buses and nearly 60,000 medium and heavy-duty trucks were sold worldwide, representing about 4.5% of all bus sales and 1.2% of all truck sales worldwide. 22% of bus companies by revenue are committed to the Race to Zero and 42% of medium heavy duty truck companies.

China continues to dominate production and sales of electric (and fuel cell) buses and trucks. In 2022, 54,000 new electric buses and 52,000 new electric medium and heavy-duty trucks were sold in China, representing 18% and 4% of total sales in China and about 80% and 85% of global sales.

Highest sales share for electric buses in Europe were in Finland, Norway, the Netherlands, and in Denmark.

With the exception of China, electric trucks sales shares remain low across most major markets. Because deployment often follows an S-curve and the technology is in the emergence stage, the rate of change will likely accelerate. (SoCA 2023, IEA 2023).

Acknowledging some of the organisations working towards this future

C40; ZEV Alliance; ZEV Community; Zero Emission Transport Association (ZETA); WEF Road Freight Zero Coalition; CALSTART; The Climate Group EV100; Transport Decarbonization Alliance (TDA); Climate Action 100+; Ceres; RouteZero; Smart Freight Centre (SFC); The Climate Group EV 100+; Sustainable Freight Buyers Alliance (SFBA); International Transport Forum (ITF); Partnership on Sustainable, Low Carbon Transport (SLOCAT); Collective for Clean Transport Finance (CCTF); Global Network for Popular Transport (GNPT); International Association of Public Transport (UITP)

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Invest in the necessary charging infrastructure, e-mobility technology, and a sustainable electricity grid to lower upfront costs for users.
- Deploy fast and ultra fast charging to extend range.
- Countries to identify mechanisms to reduce the cost of capital, leveraging various funding streams and strengthening international collaboration to address upfront costs.
- Governments to agree on a timeline by which all new bus & truck sales should be zero-emission, with interim targets taking into account each country's level of economic development and ability to scale up infrastructure. In addition, put effective and legally binding policies in place to implement these commitments.
- Businesses to increase efforts and investments to further drive efficiency and to lower upfront costs.
- By 2030, USD 130 billion per year of investment in road charging and refueling infrastructure with high dependence on technology, improving battery range and also absorption of the costs directly by consumers.

Sources and references

The Breakthrough Agenda Report 2023; X-Change Cars 2023; RMI Report 2023; State of Climate Action Report (SoCA) 2023; IEA Global EV Outlook 2023; Energy Transition Commission, Financing the Transition: How to make the money flow for a net zero economy 2023.

Transport

Resilient Transport



2030 Target

- Transport infrastructure is resilient to climate hazards through adoption of new technology, design and materials.



Progress to date

Countries are investing massively in transport infrastructure estimated globally at USD 1.4 trillion to USD 2.1 trillion per year, however, the latest data shows that the development of transport infrastructure which is resilient to climate hazards is not on track to achieve 2030 targets (World Bank 2015).

According to the world risk poll 2021 by the Lloyd's Register Foundation, data shows insufficient development:

-> 57% of people reported losing access to at least one form of critical infrastructure in the last year. This rises to 75% among people who have experienced a disaster in the previous five years.

Progress shows that the world still has a significant gap to bridge to make its transport infrastructure resilient by 2030.

Acknowledging some of the organisations working towards this future

International Transport Forum (ITF); Partnership on Sustainable, Low Carbon Transport (SLOCAT); International Coalition of Sustainable Infrastructure (ICSI).

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Establish common taxonomy and global targets for climate-resilient transport infrastructure.
- Develop unified methodologies for measuring progress in adaptation and resilience (A&R) aligned with Sustainable Adaptation & Resilience (SAA) outcomes.
- Invest in human, institutional, and technical capacity for climate data management, risk assessment, and implementation of climate risk evaluations and prioritised resilient strategies.
- Governments to establish integrated A&R plans in National Adaptation Plans (NAP) that include policies, plans, funding streams and reforms designed to reduce the impact of current and future climate risks, and to enable future adaptation.
- Financial Institutions to invest in infrastructure, technologies and data collection systems enabling robust infrastructure investments.
- Accelerate A&R finance flows by involving the private sector, and translating national plans into localized, prioritized A&R projects

Sources and references

World Bank: Moving toward climate-resilient transport 2015;
OECD: Climate-resilient Infrastructure 2018;
ICSI: The Climate Resilient Infrastructure Report 2023;
Lloyd's Register Foundation: Critical infrastructure resilience and perceptions of disaster preparedness 2021;
High volume Transport Applied Research: Climate Resilient Transport 2022; BCG & HLC: AnR through Land Transport Infrastructure Systems, 2023; Sharm Adaptation Agenda First Implementation Report, 2023

Transport

Green Shipping



2030 Target

- Zero emission fuels make up at least 5%, aiming for 10% of international shipping fuels and 15% of domestic shipping fuels by 2030 (*)



Progress to date

We are partially on track to achieve at least 5% zero emission fuels in international shipping. However 5% is now considered minimum ambition, we need to strive for 10%.

The International Maritime Organization revised ambition for 2050: net-zero GHG emissions “by or around” 2050, 5-10% uptake of zero or near-zero GHG emission fuels, 3 indicative checkpoints, and adoption of lifecycle GHG assessment guidelines. More than 30 countries released hydrogen roadmaps, the current pipeline of IEA hydrogen projects announcements totals 24 Mt of green hydrogen capacity by 2030. Regional developments include the EU FuelMaritime and inclusion of shipping in EU ETS.

In 2023, 28% of major shipping actors by revenue committed to the Race to Zero.

The Zero Emission Maritime Buyers Alliance (ZEMBA) announced it would procure ocean shipping services powered by zero-emission fuels for 600,000 twenty-foot containers (TEUs) over 3 years. More than 215 vessels designed to use non-fossil fuels (methanol and ammonia) have been ordered and the first ship journey happened this year, however, zero-emission vessel ordering is assessed as ~20% of what is needed.

Acknowledging some of the organisations working towards this future

Getting to Zero Coalition; First Movers Coalition; UMAS; coZEV; Maersk McKinney Moller Center for zero carbon shipping; UN Global Compact; Sustainable Shipping Initiative, Mission Possible Partnership; First Movers Coalition; UN Foundation; ITF; Slocat.

(*) target updated in 2023 following IMO decision

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Increase demand for 0.5-1 Mt a year of zero emission fuel (e.g. e-methanol) by 2025 - equivalent to c.100 15,000 TEU containerhips running all year.
- Increase commitment in hydrogen strategies, leveraging opportunities in emerging economies to create new export industries, skilled jobs, and accelerate deployment of renewable energy. Developing countries could produce almost 4,000EJ per year of green hydrogen vs. projected annual shipping demand of 20-40 EJ.
- Update the Poseidon Principle trajectories to align to a 1.5°C pathway and stricter conditions on the issuance of debt, shifting the orderbook to zero-emission-capable vessels only.
- Convert commitments in 2023 IMO GHG Strategy for at least 5%, striving for 10% ‘uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources’ into concrete technical and economic instruments for adoption in 2025 and entry into force in 2027.
- Include diverse voices with a range of perspectives such as indigenous communities at the IMO and ensure SZEF adoption ensures geographic heterogeneity and the equitable sharing of benefits.

Sources and references

Getting to Zero Coalition, Race to Zero and UMAS, Climate Action in Shipping: Progress towards Shipping's 2030 Breakthrough, October 2023.

Trafigura, Charting a course to a greener future for shipping: low emission fuel supply and the opportunity for the global south, May 2023.

Transport

Resilient Shipping



2030 Targets

- 450,000 Seafarers need upskilling and retraining by 2030. (*)
- 30% trade moving through climate adapting ports by 2030 (*)



Progress to date

Significant progress has been made with the inclusion of a just transition in the IMO 2023 GHG Strategy and a work programme included in the IMO work.

With regards to mainstreaming resilience in the maritime sector, there is slow progress in building a community and raising the profile of resilience planning in port infrastructure. However, there are some individual case studies of good practice for example the Port of Rotterdam implemented a flood risk management plan up to 2100, the Port of Kaohsiung installed more resilient infrastructure and the Port of San Diego implemented nature-based solutions, more examples are available in the Port Resilience Toolkit.

Acknowledging some of the organisations working towards this future

ICS, ILO, IMO, UN Global Compact, ITF, Slocat, Resilience Rising, Arup, IAPH and AVIP.

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

(*) targets to be integrated to SAA in the future.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Ensure that Just Transition planning is part of decarbonisation strategies.
- Ensure a health and safety-first approach to de-risk shipping's green transition with fit-for-purpose training and familiarization onboard ships.
- Champion 'Diversity, Equity and Inclusion' on board ships as a driver for better performance.
- Invest in skills: ensure decarbonization plans take full account of the maritime industry's growing need for skills to support its green transition.
- Strengthen global training standards for seafarers.
- Deliver fair training: equitable training models for all seafarers to avoid a widening skills and training gap, which disadvantages seafarers, in particular from developing countries, Small Island Developing States (SIDS) and Least Developed Countries (LDCs).
- Embed resilience within port master planning.
- By 2030, USD 40 billion per year of investment in shipping required with increasing focus on hydrogen based vessels for shorter distances and the source of fuel for longer route.

Sources and references

UN Global Compact, International Transport Workers Federation (ITF), International Chamber of Shipping (ICS) Position Paper Mapping a Maritime Just Transition for Seafarers November 2022. DNV, Insights into seafarer training and skills needs to support a decarbonized shipping industry, 2022; Energy Transition Commission, Financing the Transition: How to make the money flow for a net zero economy 2023.

Transport

Aviation



2030 Target

- Sustainable aviation fuels (SAF) make up 13-15% of fuels globally by 2030.



Progress to date

The estimated SAF uptake by airlines in 2021 was four times higher than what it was in 2019, and in 2022, this further tripled - but the actual uptake of SAF is modest relative to the total industry demand (ATAG 2023). As of 2023, approx. USD 45 billion in SAF purchase agreements have been made by airlines, operators and corporate partners with more than 50 airlines which committed to 2030 SAF goals ranging from 5-30% of their total fuel usage (ATAG 2023).

In order to achieve net-zero emissions by 2050, it has been identified that between 53% and 71% of the decarbonization from air transport will come from SAF, with the expectation that the global average carbon intensity of the fuel we use should be around 80% lower in 2050 compared with today's fossil fuel source (ATAG 2023). Without further policy measures, by 2030, around 6-10% of the total global aviation fuel supply could be SAF (ATAG 2023).

Current production costs of SAF are 7-9 times higher compared to jet fuel (Climate Catalyst 2023).

In 2023, 35% of major aviation actors sector by revenue committed to the Race to Zero.

Acknowledging some of the organisations working towards this future

World Economic Forum: Clean Skies for Tomorrow (MPP); Green Hydrogen Catapult; Climate Action 100+; Net Zero Asset Owners Alliance (NZAOA); Rocky Mountain Institute (RMI); Environmental Defense Fund (EDF); Sustainable Aviation Buyers Alliance (SABA); International Civil Aviation Organization (ICAO); Air Transport Action Group (ATAG); Climate Catalyst (CC).

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Governments to apply appropriate policy mechanisms to allow the SAF industry to scale up, including incentivizing the use of feedstocks to aviation, adequate supply of sustainable feedstock and low-carbon energy.
- Increase cooperation between the industry, governments, finance, research institutions and energy producers to develop the major pillars for the SAF implementation and usage in the industry.
- Businesses to increase R&D effort/investments to further drive technology development which enables aircrafts to run on 100% of SAF.
- Financial Institutions to invest in aircraft and fuel production technologies.
- By 2030, USD 70 billion per year of investment in aviation required whereby the source of fuel for aviation from either bioresources or from low carbon electricity plays a vital role.

Sources and references

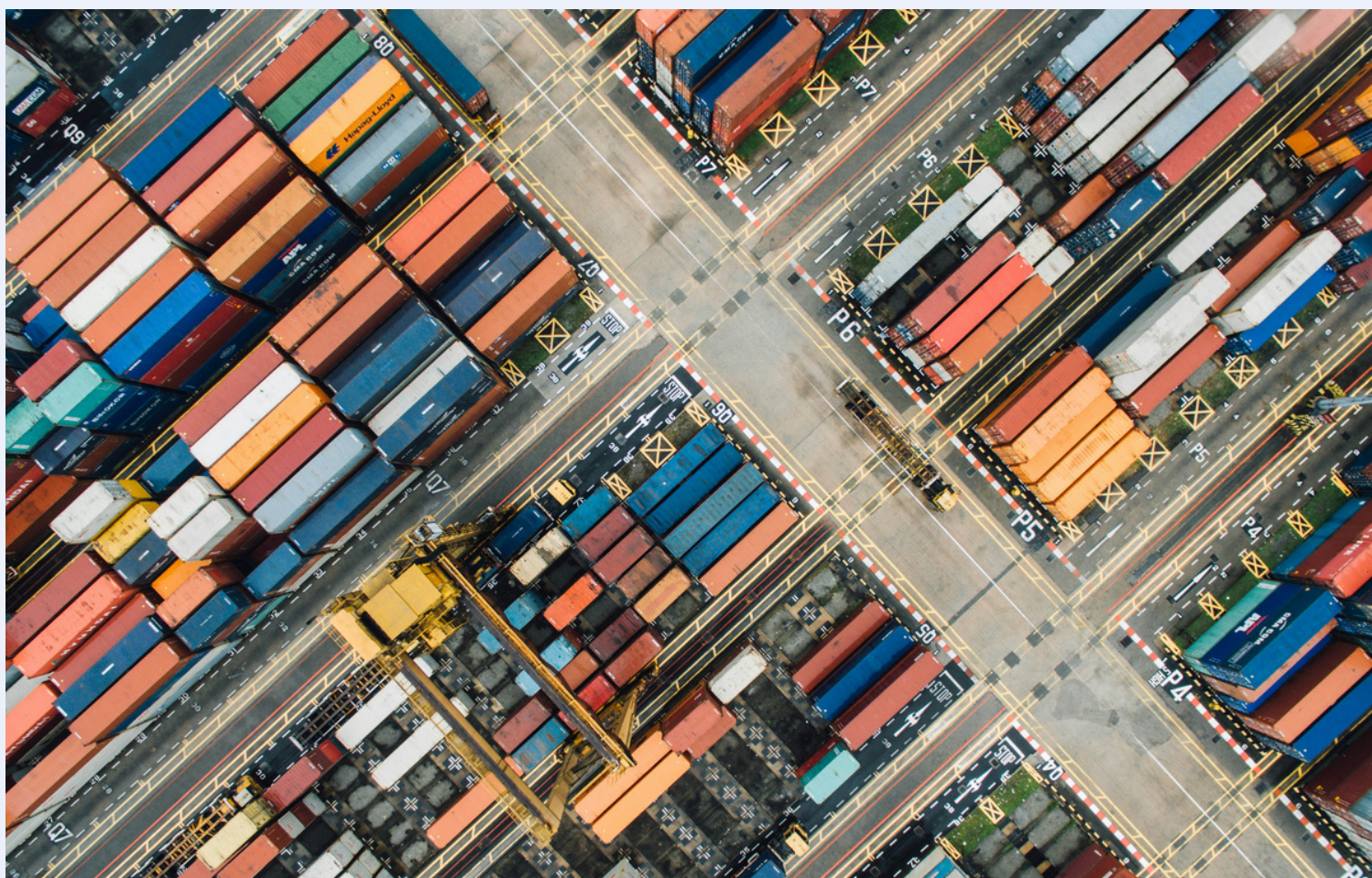
ICAO: Report on the feasibility of a long-term aspirational goal for international civil aviation CO2 emission reduction 2022; ATAG: Beginners Guide to sustainable aviation fuel 2023; IATA: Aircraft Technology Net Zero Roadmap 2023; Climate Catalyst: Kickstarting synthetic aviation fuels in Europe 2023; Energy Transition Commission, Financing the Transition: How to make the money flow for a net zero economy 2023.

Industry

In industrial sectors, progress will move slowly at first, but must quickly gain steam in order to unlock a critical mass of 700 near-zero-emission projects by 2030.

A groundswell of voluntary action from businesses, investors, cities and regions are driving breakthroughs in the supply of and demand for clean, efficient energy, zero carbon products and services, adopting compatible standards, and improving access to financing.








The Energy Transition Commission estimates that USD 540 billion of investment is required annually by 2030 for industry decarbonisation and resilience. This represents countless opportunities for new industries and job creation, coupled with increased support for skills and investment in the transition for workers.



Industry

2030 Targets


Source

<p>Steel</p> 	<ul style="list-style-type: none"> Near-zero emission steel is the preferred choice in global markets, with efficient use and near-zero emission steel production established and growing in every region by 2030. 70 (near) zero emission steel plants operational by 2030, producing well over 100Mt of green steel per annum. 	<p>Breakthrough Agenda</p> <p>2030 Breakthrough</p>
<p>Cement / Concrete</p> 	<ul style="list-style-type: none"> Over 20 cement plants with Carbon Capture Utilization & Storage. Carbon intensity per tonne of cement produced is reduced from 616 (2020 baseline) to at least 463 kg CO₂ / t cement by 2030. Near-zero emission cement is the preferred choice in global markets, with efficient use and near-zero emission cement production established and growing in every region by 2030 	<p>2030 Breakthrough</p> <p>Breakthrough Agenda</p>
<p>Aluminum</p> 	<ul style="list-style-type: none"> 43% of aluminium production to come from recycling and 35% of all aluminium plants are low carbon by 2030. 	<p>2030 Breakthrough</p>
<p>Metals & Mining</p> 	<ul style="list-style-type: none"> 60% reduction in operational emissions, while growing output of critical materials (up to 5x), ensuring highest ESG standards. 	<p>2030 Breakthrough</p>
<p>Chemicals</p> 	<ul style="list-style-type: none"> 60% of global chemicals sector electricity use from renewable sources by 2030 At least 50-120 Mt of near zero emissions ammonia produced 	<p>2030 Breakthrough</p>
<p>Plastics</p> 	<ul style="list-style-type: none"> 100% plastic packaging is reusable, recyclable, or compostable by 2025, and 2030 at the latest. 	<p>2030 Breakthrough</p>
<p>Technology-Based Carbon Removals</p> 	<ul style="list-style-type: none"> Carbon dioxide removals are responsibly scaled to remove 3.5 billion tonnes of carbon dioxide per year. 500 million tonnes of this must be stored for at least 100 years. 	<p>2030 Breakthrough</p>

Key:  Adaptation and Resilience

 Finance







 Mitigation

 Biodiversity

Industry

2030 Targets

Source

<p>Retail / Consumer Goods</p> 	<ul style="list-style-type: none"> Halve the environmental impact of shopping baskets by 2030. 	2030 Breakthrough
<p>Apparel</p> 	<ul style="list-style-type: none"> Secure 100% of electricity from renewable sources for owned and operated (Scope 2) emissions. Source 100% low climate impact materials ensuring that these do not negatively affect other sustainable development goals. 	Industry Climate Action Pathway
<p>ICT/Mobile</p> 	<ul style="list-style-type: none"> ICT: 80% of industry electricity use is decarbonized by 2030 Mobile: 70% of industry electricity use is decarbonized by 2030 	2030 Breakthrough
<p>Pharma / Med Tech</p> 	<ul style="list-style-type: none"> 95% of labs across major pharma and med tech companies are My Green Lab certified at the green level by 2030. 	2030 Breakthrough
<p>Private sector resilient planning</p> 	<ul style="list-style-type: none"> 2,000 of the world largest companies have developed actionable adaptation plans. 	Sharm El Sheikh Adaptation Agenda
<p>Private sector net-zero planning</p> 	<ul style="list-style-type: none"> Target in development. 	Race to Zero

Key:  Adaptation and Resilience

 Finance

 Mitigation

 Biodiversity

Industry Steel



2030 Targets

- Near-zero emission steel is the preferred choice in global markets, with efficient use and near-zero emission steel production established and growing in every region by 2030.
- 70 (near) zero emission steel plants operational by 2030, producing well over 100Mt of green steel per annum.



Progress to date

We are heading in the right direction, but progress is still too slow and off track to meet the 2030 targets.

The project pipeline for primary near-zero emission projects has increased to 13 Mt, from 5 Mt last year. If all 'capable' projects became near-zero, the pipeline equals 58Mt. This still represents a gap of 50Mt (Breakthrough Agenda Report 2023).

There has been good progress on standards and certification this year. However there is a gap in public and private sector demand translating to contracts and policies, climate finance to build projects in developing countries and trade agreements.

Acknowledging some of the organisations working towards this future

Net-Zero Steel Initiative; Mission Possible Partnership; ResponsibleSteel; Ceres; Net Zero Asset Owners Alliance; Task Force on Climate-related Financial Disclosures; SteelZero Initiative; C40 Clean Construction Declaration; Under2 Coalition Industry Transition Platform; LeadIT; CEM IDDI; FMC; MI NZIM; SteelZero; TACF; WWF.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Adopt net zero compatible mandatory standards from the mid-2020s.
- Increase the scale of near-zero emission steel procurement commitments supported by legal frameworks.
- Provide technical (R&D) assistance to emerging markets and developing economies with improved financing matchmaking function.
- Promote a strategic dialogue on trade to ensure near-zero emission steel can compete in international markets.
- Phase out blast furnaces, coke ovens and other emissions intensive assets.
- Take circular economy measures to reduce demand in volume.
- Deploy CCS to tackle remaining emissions from fossil-fuels production plants still operating in 2050.

Sources and references

Breakthrough Agenda Report 2023, ETC/MPP Steel Sector Transition Strategy, IRENA

Industry

Cement / Concrete



2030 Targets

- Over 20 cement plants with Carbon Capture Utilization & Storage.
- Carbon intensity per tonne of cement produced is reduced from 616 (2020 baseline) to at least 463 kg CO₂ / t cement by 2030.
- Near-zero emission cement is the preferred choice in global markets, with efficient use and near-zero emission cement production established and growing in every region by 2030



Progress to date

Decarbonisation in the cement sector has been lagging behind what is needed; despite a recent acceleration in activities.

Total CO₂ emissions from the cement sector have been rising since 2015. Emissions intensity of cement production has risen by nearly 10% since 2015, largely due to an increase in the clinker-to-cement ratio in China. By 2030, total emissions need to fall by around 20%, enabled in part by an increase in CCUS (IEA, 2023).

The 2021 Cement Industry GNR data show a 23% reduction in CO₂ per tonne of cementitious has been achieved since 1990 (GCCA, 2022).

During the 2020s, costs of producing near-zero emission cement are likely to remain significantly higher than conventional cement.

While a range of different low-emission technologies are under development, current estimates put low-emission cement at a 75% premium versus conventional cement production (IEA, 2023).

Acknowledging some of the organisations working towards this future

First Movers Coalition, GCCA and its members, Mission Innovation's Net Zero Industry Mission, Mission Possible Partnership (MPP); LeadIT, UNIDO.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Adopt net zero/green cement standards from the mid-2020s (mandatory) to support the creation of market demand.
- Increase the scale of near-zero emission cement procurement commitments supported by legal frameworks: to increase public/private demand signals.
- Provide technical (R&D) assistance to emerging markets and developing economies with improved financing matchmaking function.
- Deploy CCS to tackle remaining emissions from fossil-fuels production plants still operating in 2050.
- Establish national decarbonisation strategies and action plans for the cement sector.
- Set up technology and financial assistance vehicles in countries to accelerate decarbonisation of cement sector (public/private) and purchasing sectors for green cement.
- Design and implement circular economy strategies for all players to reduce demand in volume.

Sources and references

Breakthrough Agenda Report 2023, GCCA Industry Progress Report 2023, State of Climate Action Report 2023, GCCA / Getting the Numbers Right (GNR) Tool

Industry

Aluminum



2030 Targets

- 43% of aluminium production to come from recycling.
- 35% of all aluminium plants are low carbon by 2030.



Progress to date

Technological progress is being made, but post-consumer scrap collection rates vary widely across geographies and sectors. Scrap collection rates need to move from about 70% today, to more than 90% by 2050 to maximise circularity in the sector (MPP, 2022).

Over 70% of energy consumption for primary and recycled aluminium production is fossil-fuel based (WEF, 2022). Low carbon power, low carbon anodes and fuel switching in refineries can reduce emissions from the production of aluminium by 95% (MPP, 2022). Inert anodes represent the best opportunity to mitigate carbon emissions from smelting. Several companies (Rio Tinto, Alcoa, RUSAL, Arctus Aluminium) are actively developing inert anode technology, but it is not expected to achieve commercial readiness before 2030 and companies will face significant retrofitting costs.

Private sector net-zero commitments have increased significantly in the last decade. However, volumes of PPAs for renewable electricity signed by aluminium smelters remain low.

Acknowledging some of the organisations working towards this future

International Council on Metals and Mining (ICMM); International Aluminium Institute (IAI); SBTi, WEF First Movers Coalition; Aluminium Stewardship Initiative; Aluminium for Climate Initiative (MPP); Under2 Coalition Industry Transition Platform (The Climate Group); The Aluminium Association.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Heighten demand signal for low carbon aluminium (including secondary aluminium) to improve the business case and de-risk investment in low emission assets.
- Set up targeted policy and finance instruments to accelerate the learning curve and commercial readiness, and drive down costs for key technologies.
- Secure access to low carbon electricity and affordable pricing through close collaboration with electricity market players.
- Consider regulation to establish and maintain efficient infrastructure and collection systems for aluminium recycling (such as deposit return schemes).
- Introduce requirements for product design to improve repairability, durability, and recyclability.
- Accelerate the publication and socialisation of sector-specific SBTi guidance and support.

Sources and references

MPP - Making Net Zero Aluminium Possible - 2022; IEA - Net Zero Roadmap - 2023; WEF - The Net-Zero Industry Tracker - 2022.

Industry

Metals & Mining



2030 Target

- 60% reduction in operational emissions, while growing output of critical materials (up to 5x), ensuring highest ESG standards



Progress to date

Only 8% of the leading natural resources companies are on track to deliver Net Zero by 2050, 32% are off track, but decreasing emissions and 60% are off track, and still growing emissions. In fact 77% of these companies still do not have net zero targets covering scopes 1, 2 and 3. (Accenture, 2023). Similarly, there is mixed progress across ESG dimensions, with companies making headway on community investment, worker safety and gender balance, whilst demonstrating slow progress on environmental sustainability (IEA, 2023). Some operators are adhering to site-level responsible mining standards, where the Initiative for Responsible Mining Assurance (IRMA) and Towards Sustainable Mining (TSM) have seen greater uptake. However, no mine site has yet been able to achieve an IRMA 100 score following independent 3rd party assessment.

Whilst only 0.5% of mining equipment is fully electric today (McKinsey, 2020), significant progress is being made to address direct site-level emissions. For example, ICMM's Innovation for Cleaner Safer Vehicles (ICSV) initiative is fostering collaboration between member companies, OEMs and technology suppliers to set up pilot breakthrough solutions. Aligning to the ambition of increasing critical minerals output makes this ever more important.

Acknowledging some of the organisations working towards this future

International Council on Metals and Mining (ICMM); International Copper Association (ICA); Copper Mark; Intergovernmental Forum on Minerals, Mining and Sustainable Development; Natural Resources Governance Institute (NRGI), Extractive Industries Transparency Initiative (EITI), Initiative for Responsible Mining Assurance (IRMA); Digging for Climate Change, RE100, Climate Action 100+.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Activate regulation to accelerate transition of grids to renewable energy, and funding to de-risk these renewable energy project investments (particularly in global south countries where mining operations dominate).
- Improve financing matchmaking to ensure sites in developing countries receive financial and technical assistance to decarbonise operations.
- Set up technology and financial assistance to accelerate decarbonisation of mining fleets - e.g. via transitioning fuel source or retrofitting existing vehicles.
- Consider policy reform to drive for more efficient permitting processes, overcome long lead times and secure funding for geological surveys, to support the diversification of critical minerals supply.
- Facilitate a demand signal from governments and purchasing sectors for responsibly produced minerals aligned to ESG standards.
- Introduce harmonised and mandatory responsible mining standards, supported by capacity building efforts to increase corporate buy-in and transparent reporting.

Sources and references

IEA - Critical Minerals Market Review - 2023; IEA - Net Zero Roadmap - 2023; Accenture - Destination Net Zero - 2023; NRGI - Triple Win - 2022; ICA - Copper, The Pathway to Net Zero - 2023; McKinsey - Here's how the mining industry can respond to climate change - 2020; WRI - State of Climate Action - 2023.

Industry

Chemicals



2030 Targets

- 60% of global chemicals sector electricity use from renewable sources by 2030
- At least 50-120 Mt of near zero emissions ammonia produced



Progress to date

Many technologies for decarbonising ammonia and other chemical production are commercially available, however, the high capital intensity of plant modification is a notable barrier. Modifying existing ammonia plants to near zero emission ammonia production would require up to EUR 90 billion capex investment (Accenture, 2022).

Similarly, widespread availability of renewable energy is required to justify the electrification of chemical plants.

Direct carbon dioxide emissions from primary chemical production remained relatively constant at around 935Mt in 2022, but this was due to a stagnation in production (IEA, 2023). About 70% of all ammonia produced worldwide in 2021 was based on natural gas, with coal supplying the bulk of the rest (IEA, 2021).

Acknowledging some of the organisations working towards this future

Collaborative Innovation for Low-Carbon Emitting Technologies (LCET) coalition (MPP, WEF); Under2 Coalition Industry Transition Platform (The Climate Group); RE100; Climate Action 100+; SBTi; Cefic (European Chemical Industry Council).

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Accelerate the publication and socialisation of sector-specific guidance and support from the Science Based Targets Initiative (SBTi).
- Enhance policy frameworks to encourage corporate renewable energy sourcing.
- Support the development of infrastructure required to scale up renewable electricity supply.
- Consider demand-side policy mechanisms to stimulate investment in near zero emissions ammonia production, such as mandated content requirements in fertiliser production.
- Activate market signals, such as offtake agreements, to de-risk investment in low carbon chemicals production.
- Establish climate-aligned investment principles for near-zero emissions chemical production to mobilise necessary capital to develop related infrastructure assets.
- Set up appropriate policy and financing mechanisms to protect vulnerable and resource-constrained communities as ammonia production costs rise in the transition to lower emission production routes.

Sources and references

SBTi - Chemical Sector Status Report - 2023; IEA - Tracking Clean Energy Progress - 2023, IEA - Ammonia Technology Roadmap - 2021, Accenture - Road to Net Zero for the Chemical Industry - 2022, MPP - Making Net Zero Ammonia Possible - 2022.

Industry Plastics



2030 Target

- 100% plastic packaging is reusable, recyclable, or compostable by 2025, and 2030 at the latest



Progress to date

Currently, 50% of global plastic production is for single use, and 14% of packaging is collected for recycling (WEF, 2023). Secondary plastic is expected to make up only 12% of all plastics by 2060. Plastic waste is projected to triple by 2060, with 50% of all plastic waste still being landfilled, and only 17% being recycled (OECD, 2022).

Key challenges include higher relative profitability of primary plastics, low plastic collection rates, limited uptake of circular product design methods and mechanical recycling technology limitations. For example, 80% of the plastic in short-lived plastic products is not economically recyclable, due to non-circular design decisions, such as the use of additives or material combinations (UNEP, 2023). Additionally, the flexible packaging category (e.g. sachets, films) is increasingly unlikely to meet recyclability in practice and at scale by 2025 (Ellen MacArthur Foundation, 2022).

Moving forward, the legally binding UN Global Plastics Treaty aiming to eliminate plastic pollution is entering into an advanced phase of negotiations, with plans to conclude by end 2024.

Acknowledging some of the organisations working towards this future

C40 Zero; Waste Declaration; Ellen MacArthur Foundation-New Plastics Economy; Collaborative Innovation for Low-Carbon Emitting Technologies (LCET) coalition (MPP, WEF); Waste & Resources Action Programme (WRAP); Net-Zero Asset Owners Alliance; Platform for Accelerating the Circular Economy (PACE).

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Drive co-ordinated global policy action across the lifecycle to reduce plastics demand, enhance circularity and recycling, and close leakage pathways (e.g. EU's PPWR).
- Harmonise international standards for designing products and packaging with circularity in mind to enable cross-market activity and streamline use of chemical additives.
- Improve economics of reuse and recycling to make it more stable and profitable, including access to feedstock.
- Unlock investment in collection and sorting infrastructure, and RD&D for high-quality and cost-effective plastic sorting and recycling technology.
- Set up more effective governance structures, capacity building and financial support to improve collection rates in areas that generate a high share of plastic pollution - adapted to regional requirements.
- Establish a credible plan to address the growing issue of flexible packaging waste.

Sources and references

WEF - Accelerating reuse models to achieve a world free of plastic waste - 2023; OECD - Global Plastics Outlook: Policy Scenarios to 2060 - 2022; UNEP - Turning off the tap - 2023; Accenture - The future of packaging in the circular economy - 2023; McKinsey - Scaling plastics circularity - 2023; Ellen Mac Arthur Foundation - Global Commitment Report - 2022; EU - Packaging and Packaging Waste Directive - 2023.

Industry

Technology-Based Carbon Removals



2030 Targets

- Carbon dioxide removals are responsibly scaled to remove 3.5 billion tonnes of carbon dioxide per year.
- 500 million tonnes of this must be stored for at least 100 years.



Progress to date

The growing sales of future purchases and the continued commitment of major players like Microsoft, Airbus, and NextGen to a fast expansion of carbon dioxide removal (CDR) technologies and capture of CO₂ are positive indicators of the increasing trust in the CDR market.

CDR sales have risen 300% since April 2023. CDR market has grown into a USD 400 million market in just three years. Currently, top 5 purchasers are Microsoft (2,819,637 tonnes), Airbus (400,000), NextGen (193,125), Frontier (121,409) and JPMorgan Chase & Co. (63,752). (CDR.fyi, 2023)

However, this progress only accounts for 0.0399% of what is required to achieve our 2050, 10 gigaton/ year global target. However, the slow rate of actual delivery of these CDR solutions indicates the need for a more rapid and efficient scaling up of operations. (Carbon unbound, 2023)

Acknowledging some of the organisations working towards this future

Global Carbon removal partnership, Foundation for Climate Restoration; Carbon Gap; Systems Change Lab; Rethinking Removals; Climate Action Platform Africa; World Resources Institute; Open Air, CAEM, ICCI, DACC

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Provide updated assessments of the state of individual CDR methods about costs, potentials, hazards, co-benefits, technology readiness, potential, and other factors.
- Assemble a more complete picture of research and innovation across countries and methods, similar to the process followed by the International Energy Agency for Energy Research, Development and Demonstration (RD&D) and by the International Renewable Energy Agency for tracking renewable projects and their pipelines.
- Design policy instrument and evaluation in areas such as monitoring, reporting, and verification.
- Establish public-private partnerships that can scale up the technology faster, provide the necessary funding for RD&D activities, create demand for carbon removals through procurement programs, and facilitate stakeholder engagement activities.
- Ensure opportunities for community ownership of CDR benefits, as well as efforts to ensure a just and well-managed transition of skills and expertise into new jobs in the emerging carbon removal sector.

Sources and references

State of CDR - 2023, Centre for Energy and climate solutions, Engineered CDR - Scalability & durability - 2022, Carbon unbound - 2023

Industry

Retail / Consumer Goods



2030 Target

- Halve the environmental impact of shopping baskets by 2030 (*)



Progress to date

Retailers and manufacturers are making progress on Scope 1 and 2 but Scope 3 is still representing a major challenge. The first progress report from the WWF UK shows that retailers have achieved an average reduction in Scope 1 and 2 emissions of 4% and 43% respectively against their respective baseline years. However, Scope 3 emissions across multiple years (on which three retailers reported this year) have seen an average increase of 5%.

This retail snapshot is reflective of the industry more broadly with only 6% of the leading Consumer Goods and Services Companies being on track for delivering Net Zero by 2050, 39% are off track, but decreasing emissions and 55% are off track, and still growing emissions (based on research of the 2,000 largest public and private companies by revenue globally - the G2000). For Retailers 27% on track for delivering Net Zero by 2050, 34% are off track, but decreasing emissions and 40% are off track, and still growing emissions.

Acknowledging some of the organisations working towards this future

WWF; CGF; WBCSD; WEF; The Ellen MacArthur Foundation.

(*) target based on WWF UK source, relevant for developed countries mainly.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Encourage net zero target-setting that cover the entire value chain.
- Enable engagement between companies and policymakers on the implications of increasing regulatory requirements and disclosures e.g., EUDR, CSRD.
- Support policy decisions at national/sub-national level that incentivize action.
- Drive pre-competitive collaboration across the consumer industries value chain - especially related to data sharing, joint pilots, and financing of shared infrastructure needed for the transition.
- Embed just transition livelihoods for affected communities and human rights across the value chain into net zero transition plans and strategies.
- Deploy private/public financing to implement and scale climate change mitigation solutions such as regenerative agriculture, circular packaging solutions, fleet electrification, and alternative protein products.
- Support R&D and deployment of emerging technologies to scale more sustainable products (including packaging) and increase availability and accessibility to consumers
- Engage with consumers to enable them to make healthier and more sustainable purchasing decisions.

Sources and references

WWF UK - What's in store for the planet: the impact of the UK shopping basket on climate and nature - 2022; Accenture - Destination net zero - 2023.

Industry

Apparel



2030 Targets

- Secure 100% of electricity from renewable sources for owned and operated (Scope 2) emissions.
- Source 100% low climate impact materials ensuring that these do not negatively affect other sustainable development goals.



Progress to date

Some of the largest brands and suppliers have set a measurable 100% renewable energy target for their operations by 2030.

Progress however is difficult in manufacturing countries in South East Asia, with varying accessibility to renewable energy solutions. Barriers are mostly cited around lack of available actions, policy and financial incentives. (Fashion Charter Progress Report, 2023).

On the materials side, more than half of global growing fiber production is reported to still be fossil based. (Preferred Fibers and Materials Report).

More commitment, investment and research is needed to speed up the shift from conventional—particularly fossil-based—to preferred fiber and materials is needed (Preferred refers to “fibers and materials which results in improved environmental and/or social sustainability outcomes and impacts compared to conventional production).

Acknowledging some of the organisations working towards this future

UN Fashion Charter ; Fashion Industry Charter for Climate Action; Fashion Pact; Fashion Industry Charter for Climate Action; Global Fashion Agenda; International Finance Corp; Fashion for Good

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Invest in energy and recycling infrastructure, and create a set of incentives that supports private sector investment in low GHG technologies and practices.
- For non-grid challenges - such as agricultural production, high-heat processes, energy efficient machinery, off-grid power etc: create an effective incentive and regulatory structure.
- Invest in data, transparency and innovation in effective fibre recycling systems; low impact raw material production and innovation.
- Develop financial actions in developing countries to generate the business case for investment.
- Develop policies to create favorable renewable markets and enable direct renewable energy PPAs.
- Deploy mechanisms such as commercially preferential contracts, long term partner status, research, technical or financial support or participation in 3rd party programmes etc.

Sources and references

Fashion Charter Progress Report 2023; Preferred Fibers and Materials Report

Industry

ICT / Mobile



2030 Targets

- ICT: 80% of industry electricity use is decarbonized by 2030
- Mobile: 70% of industry electricity use is decarbonized by 2030



Progress to date

Heading in the right direction. Leading ICT & Mobile players are already reporting 100% renewable electricity and some companies are exploring further steps, such as Google's 24/7 Carbon Free Energy initiative, focused on hourly carbon free energy of the grid.

Mobile Operators are also making progress, directly purchasing 24% of their electricity from renewable sources, up from 18% in 2021 and 14% in 2020 (GSMA). This is in addition to renewables supplied through the electricity grid mix.

However, challenges exist in accessing renewables in many countries, particularly in equipment manufacturing regions, as referenced by Samsung's RE100 commitment from September 2022.

There is a need for policymakers to help expand renewable electricity access to facilitate private sector purchases in countries across LATAM, MENA, Africa and APAC. The industry is proactively working with governments, regulators and energy companies to create mechanisms to enable the corporate purchase and investment into new renewable generation facilities, with broader developmental benefits.

Acknowledging some of the organisations working towards this future

ITU, GSMA, GeSI, RE100, WBCSD, WEF, 1.5C Supply Chain Leaders, European Green Digital Coalition, TechUK, ITI, TechZero, TechUK, Large electricity users including: Google, Microsoft, Apple, Samsung, Amazon, Meta, TSMC.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- ICT/Mobile Companies to switch to 100% renewable electricity where feasible, and where not, to engage with local policymakers in Latin America, Africa and Asia.
- Policymakers to create favourable renewables markets and conditions for investment into renewable energy. Including guarantees of origin for all renewable energy projects, enabling direct clean energy PPAs and local policies to extend reach of RE through grids to reach remote communities.
- Harmonise global standards and policy for the description of green bonds.
- Improve accuracy of progress tracking through transparency of corporate renewable energy sourcing data and definitions (e.g. RECs, PPAs). Effort is needed to aggregate and harmonize local definitions to produce accurate emissions reporting.

Sources and references

ICT & Mobile 2030 Breakthrough (Climate Champions). ITU L.1470 GHG trajectory, ICT SBTi pathway, GSMA, 24/7 Carbon Free Energy Initiative.

Industry

Pharma / Med Tech



2030 Target

- 95% of labs across major pharma and med tech companies are My Green Lab certified at the highest certification level by 2030.



Progress to date

The sector, while actively engaging in various emission reduction initiatives, has witnessed a rise in its global carbon emissions share from 3.9% in 2021 to 5% in 2022 (My Green Lab, 2023), indicating the urgency for more robust actions.

Promising sector signals include 56% of the sector (measured by revenue) committed to the Race to Zero, and nearly two-thirds of these organizations pursuing My Green Lab Certification. Additionally, programs such as Energize, which encourages renewable power adoption, and the Sustainable Medicines Initiatives, which focuses on the impact of pharmaceutical manufacturing, continue to gain traction.

Recently the sector has worked collectively to launch joint supplier initiatives to help align suppliers, which account for the majority of sector emissions, to climate and sustainability targets. Examples of this include the Sustainable Markets Initiative's Joint Supplier Targets, and the Converge Initiative, which was founded by five global pharmaceutical companies and announced at COP28.

Acknowledging some of the organisations working towards this future

My Green Lab; Pharmaceutical Supply Chain Initiative; Sustainable Healthcare Coalition; Sustainable Medicines Partnership

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Establish renewable energy policies and power purchase agreements that commit sector facilities to 100% renewable energy by 2030 or sooner.
- Encourage scientific funders to set expectations for efficiency, resiliency, and sustainability in the way scientific research is conducted.
- Perform continuing equipment monitoring and other data-driven activities to identify and abate sector-specific energy-intensive hotspots such as laboratory equipment and ventilation.
- Apply sustainable medicine best practices to pharmaceutical manufacturing that reduce the unnecessary production, transport, packaging, and disposal of medicines.
- Continue to align joint supplier initiatives and targets to provide clear signals to sector suppliers on environmental reporting and emission reduction requirements.
- Support the use of existing and emerging technologies that reduce the environmental impact of regulated medical waste and its disposal.
- Establish environmentally preferred purchasing programs that require consideration of the environmental and carbon impact of purchased goods and services.

Sources and references

Race to Zero Progress Report, 2023; My Green Lab, Carbon Impact of Biotech and Pharma Report (<https://www.mygreenlab.org/2022-carbon-impact-of-biotech-pharma-report.html>), 2023.

Industry

Private sector resilient planning



2030 Target

- 2,000 of the world largest companies have developed actionable adaptation plans



Progress to date

Most of private climate action has focused on mitigation in the past but businesses are recognizing the emerging and compound risks presented by climate change and are starting to prioritise activities and investments that enhance resilience across their supply chain, assets and operations. This is especially important for companies that own and operate critical infrastructure and supply chains and provide essential services highlighted in countries' NAPs and NDCs.

There are no data sources that track the number of adaptation plans at the corporate level. The increasing responses to physical climate risk in existing disclosure databases like CDP signal progress in this area. 25% of 18,700+ companies reported on physical climate risk in 2022. However, worth noting this number does not necessarily translate to adaptation plans; only that companies are recognizing and quantifying the impacts of physical climate risks. WEF adaptation stocktake progress report showed that 27 out of 100 companies identified adaptation-related opportunities.

Global developments in private sector adaptation and resilience— including regulations and standards – have led to increasing disclosures on climate risks. In CDP's 2022 Global Water report, there has been an 85% increase in disclosure over the last five years, with global brands reporting water-related opportunities worth USD 436 billion.

Acknowledging some of the organisations working towards this future

Resilience Rising, Resilience First, ICSI, C2ES

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Companies to continue recognizing the materiality of physical climate risks on their assets, supply chains, operations.
- Mainstream climate resilience into business-as-usual decisions - including addressing barriers in lack of clarity around the role of the private sector, climate information, and methodologies and disclosures for Adaptation & Resilience.
- Embrace the opportunities for contributing to broader community resilience alongside protecting a company's own assets and operations.
- Governments to step up to help de-risk the investments that can generate wider, direct socioeconomic co-benefits.
- Showcase the emerging stories of private sector action to build resilience for their own assets and operations.
- Foster collaboration between public and private sectors to build innovative and effective climate adaptation and resilience strategies that benefit both businesses and communities alike.

Sources and references

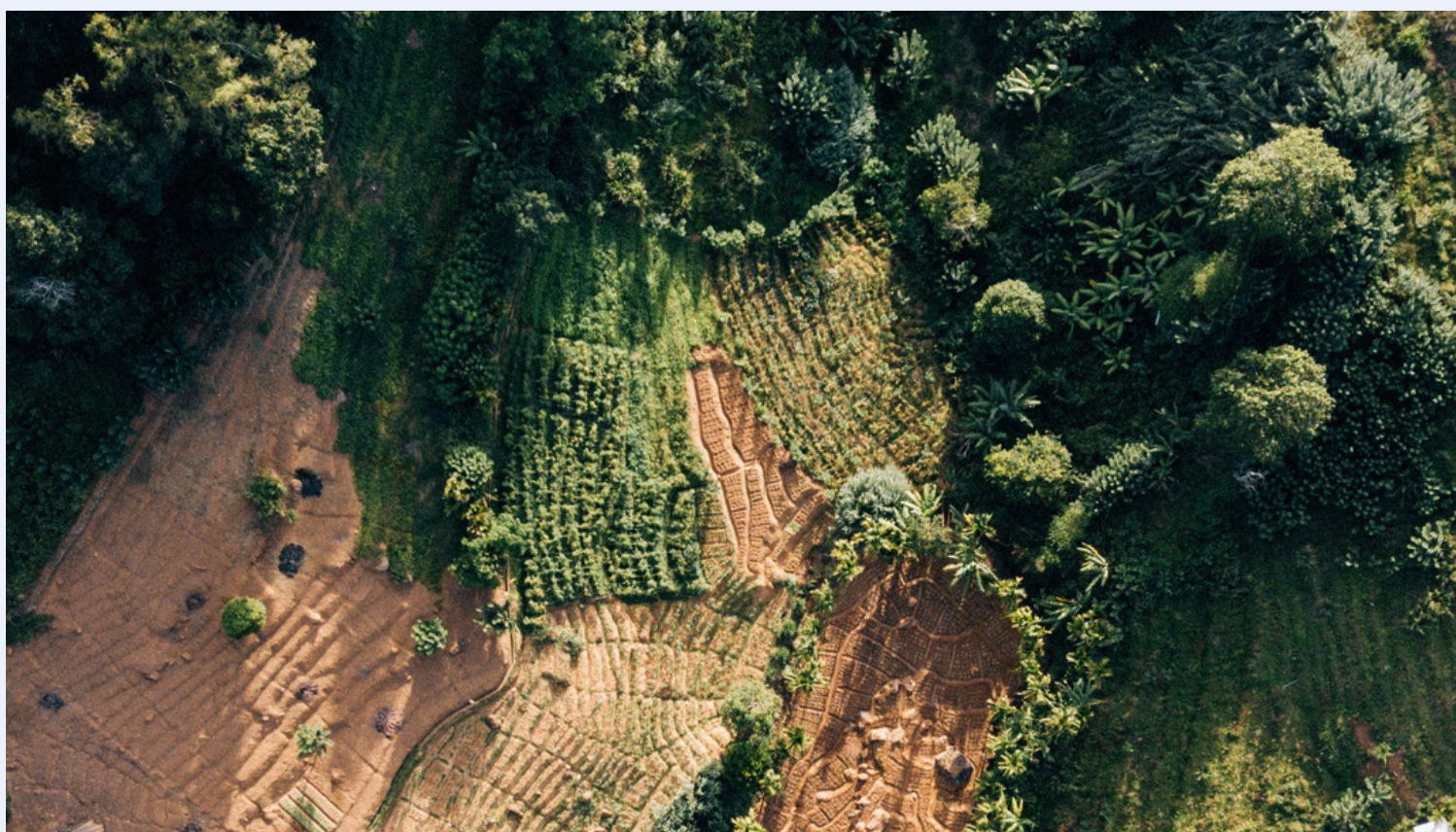
CDP Corporate Climate Change Questionnaire 2022
Sharm Adaptation Agenda First Implementation Report, 2023
WEF Accelerating Business Action on Climate Change Adaptation, 2023

Land-Use

Nature – restored, protected, and inclusively managed – is pivotal to our survival and prosperity. This vision requires inclusivity, where women, youth, and especially Indigenous Peoples – stewards of 85% of the world’s biodiversity – play central roles.

As we navigate the challenges of the 21st century, our understanding of nature must grow. Beyond mere conservation, it’s about tapping into nature's unparalleled economic, societal and environmental wealth. Nature systems such as forests, peat lands, and nature-based solutions deliver one-third of the emissions reduction needed by 2030, underpinning over USD 44 trillion of global GDP and the resilience of all of humanity. They also offer the potential of 400 million jobs by 2030.





How we produce food deeply relies on nature. Changing not just how we grow food but also the kinds of foods we produce and consume, is paramount to both protecting nature and combating climate change. Farmers, cities, businesses, financial institutions and others are taking action across critical areas of the food system, to shift to more nature-friendly farming, regenerative agriculture, healthier diets, and dramatically reduce food loss and waste.



Land-Use

2030 Targets

Source

<p>Nature-Based Solutions for Mitigation</p> 	<ul style="list-style-type: none"> • More than 10Gt CO2e mitigated per year through nature-based solutions by 2030, including the protection (45MHa), sustainable management (2BHa) and restoration (350Mha) of land and demand side food system action. • By 2030: secure indigenous and local community rights, protect 45Mha, restore 350Mha of degraded land and sustainably manage forests and other terrestrial biomes. 	<p>2030 Breakthrough</p>
<p>Resilient Natural Landscapes</p> 	<ul style="list-style-type: none"> • Protection of 30% of the world’s lands and inland waters, 2 billion hectares sustainable management and 350 million hectares restoration of land securing legal Indigenous and local communities with use of nature-based solutions to deliver the integrity of natural ecosystems for climate, water, food, health and other biodiversity life supporting roles 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Halting deforestation and investing in nature</p> 	<ul style="list-style-type: none"> • Financial institutions contribute to halting land conversion by eliminating commodity-driven deforestation from portfolios, and triple investment in Nature-based Solutions, to reach USD 484 billion/year needed by 2030. 	<p>2030 Breakthrough</p>
<p>Sustainable and Resilient Agriculture</p> 	<ul style="list-style-type: none"> • By 2030: climate-resilient, sustainable agriculture is the most attractive and widely adopted option for farmers everywhere and 2BHa of land is sustainably managed. • 50% of food globally is produced through sustainable agriculture practices (including agroecological and regenerative approaches), without expansion of the agricultural frontier into pristine ecosystems, to deliver for people, nature and climate. • Advance a just and inclusive food systems transition, ensuring equitable and resilient livelihoods and meaningfully engaging all relevant stakeholders, and especially smallholders, women, youth and Indigenous Peoples, in relevant plans, processes and finances that affect them, with emphasis on supporting their efforts to secure land and resource tenure rights, as well as boosting local markets for local consumption. 	<p>Breakthrough Agenda</p> <p>Sharm El Sheikh Adaptation Agenda</p>

Key:  Adaptation and Resilience

 Finance




 Mitigation

 Biodiversity

Land-Use

2030 Targets

Source

<p>Healthy and sustainable food for all</p> 	<ul style="list-style-type: none"> • Demand-side food system action, including a culturally appropriate 40% global shift to the 'Planetary Health Diet' and halving per capita food waste. • Adoption of healthy, locally-appropriate, and sustainable diets in line with global goals, respecting socio-cultural sensitivities and geographic variations. This includes increasing the global consumption per capita of fruits, vegetables, seeds, nuts, and legumes by 1.5x, while also significantly increasing the share of alternative plant-based proteins in the meat and seafood markets. • By 2030, end hunger and climate-induced malnutrition in all its forms, in particular for the poorest and most vulnerable, including infants, through access to safe, nutritious and sufficient food all year round. 	<p>2030 Breakthrough</p> <p>Sharm El Sheikh Adaptation Agenda</p>
<p>Reducing food loss and waste</p> 	<ul style="list-style-type: none"> • Halve global food waste and food loss per capita (relative to 2019). 	<p>Sharm El Sheikh Adaptation Agenda</p> <p>2030 Breakthrough</p>
<p>Financing the food systems transformation</p> 	<ul style="list-style-type: none"> • Scale and re-orient finance flows from public and private sources towards resilient, inclusive and sustainable food systems, increasing direct access for small-scale family farmers, women, youth, and Indigenous Peoples, aligned with climate risk-informed food policies and plans. 	<p>Sharm El Sheikh Adaptation Agenda</p>

Key:  Adaptation and Resilience

 Finance

 Mitigation

 Biodiversity

Nature-Based Solutions for Mitigation



2030 Targets

- More than 10Gt CO₂e mitigated per year through nature-based solutions by 2030, including the protection (45Mha), sustainable management (2BHa) and restoration (350Mha) of land and demand side food system action.
- By 2030: secure indigenous and local community rights, protect 45Mha, restore 350Mha of degraded land and sustainably manage forests and other terrestrial biomes.



Progress to date:

Global land restoration and conservation initiatives are making significant strides in combating land degradation. These efforts are being supported by the development of monitoring and tracing tools and an increasing reliance on the participation of Indigenous Peoples and Local Communities (IPLC). Global initiatives include the UN-Decade of Restoration, G20 Global Land Initiative, AFR100, RESTOR Africa, and RESTOR Asia, and many others are taking considerable steps towards halting land degradation by 2030.

The United Nations Environment Programme has declared the current decade (2021 to 2030) as the UN Decade on Ecosystem Restoration. Restoring 350 million hectares of degraded land by 2030 could remove 13-26 gigatons of greenhouse gases from the atmosphere and generate significant economic benefits.

Nature-based solutions face hurdles such as low public awareness, technical and logistical issues, and lack of standardized methodologies (IPCC). Social factors like overlooked indigenous rights and inadequate local engagement further impede success.

Short-term economic priorities of governments and fragmented conservation efforts weaken long-term sustainability, with projects often missing synergistic opportunities for greater impact.

Acknowledging some of the organisations working towards this future

UNCCD, Afr100, UNEP, IUCN, GEGA, FAO, CCT, N4C, CI, WEF-TFA, Global Canopy, Consumer Goods Forum, WBCSD, Business for Nature, Finance for Biodiversity, WRI, System Change Lab, Exponential Roadmap, Global Commons Alliance, MPP

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Businesses to adopt the Science Based Targets initiative (SBTI) guidance on Forest, Land, and Agriculture, to integrate nature into their climate plans, and to join the Science-Based Targets Network (SBTN).
- Financial institutions to commit to eliminating commodity-driven deforestation.
- Develop capacity-building focussing on understanding and incorporating biomes in restoration plans.
- Leverage private capital through bonds and carbon taxes or cap-and-trade systems.
- Use technological innovations such as satellites and drones for land management and deforestation monitoring.
- Empower local communities and policymakers, harmonize international efforts, and establish strong regulatory frameworks, including secure land tenure for indigenous communities and promote women's roles in decision-making.

Sources and references

2030 Breakthroughs, 2021; ENACT report, 2023, IUCN; Land Use 2030 Breakthroughs; IPCC Report, UNFCCC, 2023 Global Land Initiative, UNCCD, 2022

Resilient Natural Landscapes



2030 Target

- Protection of 30% of the world's lands and inland waters, 2 billion hectares sustainable management and 350 million hectares restoration of land securing legal Indigenous and local communities with use of nature-based solutions to deliver the integrity of natural ecosystems for climate, water, food, health and other biodiversity life supporting roles.



Progress to date

To date, 16% of the world's lands and their embedded inland waters are under protection. There is still a gap of 14% to be bridged to reach the Kunming-Montreal 30 by 30 target of protecting at least 30% of the world's lands and inland waters.

The target of protecting 350 million hectares comes from the Bonn Challenge to bring 350 millions hectares of degraded and deforested landscapes into restoration by 2030. Since its launch, pledges under the Challenge have now reached 210 million hectares of land area for restoration across 60 countries.

There is currently no known initiative actively tracking the sustainable management of land, partly due to the lack of a universally accepted definition of sustainable land management. The ENACT initiative is setting up a tracking mechanism for these goals. The engagement of Indigenous Peoples and local communities is critical to successfully achieve resilient natural landscapes.

Acknowledging some of the organisations working towards this future

ENACT, IUCN, FAO, CI, TNC, WWF

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Improve and harmonize monitoring frameworks, reporting systems, data and tools (e.g. satellite data, inclusion metrics) and agree on common robust tracking mechanisms to assess the success of management and restoration solutions.
- Include those directly affected by climate, particularly local communities and indigenous people.
- Enhance connection between climate goals and development objectives to help address other limiting factors e.g. land tenure.
- Strengthen policy and integrate financial mechanisms (e.g. Payment for ecosystems services to land owners).

Sources and references

Protected Planet, 2023; ENACT Report, 2023; Sharm Adaptation Agenda First Implementation Report, 2023

Land-Use

Halting Deforestation and Investing in Nature



2030 Target

- Financial institutions contribute to halting land conversion by eliminating commodity-driven deforestation from portfolios, and triple investment in Nature-based Solutions, to reach USD 484 billion/year needed by 2030.



Progress to date

The Forest Declaration Assessment (2023) calculates that the world lost 6.6 million hectares of forest, an area larger than Sri Lanka, and deforestation rates increased by 4% in 2022. Progress on the Glasgow Declaration on Forests remains slow, however there is momentum as a result of the Kunming-Montreal Global Biodiversity Framework which calls for alignment of public/private/and financial flows from other sources.

36 leading Financial Institutions have signed the Finance Sector Deforestation Action (FSDA) initiative through which they committed to best efforts to eliminating commodity-driven deforestation risk across portfolios for forest-risk commodities (soy/paper/pulp/palm oil/beef), address human rights abuses, and increase investments in NBS by 2025, put in place deforestation policies, developed common set of investor expectations, started or strengthened engagement with companies in their portfolios, engaging with data providers, and are disclosing deforestation risk and mitigation activities in portfolios, including due diligence and engagement.

Acknowledging some of the organisations working towards this future

Finance Sector Deforestation Action members, Conservation International, Global Canopy, Global Optimism, High-Level Champions, Nature4Climate Coalition, and WEF Tropical Forest Alliance., Make My Money Matter, Forest Climate Leaders Partnership, PRI, UNEP FI, IIGCC, Investor Agenda

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Financial Institutions to assess and mitigate deforestation-related risks in line with the Deforestation-Free Finance Sector Roadmap, and scale investments in nature-based solutions.
- Civil society to develop new tools/resources and pressure on financial institutions to address deforestation and land conversion.
- Mainstream deforestation guidance through climate transition plans through Investor Climate Action Plan and Net Zero Investment Framework guidance.
- Governments to set policy targets for halting and reversing deforestation and land conversion and the recognition and adoption of Free Prior and Informed Consent (FPIC) regarding rights of Indigenous communities.
- Achieve sufficient finance to support climate-proofed area-based management tools, including funds from governments, public-private partnership, payment for ecosystem services and innovative financing sources (e.g. Debt conversion deals for nature and climate) and trust funds or coalition for private investment.
- Build pipeline of bankable NBS projects through public-private-philanthropic partnerships.

Sources and references

Climate Champions Team, Finance Sector Deforestation Action initiative, 2023; Investor Climate Action Agenda, 2023; Nature Action 100, 2023; PRI nature stewardship initiative, 2023; UNEP State of Nature Finance Report, 2022; Forest Declaration Assessment, 2023

Land-Use

Sustainable and Resilient Agriculture



2030 Targets

- By 2030: climate-resilient, sustainable agriculture is the most attractive and widely adopted option for farmers everywhere and 2Bha of land is sustainably managed.
- 50% of food globally is produced through sustainable agriculture practices (including agroecological and regenerative approaches), without expansion of the agricultural frontier into pristine ecosystems, to deliver for people, nature and climate.
- Advance a just and inclusive food systems transition, ensuring equitable and resilient livelihoods and meaningfully engaging all relevant stakeholders, and especially smallholders, women, youth and Indigenous Peoples, in relevant plans, processes and finances that affect them, with emphasis on supporting their efforts to secure land and resource tenure rights, as well as boosting local markets for local consumption.



Progress to date

Transitioning to sustainable, regenerative, agroecological production is a critical part of the solution. There is evidence that such practices can help to achieve climate and biodiversity goals and increase yields and farmers incomes vs. a business-as-usual approach. For example, some studies suggest yield increases could be as high as 40% and the boost to economies would create as many as 5 millions full-time jobs by 2040 in farming, processing, and supportive industries (GAFF, 2023).

Practices will vary by landscape and local context, which makes it difficult to measure, however there is growing alignment around a common set outcomes that deliver for people, nature, and climate (Regen10, 2023). As a proxy, the organic share of total agricultural land was at 1.5% in 2019, as reported by FIBL, indicating that adoption of sustainable agriculture practices is still very low (FIBL, 2021).

This transition must draw on the traditional knowledge of Indigenous Peoples and Local Communities around the world, and must be based on just transition principles (JRT, 2023; ActionAid, 2019).

Acknowledging some of the organisations working towards this future

Just Rural Transition, The Agroecology Fund, The Agroecology Coalition, Regen10, FAO, Global Alliance for the Future of Food (GAFF), IUCN, Food and Land Use Coalition (FOLU), Food and Agriculture for Sustainable Transformation Initiative (FAST).

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Reorientate agricultural and food policies and repurpose public subsidies to incentivise sustainable, regenerative, agroecological approaches and more plant-based, resilient, sustainable, and locally-appropriate food production and consumption.
- Address trade, finance, and regulatory barriers to ensure a level playing field for healthy, sustainable and fair trade products.
- Prioritize climate risk-informed, direct access to finance for small-scale farmers, especially in developing countries.
- Invest in innovation, such as in organic fertilizers, to drive adoption of sustainable, regenerative, agroecological approaches.
- Implement just transition principles, ensuring policy and financial instruments are designed with the goal of fairly distributing the risks, burdens, and benefits of the transition.

Sources and references

Breakthrough Agenda Report 2023; Sharm Adaptation Agenda Implementation Report, 2023; Global Alliance for the Future of Food (GAFF), Natural farming through a wide-angle lens, 2023; FIBL, The World of Organic Agriculture 2021; IUCN, Regenerative agriculture works: New research and African businesses show how, 2021; Just Rural Transition (JRT), Principles for Just Food System Transitions 2023; ActionAid, Principles for a Just Transition in Agriculture, 2019; Regen10, Accelerating an Evidence, Outcomes, and Principles-Based Transition, Accessed 2023.

Land-Use

Healthy and sustainable food for all



2030 Targets

- Demand-side food system action, including a culturally appropriate 40% global shift to the 'Planetary Health Diet' and halving per capita food waste.
- Adoption of healthy, locally-appropriate, and sustainable diets in line with global goals, respecting socio-cultural sensitivities and geographic variations. This includes increasing the global consumption per capita of fruits, vegetables, seeds, nuts, and legumes by 1.5x, while also significantly increasing the share of alternative plant-based proteins in the meat and seafood markets.
- By 2030, end hunger and climate-induced malnutrition in all its forms, in particular for the poorest and most vulnerable, including infants, through access to safe, nutritious and sufficient food all year round.



Progress to date

Over 900 million people are food insecure and over 3 billion cannot afford a healthy diet (FAO, 2023). An equitable transition to healthy, locally-appropriate, and sustainable diets in line with global goals can contribute significantly to reducing greenhouse gas emissions, build climate resilience, and safeguard food and nutrition security. Shifting to diets that are predominantly low-meat and plant-rich is particularly important in regions and communities with overconsumption of meat.

It is important to note that diets will differ in every part of the world and should be equitable and respect socio-cultural differences and varying geographical contexts. The food and nutrition security of the most vulnerable should be prioritised. Regions where undernutrition and micronutrient deficiencies are prevalent may need to increase consumption of animal-based proteins.

There are some promising trends in shifting towards healthy, sustainable diets and as of 2023, there are 612 food and agriculture members in the Race to Zero, a 76% growth from 2022 (347 members). However progress is slow and remains off track.

Alternative plant-based proteins that are healthy, minimally-processed, and sustainable could provide an opportunity to support this transition.

Acknowledging some of the organisations working towards this future

WWF, EAT, FAIRR, Transforming Urban-Rural Food Systems Consortium (TURFS), I-CAN, Stronger Foundations for Nutrition, Global Action Platform on Sustainable Consumption and Diets, Good Food Institute, Madre Brava.

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Change food environments, availability, and prices, so that it's easier for people to eat more healthy and sustainably, including using public procurement to source healthy and sustainable food, and introducing policies that level the regulatory playing field for plant-based, sustainable foods (e.g. repurpose public subsidies, fair marketing and labelling regulations).
- Apply true cost accounting to food policy, especially to meat in high-consuming countries, and use findings to drive fiscal and regulatory policies, which also subsidise the shift to sustainable and healthy diets (e.g. fruit and vegetable subsidies).
- Invest in values-based consumer awareness and education (i.e. health, animal welfare, environmental, social and cultural) to encourage healthy and sustainable consumption.
- Update national dietary guidelines to foster healthy nutrition that is climate compatible.
- Ensure R&D in alternative plant-based foods results in healthy, nutritious, sustainable and affordable products.
- Include nutrition-related indicators (incl. child wasting and food prices) in early warning systems for climate-related shocks and expand climate and nutrition-sensitive social protection to safeguard food and nutrition security of the most vulnerable.

Sources and references

IPCC AR6 Synthesis Report: Climate Change 2023; EAT-Lancet Commission Report 2019; GRI, Creating a Sustainable Food Future: Interim Findings, 2013; Global Alliance for the Future of Food, 2023; WHO, Healthy Diet Fact Sheet 2021; WRI, Creating A Sustainable Food Future, 2019; FAO, The State of Food Security and Nutrition in the World 2023, 2023; Sharm Adaptation Agenda First Implementation Report, 2023.

Land-Use

Reducing food loss and waste



2030 Target

- Halve global food waste and food loss per capita (relative to 2019).



Progress to date

Reducing food loss - resulting from losses throughout the food supply chain - and food waste - resulting from decisions or actions taken by consumers and retailers - is a significant lever to build the resilience of agri-food systems and reduce emissions. Globally, around one third of total food production is lost or wasted (UN, 2023). In 2019, a total of 119.9 kg of food was wasted per capita globally at household, food service or retail levels, representing 17% of total food produced (UN, 2023). Food loss per capita was around 97 kg in 2019 (13.8% of total food produced), with a slight decrease from 13.8% to 13% in 2022 (SDG 12 Hub, 2023). While there are some differences in levels of food loss and waste across regions, it remains a prevalent issue globally, highlighting the need for action in all countries.

The European Commission has announced proposals for the first legally binding food waste reduction targets by 2030, which may provide a template for further national and regional action.

Several companies are reporting reductions in food loss and waste by implementing new initiatives such as redistributing surplus food to food relief organisations, maximising the outflow of products before expiration, and helping consumers waste less at home.

Acknowledging some of the organisations working towards this future

Champions 12.3, Waste Resources Action Programme (WRAP), Global FoodBanking Network, Food and Land Use Coalition (FOLU), FAO, IUCN.

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Invest in post-harvest and cold-storage infrastructure, optimize harvesting and storage techniques, and finance advanced agricultural equipment to limit food loss, especially in global south countries.
- Improve communications throughout supply chains, including better information about crop availability, to help farmers with excess food find markets that are able to buy it.
- Implement consumer education awareness campaigns to reduce food waste.
- Advance policy to incentivize retailer behavior to reduce food waste (e.g., donate waste to food banks) and work with their supply chains to help reduce food loss.
- Establish consistent use of food labelling with only one date label on products, expand composting access and infrastructure to turn food waste into valuable resources, standardize policies on imports, and explore more simplified packaging to simplify operations for value chain players and eliminate losses.
- Improve measurement and assessment of food loss and waste hotspots to focus efforts and address effectively.

Sources and references

Sharm Adaptation Agenda First Implementation Report, 2023; United Nations (UN), Reducing food loss and waste: Taking Action to Transform Food Systems, Accessed November 2023; Champions 12.3, SDG Target 12.3 on Food Loss and Waste: 2023 Progress Report, 2023; SDG 12 Hub, Food Loss and Waste, Accessed November 2023; UN, Sustainable Development Goals Report 2023, 2023.

Financing the food systems transformation



2030 Target

- Scale and re-orient finance flows from public and private sources towards resilient, inclusive and sustainable food systems, increasing direct access for small-scale family farmers, women, youth, and Indigenous Peoples, aligned with climate risk-informed food policies and plans.



Progress to date

CPI estimates that total climate funding for food and agriculture-related projects amounted to USD 28 billion (2020), with climate adaptation efforts only representing around a quarter (USD 7.3 billion) of that (CPI, 2023). Further, climate-related development funding for food and agriculture has been decreasing as a share of overall climate-related development finance allocations, from an average of 37% in the period 2000-2010 to around 20% in 2020 (FAO, 2022).

A significant gap exists between the current level of finance flowing towards resilient food and agriculture solutions and its projected needs. UNEP estimates that climate finance to food systems needs to grow to at least USD 381 billion annually by 2030 to match the needs estimated by a conservative climate transition scenario (with other estimates ranging to USD 1.3 trillion) (UNEP, 2022). However, the costs of inaction far outweigh the costs of the transition. FAO reports that the current hidden costs of the food system (including environmental, health, and social costs resulting from harmful practices) amount to more than USD 10 trillion annually (FAO, 2023).

Only 8% of companies have set financial targets to support farmers in their supply chain to incentivise regenerative agriculture (FAIRR, 2023). Small-scale family farmers receive just 0.3% of international climate finance (FFORA & Climate Focus, 2023).

Acknowledging some of the organisations working towards this future

Global Alliance for the Future of Food (GAFF), Food and Land Use Coalition (FOLU), Good Food Finance Network (GFFN), Science-Based Targets Initiative (SBTi) FLAG, Science-Based Targets Network (SBTN), Taskforce for Climate-Related Financial Disclosures (TCFD), Taskforce for Nature-Related Financial Disclosures (TNFD), International Sustainability Standards Board (ISSB), Carbon Disclosure Project (CDP).

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Repurpose public spending, including public subsidies, to incentivise sustainable, regenerative, agroecological production approaches.
- Remove regulatory, financial and market barriers to create a level playing field for healthy and sustainable food products.
- Integrate food and agriculture into target setting, disclosure, and reporting frameworks to drive accountability in the finance and business sectors.
- Set company financial targets to support farmers in their supply chain to incentivise the uptake of sustainable, regenerative, agroecological production approaches.
- Businesses to adopt the Science Based Targets initiative (SBTi) guidance on Forest, Land, and Agriculture (FLAG) and join the Science-Based Targets Network (SBTN).
- Financial institutions to adopt climate and nature related disclosure on risks, impacts and opportunities, such as Taskforce on Nature-Related Financial Disclosures (TNFD).
- Better track and monitor financial flows and agri-food related data to increase transparency.

Sources and references

CPI, Landscape of Climate Finance for Agri-food Systems, 2023; FAO, The State of Food and Agriculture, 2023; FAO, Climate-related Development Finance in the Agriculture and Land Use Sector between 2000 and 2020, 2022; UNEP, State of Finance for Nature 2022, 2022; FAIRR, Food sector making 'more promises than progress' on regenerative agriculture, 2023; FFORA & Climate Focus, Untapped Potential: An analysis of international public climate finance flows to sustainable agriculture and family farmers, 2023; Sharm Adaptation Agenda First Implementation Report, 2023; GAFF, Cultivating Change: Accelerating and Scaling Agroecology and Regenerative Approaches, 2023.

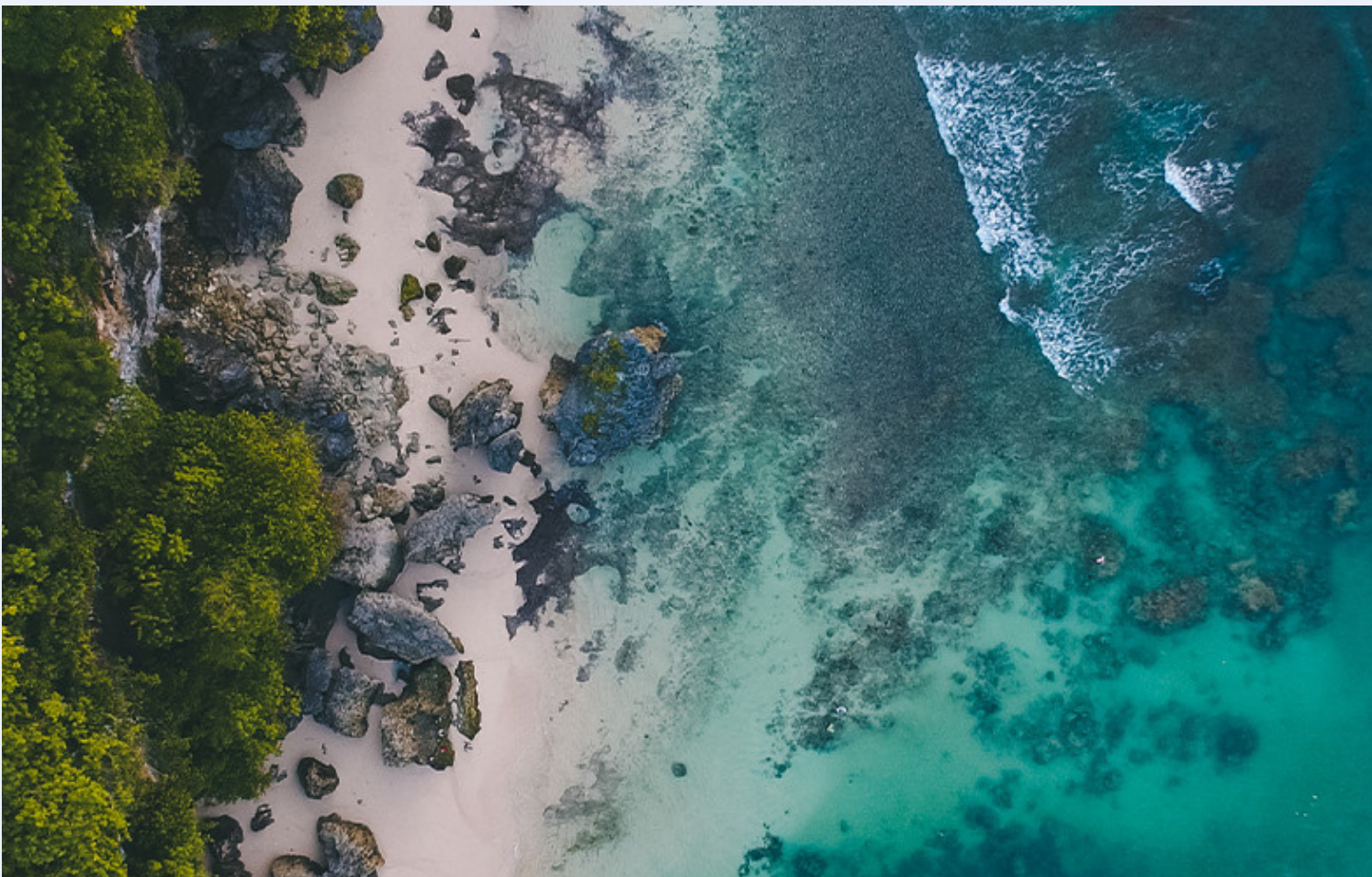
Ocean & Coastal Zones

A healthy and productive Ocean is vital to a resilient, nature-positive and net-zero future.

In the backdrop of the Global Biodiversity Framework and the UN High-Sea Treaty, the Ocean Breakthroughs provide clear, science-based targets and transformative pathways for conservation, energy, food, transport and tourism. Accelerated action and investments in these sectors could deliver up to 35% GHG emissions reduction and contribute to a resilient, nature-positive and net zero future by 2050.

Governments and non-state actors, including from the Race to Resilience campaign, are mobilizing around the Ocean Breakthroughs to build the resilience of vulnerable coastal communities globally, and accelerate the implementation of the Sharm el Sheikh Adaptation Agenda.







Sustainable ocean management is the foundation to implement ocean based solutions to reduce emissions, halt climate change driven biodiversity loss and restore marine ecosystems.



Ocean and Coastal Zones

2030 Targets

Source

<p>Mangroves</p> 	<ul style="list-style-type: none"> Invest USD 4 billion to secure the future of 15 million hectares of mangroves globally through collective action on halting mangrove loss, restoring half of recent losses, doubling protection of mangroves globally and ensuring sustainable long-term finance for all existing mangroves 	<p>2030 Breakthrough Sharm El Sheikh Adaptation Agenda</p>
<p>Coral Reefs</p> 	<ul style="list-style-type: none"> Secure the future of at least 125,000 km² of shallow-water tropical coral reefs with investments of at least USD 12 billion to support the resilience of more than half a billion people globally in total by 2030. 	<p>2030 Breakthrough Sharm El Sheikh Adaptation Agenda</p>
<p>Ocean Renewable Energy</p> 	<ul style="list-style-type: none"> By 2030, install at least 380 GW of offshore capacity while establishing targets and enabling measures for net-positive biodiversity outcomes and advocate for mobilizing USD 10 billion in concessional finance for developing economies to reach that goal. 	<p>2030 Breakthrough</p>
<p>Aquatic Food</p> 	<ul style="list-style-type: none"> By 2030, provide at least USD 4 billion per year to support resilient aquatic food systems that will contribute to healthy, regenerative ecosystems, and sustain food and nutrition security for three billion people. 	<p>2030 Breakthrough</p>
<p>Marine Conservation</p> 	<ul style="list-style-type: none"> By 2030, investments of at least USD 72 billion secure the integrity of ocean ecosystems by protecting, restoring, and conserving at least 30% of the ocean for the benefit of people, climate, and nature. 	<p>2030 Breakthrough Sharm El Sheikh Adaptation Agenda</p>
<p>Shipping</p> 	<ul style="list-style-type: none"> Zero emission fuels make up at least 5%, aiming for 10% of international shipping fuels and 15% of domestic shipping fuels by 2030 (*) 450,000 Seafarers need upskilling and retraining by 2030. (*) 30% trade moving through climate adapting ports by 2030 (*) 	<p>2030 Breakthrough Sharm El Sheikh Adaptation Agenda See pages 27-28</p>
<p>Coastal Tourism</p>	<ul style="list-style-type: none"> Target in development 	<p>2030 Breakthrough Sharm El Sheikh Adaptation Agenda</p>
<p>Seagrass</p>	<ul style="list-style-type: none"> Target in development 	<p>2030 Breakthrough Sharm El Sheikh Adaptation Agenda</p>

Key:  Adaptation and Resilience

 Finance

 Mitigation

 Biodiversity

Ocean & Coastal Zones

Mangroves



2030 Target

- Invest USD 4 billion to secure the future of 15 million hectares of mangroves globally through collective action on halting mangrove loss, restoring half of recent losses, doubling protection of mangroves globally and ensuring sustainable long-term finance for all existing mangroves



Progress to date

20 governments have endorsed the Mangrove Breakthrough targets, reinforcing a global commitment to mangrove protection and restoration.

New financial commitments aimed at reaching the USD 4 billion goal outlined in the Finance Roadmap are being developed by financial institutions, corporations, and government.

Philanthropic organizations are making commitments that actively contribute to achieving the Mangrove Breakthrough restoration targets.

Countries and NSA endorsing the Mangrove Breakthrough commit to science-based mangrove restoration in a fair and equitable way, to underpin best practices and knowledge sharing for the conservation and restoration of mangroves.

The Guiding Principles serve as guardrails towards sustainably and effectively conserving and restoring mangrove ecosystems by: safeguarding nature and maximize biodiversity; employing the best information and practices; empowering people; aligning to the broader context – operate locally and contextually; designing for sustainability; mobilising high-integrity capital.

Acknowledging some of the organisations working towards this future

Global Mangrove Alliance (TNC, IUCN, Wetlands Int'l, CI), Mangrove Alliance for Climate, CCT Oceans & Coastal Zone Team, MP-GCA Ocean & Coastal Zones SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Build capacity through the financial roadmap for achieving the breakthrough.
- Countries to showcase their contributions to R&D.
- Mobilize new partners and resources to achieve the Mangrove Breakthrough.
- Develop new financial instruments and enhance others to scale investments in mangroves and address drivers of mangrove loss.
- Provide greater visibility on the investment returns from mangrove ecosystems.
- Share best practices in mangrove protection and restoration, with a focus on leadership by local and Indigenous communities.
- Highlight innovative and effective technology to protect and restore mangroves.
- Support measurement and tracking of implementation.
- Establish a pipeline of investable mangrove projects.
- Involve more investors ready to commit to financing the projects .

Sources and references

Global Mangrove Alliance, Mangrove Breakthrough Financial Roadmap, 2023; Climate Champions, Mangrove Breakthrough, 2023; Climate Champions, Mangrove Breakthrough Financial Roadmap, 2023

Ocean & Coastal Zones

Coral Reefs



2030 Target

- Secure the future of at least 125,000 km² of shallow-water tropical coral reefs with investments of at least USD 12 billion to support the resilience of more than half a billion people globally in total by 2030.



Progress to date

The Global Fund for Coral Reefs (GFCR) Coalition has already mobilised an initial USD 200 million toward the Coral Reef Breakthrough targets (including from donors, investors and philanthropies). It is now scaling implementation of climate-smart solutions that bolster the resilience of coral reefs and safeguard their biodiversity, functions, and services for future generations.

In line with the vital mission of the Coral Reef Breakthrough, the GFCR and Internal Coral Reef Initiative (ICRI) are supporting collective efforts and collaboration with stakeholders globally - from local and indigenous communities, to government officials and private sector actors.

Moving forward, the GFCR Coalition aims to directly raise and invest an additional USD 500 million toward Coral Reef Breakthrough actions by 2030, leveraging investments with the potential to amplify conservation returns for coral nations at the scale of at least USD 2.5 billion.

Acknowledging some of the organisations working towards this future

Internal Coral Reef Initiative, Global Funds for Coral Reef, ORRAA, CCT Oceans & Coastal Zone Team, MP-GCA Ocean & Coastal Zones

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Stop drivers of loss, including land-based sources of pollution, destructive coastal development, and overfishing.
- Double the area of coral reefs under effective protection, by aligning with and transcending global coastal protection targets including 30by30.
- Accelerate Restoration: develop innovative solutions at scale and climate smart designs that support coral adaptation to impact 30% of degraded reefs by 2030.
- Secure investments of at least USD 12 billion by 2030 from public and private sources to conserve and restore these crucial ecosystems.
- Unlock financing to accelerate implementation to reverse the downward trajectory of coral reefs, and scale cost-efficient conservation and restoration solutions.
- Employ best-practice, climate-smart guidelines for intervention by engaging in targeted, strategic efforts to address coral bleaching, and repair degraded coral reef ecosystem.
- Mobilize sustainable financing, ensuring that efforts to close the biodiversity finance gap include diverse sources of funding for coral reefs

Sources and references

Global Funds for Coral Reef, Coral Reef Breakthrough, 2023
ICRI, Coral Reef Breakthrough Report, 2023
ICRI, Launch of the Coral Reef Breakthrough, 2023

Ocean & Coastal Zones

Ocean Renewable Energy



2030 Target

- By 2030, install at least 380 GW of offshore capacity while establishing targets and enabling measures for net-positive biodiversity outcomes and advocate for mobilizing USD 10 billion in concessional finance for developing economies to reach that goal.



Progress to date

The current pace is not adequate to achieve the 2030 targets as only 64 GW of offshore wind is deployed (GWEC, 2023). A significant increase should take place in developing markets.

The International Renewable Energy Agency and International Energy Agency both estimate that 2,000 gigawatts (GW) of offshore wind will be needed globally, alongside the scale up of other onshore renewables and phase out of fossil fuels, by 2050.

Offshore Wind Energy offers key mitigation benefits by reducing GHG emissions, improving air quality, minimising land use and supporting the global energy transition. The International Energy Agency estimates that 1 GW offshore wind project could avoid 3.5 million metric tonnes of CO₂ per year - meaning 380 GW could avoid 1.3 billion metric tonnes. It also contributes to climate resilience by providing a reliable and predictable source of energy and helping diversify energy sources. Sustainably planned and managed offshore wind farms will further enhance mitigation and resilience benefits by supporting the huge potential of healthy marine ecosystems, and deliver on biodiversity goals through halting climate change driven biodiversity loss.

Acknowledging some of the organisations working towards this future

MP-GCA Ocean & Coastal Zones, Ocean Conservancy, IRENA, World Bank, Ocean Conservancy, Orsted

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Update NDCs and national energy plans to include offshore renewable energy targets and biodiversity protection frameworks that ensure the clean ocean energy development process is inclusive for local communities, indigenous peoples, and other ocean users.
- Create a global initiative to share offshore renewables and biodiversity data to ensure environmentally sound offshore renewables deployment while accommodating other ocean uses - action is underway on this through the Ocean decade via UNESCO
- Mobilize USD 10 billion in concessional finance for the deployment of offshore wind in developing countries (World Bank Group).
- Enhance the capacity among policymakers to create robust regulatory frameworks that guarantee net-positive biodiversity impacts of Offshore Renewable Energy deployment.
- Increase technical assistance for creating offshore wind roadmaps.

Sources and references

International Energy Agency, Breakthrough Agenda Report, 2023
World Bank Group, The Role of Concessional Climate Finance in Accelerating the Deployment of Offshore Wind in Emerging Markets. ESMAP Paper, 2023
GWEC, Global Wind Report, 2023

Ocean & Coastal Zones

Aquatic Food



2030 Target

- By 2030, provide at least USD 4 billion per year to support resilient aquatic food systems that will contribute to healthy, regenerative ecosystems, and sustain food and nutrition security for three billion people.



Progress to date

The number of examples showcasing climate solutions in the aquatic food sector is increasing, as well as guidance on how to address climate change impacts (adaptation) and contribute to mitigation.

Out of the 85 new or updated NDCs submitted (between 1 January 2020 and 31 July 2021) by countries, 62 of the 77 (81%) with adaptation components referred to adaptation in fisheries and aquaculture, including ocean and coastal zone management. (2022 SOFIA Report)

-The 2023 Ocean and Climate Change Dialogue under the UNFCCC focused on “Fisheries and food security” as one of the two topics for discussions, acknowledging the critical role of aquatic food climate solutions.

Increasing availability of scientific data that demonstrates the importance of aquatic foods to health and nutrition, climate, biodiversity, and social-economic outcomes (Building Blue Food Futures for People and the Planet. The Report of the Blue Food Assessment. September 2021).

Acknowledging some of the organisations working towards this future

MP-GCA on Ocean & Coastal Zones, FAO, Environmental Defense Fund

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Establish mechanisms to officially incorporate aquatic food system adaptation and mitigation efforts into Nationally Determined Contributions and National Adaptation Plans.
- Partner with the entire aquatic food supply chain, from producers to consumers, to align incentives for more responsible and regenerative production.
- Enhance development and build awareness of science-based tools, traditional knowledge, capacity development and guidance to fishery managers, aquaculture regulatory bodies, policy makers, communities and other actors involved in aquatic food value chains.
- Build capacity of stakeholders on climate responses in the aquatic food sector.
- Improve investors and donors' knowledge and understanding of the vulnerability to climate change of aquatic food, and its crucial role for food security.
- Foster access to finance for communities and relevant authorities.
- Integrate aquatic foods into existing policies and frameworks related to food systems, biodiversity and climate at international, national and regional levels.

Sources and references

Ocean and Climate Change 2023 Report
Marine Conservation Breakthrough (under development).
FAO Blue Transformation, Blue Food Assessment, Illuminating Hidden Harvests, FAO 2022 SOFIA Report

Ocean & Coastal Zones

Marine Conservation



2030 Target

- By 2030, investments of at least USD 72 billion secure the integrity of ocean ecosystems by protecting, restoring, and conserving at least 30% of the ocean for the benefit of people, climate, and nature.



Progress to date

The 2030 mitigation potential for marine conservation and restoration opportunities is estimated at 0.028–0.135 GT CO₂ each year (Hoegh-Guldberg, O., Northrop, E. et al. 2023).

To achieve this, the USD 72 billion target will enable an increase in current protection rates, from 8.2% in protected and conserved areas (WDPA / Protected Planet 2023) to 21.8% to reach at least 30% by 2030, and bridge the funding gap for the marine 30x30 goal – which is estimated at USD 12 billion a year (UNEP, 2022) – over the next 6 years.

There has been some encouraging policy developments in the last two years: 97 new or updated Nationally Determined Contributions now include coastal and marine Nature-based Solutions. In 2022, as part of the Global Biodiversity Framework, Parties to the Convention on Biological Diversity agreed on the '30x30 Target' to sustainably manage, protect and restore 30% of marine and coastal areas by 2030. And the High Seas Treaty was adopted (2023) and ratified by 80+ countries.

Acknowledging some of the organisations working towards this future

MP-GCA on Ocean & Coastal Zones, IUCN, Conservation International

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Build capacity and make science-based tools and knowledge equitably available to ensure the use of evidence-based targets and tools for design, implementation, monitoring, innovation, and climate smart planning based on anticipated climate change impacts.
- Support the development of needed science and science capacity.
- Ensure the recognition and inclusion of Indigenous and local knowledge.
- Develop and scale up blended and innovative financial instruments to attract capital for marine conservation.
- Increase investments from public and private stakeholders, including philanthropy and development finance institutions.
- Increase inclusion of NBS in national strategies and plans for climate and biodiversity (including NDCs and NBSAPs).
- Develop partnerships and inclusion of IPLCs for the co-design and co-implementation of solutions.

Sources and references

United Nations Environment Programme (2022). State of Finance for Nature.
Marine Conservation Breakthrough (under development)
Hoegh-Guldberg, O., Northrop, E. et al, The Ocean as a Solution to Climate Change, 2023

Water

Our water system is in crisis, contributing to climate change, nature loss and poverty. Reliable water systems will sustain a healthier, more resilient and more equitable future for us all and improved water management has the potential to add quick wins to the range of tools for fighting climate change.

Governments, businesses, cities, farmers, and communities are working together to improve how we manage and use water. They're also finding ways to reduce the environmental impact of providing water services like sanitation. These actions help tackle climate change by cutting emissions and making our communities more resilient.







When both public and private sectors join forces, they can make water system improvements a key part of fighting climate change. This doesn't just reduce emissions but also makes us better prepared for climate challenges, protects nature, and helps us achieve sustainable development goals.



Water

2030 Targets


Source

<p>Water and Wastewater systems</p> 	<ul style="list-style-type: none"> Water systems are smart, efficient and robust with a reduction in water loss through leakage and Wastewater systems maximise recycling and reuse alongside natural wetland filtration with zero environmental spillage 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Freshwater</p> 	<ul style="list-style-type: none"> Restore 300.000 kms of rivers and 350M hectares of wetlands by 2030 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Climate Resilient WASH</p> 	<ul style="list-style-type: none"> By 2028, all communities living in the overlap of high climate hazard exposure and insufficient water, sanitation, and hygiene access have been targeted with climate resilient water, sanitation, and hygiene services 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Food-Water Nexus</p> 	<ul style="list-style-type: none"> Coherent national policy frameworks and climate strategies are enhanced to integrate water planning that enables transformative climate outcomes in agriculture. 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Funding Water</p> 	<ul style="list-style-type: none"> By 2030, 1% (approximately USD 7 billion per year) of annual water sector spending is invested in nature-based solutions via watershed investment programs – like water funds – resulting in improved management and/or protection of rivers, lakes and wetlands, driving water security benefits and improving critical habitat for biodiversity 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Water Decarbonization</p> 	<ul style="list-style-type: none"> Water and wastewater services are fully decarbonised in 20 countries, by 2030 	<p>2030 Breakthrough</p>

Key:  Adaptation and Resilience

 Finance

 Mitigation

 Biodiversity

Water

Water and wastewater systems



2030 Target

- Water systems are smart, efficient and robust with a reduction in water loss through leakage and Wastewater systems maximise recycling and reuse alongside natural wetland filtration with zero environmental spillage



Progress to date

Water loss is still a concern worldwide, it is estimated to be 15% in developed countries, and can reach levels of up to 35% in developing countries (Wyatt, 2019).

However, many are recognising the need to prioritise limiting water loss and improving water infrastructure. For instance, the European Union made a list of voluntary commitments for the Water Action Agenda for the UN 2023 Water Conference including one on improving the efficiency of its whole water supply infrastructure by reducing leakages and increasing the water user awareness on the efficiency and effectiveness of their water suppliers.

Further to this, advancement of innovative solutions using Artificial Intelligence (AI) such as FIDO Tech are being used for detecting and accurately sizing leaks to reshape how water is being managed. Technological progress like this is positioning water systems for increased intelligence, efficiency, and resilience. It represents a noteworthy development that is steering the industry towards more sophisticated and robust water management practices.

Acknowledging some of the organisations working towards this future

ORRAA, Stimson Center, ICLEI, Resilient Cities Network, Duke University, International Water Association (IWA)

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Limit water losses to a minimum by deploying smart, efficient and robust water systems and by ensuring water infrastructure is robust to withstand future impacts (e.g., extreme temperatures, damage from flooding).
- Treat wastewater, including, in some cases, through nature-based solutions, to help prevent the release of pollutants into the environment, improving the status and quality of freshwater and coastal ecosystems and the services they provide.
- Increase investment both from private and public stakeholders to fill the existing finance gap.
- Employ a targeted approach that brings both parties and non-party actors together to leverage the right inputs and skillset to accelerate progress.
- Create a guidance document /compendium of technical solutions per context that could support cities, countries etc. to garner knowledge.
- Increase deployment of cutting-edge technologies like 'digital twins' for water infrastructure, artificial intelligence, drone monitoring, along with more straightforward solutions like real-time smart water meters, which offer a chance to establish adaptive and efficient water systems.

Sources and references

UN Water SDG6 Synthesis Report (2023) <https://www.waterworld.com/home/article/14070145/nonrevenue-water-loss-its-causes-and-cures>
European Union, List of voluntary commitments for the Water Action Agenda to be presented by the European Union for the UN 2023 Water Conference (New York, 22-24 March 2023), (2023)
Liemberger R., Wyatt A., Quantifying the global non-revenue water problem (2019)

Water

Freshwater



2030 Target

- Restore 300.000 kms of rivers and 350M hectares of wetlands by 2030.



Progress to date

Wetlands are being lost at alarming rates with 35% loss globally since 1970, wetlands are our most threatened ecosystem, disappearing three times faster than forests (Ramsar convention on Wetlands, 2021).

Countries continue to have limited capacity to develop effective freshwater restoration strategies and methodologies and to implement them. The 2023 midterm review of the Water Action Decade (UN-Water, 2023) found that progress on SDG 6 is dramatically off-track, requiring a quadrupling of investments by 2030.

Research from CDP has shown that regulation to stimulate corporates to disclose their water impacts is growing and is often bundled in with climate concerns. A total of 3,909 companies responded to CDP's water security questionnaire in 2022 - water efficiency was cited as a significant priority in almost every industry. In the same year, companies revealed plans to invest up to USD 79 billion to reduce water risks.

Acknowledging some of the organisations working towards this future

WWF, IUCN, TNC and UNEP, CEO Water Mandate, Conservation International Initiatives: Freshwater Challenge, CDP, Valuing Water Finance Initiative

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Enhance access to data and information.
- Support a common methodology for effective freshwater restoration strategies.
- Enable access to funding by bridging the gap between local frontline actors and global-level funders.
- Develop ambitious freshwater targets with clear goals for freshwater ecosystems in planning, including national biodiversity and adaptation plans and accelerate solution implementation.
- Integrate river and water resource management systems: increase collaboration and coordination across sectors and borders, and factor in the health, resilience and system-wide functionality of river basins and wetlands into all development and infrastructure decisions, as well as the diverse range of benefits and services they provide.
- Invest in natural water storage through Nature-based Solutions to reduce the impact of extreme floods, increase natural water retention and strengthen resilience to droughts by restoring wetlands, floodplains and watersheds.
- Unlock investment opportunities to address water.

Sources and references

Midterm review of the Water Action Decade (2023)
Riding the Wave (2022)
Convention on Wetlands, The Global Wetland Outlook: Special Edition (2021)

Water

Climate Resilient WASH



2030 Target

- By 2028, all communities living in the overlap of high climate hazard exposure and insufficient water, sanitation, and hygiene access have been targeted with climate resilient water, sanitation, and hygiene services



Progress to date

The UNICEF-WHO Joint Monitoring Programme (JMP) latest update report (July 2023) reveals that in 2022, 2.2 billion people (around 1 in 4 people in the world) still lacked sufficient access to drinking water, 3.4 billion people (2 in 5) still lacked sufficient access to sanitation, and 2 billion still lacked sufficient access to hygiene services.

Some progress has been made to define and support climate-resilient Water, Sanitation and Hygiene (WASH). At COP27, Sanitation partners released a Call to Action for all stakeholders to collaborate in ensuring the resilience of sanitation systems to maximize the public health outcome and explore the opportunities of reducing emissions along the sanitation service chain.

Additionally, at COP27, Global Water Partnership (GWP) and UNICEF launched an updated version of the Strategic Framework for Climate Resilient WASH on how to ensure resilient WASH services that are sustainable and resilient to climate related risks.

Acknowledging some of the organisations working towards this future

SWA, UNICEF, Toilet Board

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Enable finance to encourage the setting of national priorities for risk management, adaptation, and resilience within the sector.
- Prioritize capacity building to foster cross-thematic knowledge sharing.
- Accelerate partnerships and cooperation between the water and climate communities, strengthening mutual accountability for delivering on both climate and water-sanitation related goals.
- Enable policy shifts to ensure that climate risks are well understood and integrated at policy and implementation levels by the WASH community.
- Ensure climate change policies and strategies consider water and sanitation, and vice versa to achieve coherence between climate and water sanitation policy and guide programmes and interventions to build more resilient services.
- Support the creation of effective mechanisms for citizen participation and support effective systems to monitor climate change adaptation and mitigation national targets, and other international commitments related to water and sanitation.
- WASH and climate stakeholders are encouraged to make climate-related commitments through SWA's Mutual Accountability Mechanism.

Sources and references

UNICEF-WHO Joint Monitoring Programme (JMP), (2023); Sarah Dickin et. al, Sustainable sanitation and gaps in global climate policy and financing (2020); Hyde-Smith, Climate Change Impacts on Urban Sanitation: A Systematic Review and Failure Mode Analysis (2022); UNICEF, Why Water Sanitation and Hygiene must be Top of your Climate Agenda, (2022); SWA, Adapting to climate change and fostering a low carbon water and sanitation sector (2019)

Water

Food-Water Nexus



2030 Target

- Coherent national policy frameworks and climate strategies are enhanced to integrate water planning that enables transformative climate outcomes in agriculture.



Progress to date

Water is the most critical input to food production, with agriculture being the single largest user of freshwater representing over 70% of withdrawals globally. Water is essential for food production, enabling the production of over 95% of the food on land. Many countries are implementing policies and regulations to address the food-water nexus. This includes water resource management plans, agricultural practices that prioritize water efficiency, and regulations to reduce pollution in water sources.

Advances in technology are also playing a significant role in improving water and agricultural practices. Precision agriculture, for example, is helping farmers use water more efficiently by precisely targeting irrigation and fertilizer application.

In addition, numerous voluntary commitments were made under the UN's Water Action Agenda. Among these commitments, a collaborative effort between the Niger River Basin Authority and the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV) stands out. This collective commitment involves substantial financial support, with a commitment of USD 21.2 million until 2029. The strategy encompasses climate-smart agriculture, wetland restoration, and other nature-based solutions to address the escalating challenges of unpredictable rainfall and desertification in the region.

Acknowledging some of the organisations working towards this future

FAO, Global Water Partnership (GWP), World Economic Forum (WEF), International Water Management Institute (IWMI)

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Mobilize financial resources for implementing projects and initiatives related to the food-water nexus. This includes both public and private investment in water infrastructure, sustainable agriculture, and ecosystem restoration.
- Enable access to appropriate technologies for improving water management and agricultural practices, e.g. transfer of proven technologies to regions or countries where needed.
- Support research and development to create new technologies that enhance water efficiency, crop resilience, and data collection and analysis.
- Engage farmers, pastoralists, and water user associations, among others.
- Improve connectivity between these policies and sectors to address trade-offs, align finance, and avoid maladaptation.
- Strengthen the linkages between food and water systems in national climate plans, while safeguarding and restoring the natural resources upon which these systems depend.
- Strengthen Water Resource Management by enhancing water governance, enforce regulations, and implement integrated water resource management to consider the entire water cycle.

Sources and references

<https://www.gwp.org/en/GWP-Mediterranean/WE-ACT/Programmes-per-theme/Water-Food-Energy-Nexus/>

Water

Funding water



2030 Target

- By 2030, 1% (approximately USD 7 billion per year) of annual water sector spending is invested in nature-based solutions via watershed investment programs – like water funds – resulting in improved management and/or protection of rivers, lakes and wetlands, driving water security benefits and improving critical habitat for biodiversity.



Progress to date

While acknowledging the ongoing efforts of 142 countries that have included Nature-based Solutions (NBS) in their nationally determined contributions (NDCs), with a specific focus on advancing water security in 124 of them, it's important to highlight the potential for positive change.

Currently, annual spending on water amounts to USD 770 billion, with an encouraging shift as USD 0.7 billion is allocated to NBS, representing a growing recognition of their value, even if it constitutes only 0.1% (GWI, 2019).

This positive trend underscores the increasing awareness and commitment to integrating NBS into broader sustainability initiatives.

Acknowledging some of the organisations working towards this future

TNC; Forest Trends; WRI

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Create Watershed Investment Programs funded by state and non-party actors.
- Pass tariff reform and develop a pipeline of projects ready for implementation.
- Test new, innovative funding mechanisms like political risk insurance and debt-for-nature swaps, building the toolbox of lending instruments.
- Establish a dedicated fund through utility tariffs to support Nature-Based Solutions (NBS) projects like safeguarding high-altitude wetlands and forests, as well as engaging in reforestation efforts.
- Policy makers, parties and non-party actors to develop processes for NBS with clear guidelines and technical specifications and build capacity for using them.
- Financial Institutions to implement and support policies that lay the foundation for credible green investments
- MDBs and other development partners to collaborate with governments, integrating climate finance with substantial traditional loans.

Sources and references

TNC. Financing Nature for Water Security: A How-to Guide to Develop Watershed Investment Programs. (2022)
Payments for ecosystem Services: Past, Present and Future (2018)
The United Nations world water development report 2018: nature-based solutions for water (2018)
Forest Trends. <https://www.forest-trends.org/blog/how-peru-is-scaling-up-nature-based-solutions-for-water-and-climate-resilience-and-what-it-can-teach-the-world/>
WWF. Water ways to resilience (2021)

Water

Water decarbonization



2030 Target

- Water and wastewater services are fully decarbonised in 20 countries, by 2030



Progress to date

Global water utilities currently account for nearly 2% of greenhouse gas emissions, a figure that is expected to more than double by 2040 as increasing demand for increasingly scarce water supplies rely on energy-intensive water supply methods such as desalination, large water transfers, and treatment.

Some progress has been made to decarbonise the water and wastewater sector. According to Global Water Intelligence (GWI, 2023), 88 water and wastewater utilities have net zero, carbon, and climate neutrality targets, serving over 250 million people. Of these, 25 utilities, serving over 72 million people, had joined the Race to Zero campaign.

Further to this, water companies in the UK have committed to net zero by 2030 and have almost halved operational emissions since 2011 through a combination of energy efficiency measures, renewable energy and the production of biomethane from sewage treatment processes.

Acknowledging some of the organisations working towards this future

Xylem, Race to Zero, WINZ, US Water Alliance, GIZ, Aquafed, Suez, International Water Association (IWA)

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Increase investment for research for innovative low carbon solutions needed.
- Consider how to create enabling environments to de-risk investments and scale new technologies.
- Water Utilities to set net-zero targets and transition plans.
- Optimize energy use across existing assets such as intelligent wastewater pumping systems, adaptive mixers with variable speed drives, and real-time decision support systems.
- Prioritize the reduction of leaks on the water distribution networks to increase water efficiency.
- Embed net-zero strategies into capital planning.
- Shift towards viewing wastewater as a resource rather than as a by-product to be managed and wastewater treatment facilities as engines of energy production.

Sources and references

US Water Alliance. One Water Roadmap. (2016)
Xylem, Water Utilities: Moving Fast Toward A Zero-Carbon Future (2021)
GWI. Mapping Water's Carbon Footprint' (2022)

Human Settlements

Cities have the power to drive ambitious climate action by reducing the carbon footprint of their buildings, transport systems and energy sources, in turn creating healthy, equitable and resilient communities.

By 2030, we need all new buildings to be near-zero emissions, and to ensure that one billion people live in decent, safe homes. Early warning systems must have universal coverage and people have access to risk information, solutions to build resilience and resilient health systems. Cities and regions need to deliver their plans to slash emissions and adapt to climate impacts, working closely with national governments and partners at the local and global levels.

As hotspots of rapid social, economic and environmental change, cities can be key sites to activate transformative change and drive sustainable, low-emission and resilient development.



Human Settlements

2030 Targets




Source

<p>Built Environment</p> 	<ul style="list-style-type: none"> • 100% of projects completed in 2030 or after are net zero carbon in operation with >40% reduction in embodied carbon. • Near-zero emission and resilient buildings are the new normal by 2030. 	<p><u>2030 Breakthroughs</u></p> <p>Breakthrough Agenda</p>
<p>Housing access and affordability</p> 	<ul style="list-style-type: none"> • 1 billion people have better design, construction and access to finance to live in decent, safe homes • Near-zero emission and resilient buildings are the new normal by 2030 	<p><u>Sharm El Sheikh Adaptation Agenda</u></p> <p>Breakthrough Agenda</p>
<p>Open Waste Burning</p> 	<ul style="list-style-type: none"> • 60% reduction of open burning of waste levels by 2030, and full-phase out from Africa by 2040 • Increased municipal solid waste recovery and management in controlled facilities to reduce open burning by 60% while including the informal waste sector 	<p><u>2030 Breakthrough</u></p> <p><u>Sharm El Sheikh Adaptation Agenda</u></p>
<p>Early Warning Systems</p> 	<ul style="list-style-type: none"> • Multi-hazard early warning systems have universal coverage 	<p><u>Sharm El Sheikh Adaptation Agenda</u></p>
<p>Universal access to risk information and solutions to build resilience</p> 	<ul style="list-style-type: none"> • All populations, especially those most vulnerable to impacts of climate change, have ready access to platforms to understand the risks climate poses and the solutions that can be taken to adapt and build resilience to these risks and to integrate climate risks into decision making from local to global levels. 	<p><u>Sharm El Sheikh Adaptation Agenda</u></p>
<p>Resilient Health solutions</p> 	<ul style="list-style-type: none"> • Health systems and facilities are resilient to climate hazards and vulnerable populations have access to safe and quality health services • Multi-sectoral heat action plans and health-sector action plans protect high risk populations (older persons, workers, impoverished, marginalized), for 50% of the populations exposed to extreme heat • All countries have climate-informed health surveillance and early warning systems in place for priority climate-sensitive diseases, including vector-borne, water-related, airborne • Increase financing flows to build climate-resilient health systems 	<p><u>Sharm El Sheikh Adaptation Agenda</u></p>

Human Settlements

2030 Targets


Source

<p>Cities and Regions Resilient Planning</p> 	<ul style="list-style-type: none"> 10,000 cities and 100 regional governments have evidence-based, actionable adaptation plans 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Planning and Locally-led principles for Adaptation</p> 	<ul style="list-style-type: none"> Operationalization of National Adaptation Plans and Locally-Led Principles, enabling adaptation in a country-driven localized and consultative manner 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Greening Urban Areas</p> 	<ul style="list-style-type: none"> USD 1 trillion invested in nature-based solutions for communities in urban areas 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Net zero health solutions</p>	<ul style="list-style-type: none"> Target in development 	<p>Race to Zero</p>
<p>Urban Water Resilience</p>	<ul style="list-style-type: none"> Target in development 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Cities and Regions Net zero planning</p>	<ul style="list-style-type: none"> Target in development 	<p>Race to Zero</p>
<p>Social infrastructure networks</p>	<ul style="list-style-type: none"> Target in development 	<p>Sharm El Sheikh Adaptation Agenda</p>

Key:  Adaptation and Resilience

 Finance

 Mitigation

 Biodiversity

Human Settlements

Built Environment



2030 Targets

- 100% of projects completed in 2030 or after are net zero carbon in operation with >40% reduction in embodied carbon.
- Near-zero emission and resilient buildings are the new normal by 2030.



Progress to date

The sector is not on track, but some signals of progress are emerging.

Since 2015, building sector emissions have increased by 1% annually, driven by global floor area growth, outweighing efficiency gains (UNEP, 2022). Specific indicators of energy efficiency and carbon intensity are not on track (WRI, 2023). Retrofit rate, embodied emissions and the share of new building zero-carbon in operation are lacking sufficient data (WRI, 2023).

Investment in energy efficiency in buildings increased by about 14% to over USD 250 billion in 2022 and there has been a double digit growth of heat pumps sales in 2022. (IEA, 2023)

As of October 2023, over 20% of major real estate asset managers and owners have joined the Race to Zero. Their commitment to cut emissions across scopes 1, 2 and 3 includes the embodied and operational emissions of the USD 1.4 trillion assets under management (Race to Zero, 2023).

A small but growing number of cities are taking policy-action on embodied carbon of new buildings (C40).

Acknowledging some of the organisations working towards this future

BuildingToCOP; WBCSD; WorldGBC; GlobalABC; C40 Cities; IIGCC; Resilience Rising; Climate Group; WRI.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Implement energy efficiency measures to achieve a 30% reduction in the operational energy intensity of new buildings by 2025.
- Strengthen private sector demand signals via existing buyer alliances.
- Mandate net-zero carbon for new developments throughout their life cycle through public procurement, policy, and building codes, prioritizing retrofitting.
- Implement building codes ensuring energy efficiency, introducing carbon metrics, mandatory reporting, and life cycle standards. Policies should actively promote circular economy principles.
- Internalize whole-life carbon costs in all private investment decisions by 2025.
- Target 40% global housing coverage with access to renewable electricity by 2025.
- Efforts to minimise emissions of new buildings to prioritize implementation in developing countries where most new floor area will be constructed.
- Countries to collaborate through the Breakthrough Agenda on harmonizing international definitions, aggregating demand signals, coordinating research and development, strengthening capacity-building platforms, and providing finance to support enhancing Building Energy Codes.

Sources and references

UNEP Buildings Global Status Report, 2022; WRI State of Climate Action Report, 2023; IEA, IRENA, CCT 2023 Breakthrough Agenda Report, 2023, Race to Zero Progress Report, 2023; C40 Clean Construction Accelerator

Human Settlements

Housing access and affordability



2030 Targets

- Near-zero emission and resilient buildings are the new normal by 2030.
- 1 billion people have better design, construction and access to finance to live in decent, safe homes.



Progress to date

While formal settlements have seen improved construction standards to increase safety and reduce GHG emissions, informal housing is still of poor quality.

According to the latest SDG 11 progress report, 2.8 billion people in the world experience some form of housing inadequacy, of those, 1.1 billion people live in slums and informal settlements. This means at least 1 in 4 people living in cities currently live in housing that is harmful to their health, safety, or prosperity. These households are faced with poor quality of housing, at-risk locations, and unreliable urban services all of which limits their adaptive capacity and increases their vulnerability to climate change. In fact, residents of informal settlements are part of the estimated 3.3-3.6 billion people in hotspots of high vulnerability to climate change.

Acknowledging some of the organisations working towards this future

Roof Over Our Heads (ROOH), Extreme Heat Resilience Alliance, Climate Resilient Housing SURGe-Sustainable Cities: Sustainable Urban Resilience for the Next Generation, REALL, BuildChange, Habitat for Humanity, UN Habitat, World Green Building Council, Resilience Rising, C40 Cities, ICLEI, RMI, UNEP, WRI, NIUA, Arsht Rock Resilience Center, Mission Innovation IC7 Innovation Community on Affordable Heating and Cooling of Buildings, GCOM, SEforALL

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Build capacity to normalise and harmonise the resilience assessments of Communities, Buildings and Settlements.
- Strengthen and scale existing organisations and campaigns (e.g. REALL, Build Change, Roof Over Our Heads etc.)
- Develop global standardised frameworks for assessing resilience of built assets and direct international investment into resilient projects.
- Establish 'match-making' platforms to match investment to credible resilience-building projects.
- Create International knowledge sharing platforms.
- Governments to undertake citywide climate hazards and vulnerability assessments, map climate risk and vulnerability, monitor national and local strategies, and introduce coordination mechanisms. Cities at high-risk location to have resilience standards embedded to building codes.
- Financial institutions to develop appropriate instruments/products such as microfinancing for resilience investments at the household level.
- Financial institutions and governments to put municipal bonds in place for resilience investments.
- Include resilience risk assessments in design.

Sources and references

Build CHange Annual Report, 2022
Habitat for Humanity Report, 2022

Human Settlements

Open Waste Burning



2030 Target

- 60% reduction of open burning of waste levels by 2030, and full-phase out from Africa by 2040.
-



Progress to date

COP 27 emphasized on establishment of Net Positive Green Economy by generating income from waste instead of open burning.

With support from Airtel Africa, sensors have been installed at existing dumpsite in Nairobi, Kenya for monitoring Suspended Particulate Matter (SPM) and Carbon-dioxide data on air-pollution and its health effects.

Curbing on illegal dumping and open waste burning were included as specific sustainable waste management goals of the Africa Union Agenda 2063 on The Africa We Want.

Climate and Clean Air Coalition (CCAC) has kicked off mapping of open air burning spots in Nigeria and West Africa.

Acknowledging some of the organisations working towards this future

Climate and Clean Air Coalition, Global Methane hub, Global COP 27 presidency I50 by 2050 Waste Initiative, ICLEI, WIEGO, Practical Action, C40 Cities, Telecoms & ICT Companies, Slum Dweller International, National Government, City and Local Government Including African Ministerial Conference on the Environment (AMCEN), Engineering X, ISWA, CCAC, Royal Academy of Engineering, African Ministerial Conference for the Environment, UCLG Africa, ICLEI Africa, Practical Action, Global Methane, Airtel PIC, GCCA, GAYO, SEI

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended.

- Bridge the financial, infrastructure, governance and awareness gaps, targeting resource recovery, diverting and food waste valorization to reach the 60% reduction of open waste.
- Prioritize action on food and green waste.
- Ensure the utilization of waste as a secondary resource input to promote circularity.
- Strengthen efforts on monitoring and assessment of current atmospheric pollution and its linkage with impacts on health and the environment.
- Expand the existing partnerships by bringing international and regional partners together to ensure the sustainability of the outcomes and impacts.

Sources and References

Eng X -Report on Open Burning , 2022; UNFCCC - Global Climate Action Plan Summary 2022; CCAC - Integrated Assessment of Air Pollution and Climate Change for Sustainable Development in Africa, 2022; Sharm El Sheikh Adaptation Agenda

Human Settlements

Early Warning Systems



2030 Target

- Multi-hazard early warning systems (MHEWS) have universal coverage



Progress to date

A third of the world's population, mainly in least developed countries and small island developing states, are not covered by early warning systems. Only half of countries have adequate Multi Hazard Early Warning Systems (MHEWS) and fewer have regulatory frameworks connected to emergency plans.

The Early Warnings For All Initiative (EW4All) is an overarching framework for early warning initiatives. Recent financial commitments include joint commitment from all major MDBs, GCF to invest up to USD 1 billion, with announcement of a first USD 157 million global program, and alignment of existing financing mechanisms and partnerships such as Systematic Observation Finance Facility (SOFF) and Climate Risk and EWS (CREWS) (UNDRR, 2023).

Data availability and quality are key challenges. In 2021, the Global Basic Observing Network (GBON) committed all countries to generate and exchange basic weather and climate data. However, today, less than 10% data are available from LDCs and SIDS.

WMO, UNDP and UNED established the Systematic Observations Financing Facility (SOFF) to provide long-term technical and financial support to the countries with largest capacity gaps, to close their GBON data gap, with a special focus on LDCs and SIDS.

Acknowledging some of the organisations working towards this future

World Meteorological Organisation - AWARE initiative, UN REAP, DARAJA (Resurgence), GSMA, UN ITU, Resurgence, Red Cross, SDI Affiliates, UK Met Office, CREWS

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following solutions and Means of Implementation are recommended:

- Bridge the gap in MHEWS with an increase of USD 3.1 billion between 2023 and 2027, to develop and improve MHEWS infrastructure capacity, enhance preparedness and build capacity for dissemination and communication of warnings globally, with emphasis on reaching the "last mile".
- Facilitate stakeholder mapping.
- Organize national consultative workshops.
- Conduct gap analysis to identify key gaps, needs, and priorities.
- Develop national roadmaps to scale implementation of early warning systems.

Sources and references

UNDRR, WMO, Global status of multi-hazard early warning systems: Target G, 2022
UNDRR, [News Climate Ambition](#), retrieved 5 December 2023

Human Settlements

Resilient Health Solutions



2030 Targets

- Health systems and facilities are resilient to climate hazards and vulnerable populations have access to safe and quality health services
- Multi-sectoral heat action plans and health-sector action plans protect high risk populations*, for 50% of the populations exposed to extreme heat
- All countries have climate-informed health surveillance and early warning systems in place for priority climate-sensitive diseases, including vector-borne, water-related, airborne
- Increase financing flows to build climate-resilient health system



Progress to date

There is growing recognition of the Health and Climate nexus, including the COP28 Presidency contribution to the Sharm El-Sheikh Adaptation Agenda.

Coverage of Health and Climate in the media grew in 2021 with 14,474 articles, a 27% increase from 2020. The number of scientific papers investigating health and climate change increased by 22% from 2020 to 2021 (Lancet, 2022).

126 NDCs reference health-climate objectives. 67% of surveyed countries (95 participants) have conducted climate change and health vulnerability and adaptation assessments, and 77% have developed national health and climate change plans or strategies (Lancet, 2022; WHO, 2021).

At the city level, local authorities are progressively identifying climate risks on the health of their populations. However, implementation of health solutions remains low. Only a quarter of surveyed countries (out of 46) have reached a “high” or “very high” level of implementation of their health plans or strategies (WHO, 2021).

Acknowledging some of the organisations working towards this future

WHO, IFRC, ATACH, GSK

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

(*) older persons, workers, impoverished, marginalized

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Consider the strong interlinkages with health and other systems.
- Foster radical collaboration across sectors.
- Enhance initiatives that aim to help countries meet commitments, such as the Alliance for Transformative Action on Climate and Health (ATACH) launched at COP26 to drive the work on Climate Resilient Health Systems.
- Conduct climate change and health vulnerability and adaptation assessments.
- Support Health National Adaptation Planning.
- Facilitate access to climate change funding for health.

Sources and references

Sharm Adaptation Agenda, 2023
The Lancet Countdown report on health and climate change: Health at the mercy of fossil fuels, 2022
WHO, Health and Climate Change Global Survey Report, 2021

Human Settlements

Universal access to risk information and solutions to build resilience



2030 Target

- All populations, especially those most vulnerable to impacts of climate change, have ready access to platforms to understand the risks climate poses and the solutions that can be taken to adapt and build resilience to these risks and to integrate climate risks into decision making from local to global levels.



Progress to date

The volume of open-access climate data is increasing globally, but data accessibility, resolution and completeness remain challenging particularly for the Global South.

As of 2023, ~70% of developing countries use their own national models in their NAPs, but only ~55% have tailored downscaled scenarios that local governments can leverage in their Adaptation & Resilience (A&R) planning (NAP Global Network 2023).

Climate analytics, on the other hand, that translate data into a format that simplifies decision-making related to A&R, are an even bigger gap in the Global South.

Acknowledging some of the organisations working towards this future

Google, GRII, BCG

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Scale partnerships with research institutions and organizations to foster collaboration and exchange of capacities
- Make available to governments and decision-makers localized climate data, contributing to more effective and evidence-based A&R planning
- Enhance the integration of data hubs, solution platforms and ensure interface with local actors for accelerating information sharing and decision-making.

Sources and references

NAP Global Network, NAP Trends, Accessed 17 November 2023

Human Settlements

Cities and Regions Resilient Planning



2030 Target

- 10,000 cities and 100 regional governments have evidence-based, actionable adaptation plans



Progress to date

As of 2022, 572 cities and 36 regional governments have an adaptation and resilience plan as reported in CDP, equivalent to ~6% and 36% achievement of the 2030 target, respectively (CDP, 2021). While there's still much to be done, collective progress towards A&R planning has increased in recent years, with the number of cities in the CDP Cities A list in 2022 up to 122, compared to 95 the year before.

For the first time, the CDP A list included several countries in the Global South such as Peru, Ecuador, Cameroon, Turkey, Jordan, and India. It is important to note these metrics only capture cities and regions who report to CDP and may exclude those who do have A&R plans but have not disclosed.

According to RegionsAdapt, Industrialized cities and regions have made more progress in developing their adaptation plans than middle-income and lower-income governments due to the latter's lack of technical capacity to initiate the process.

The Cities Race to Resilience campaign has provided a framework for how cities can plan to integrate A&R in all aspects of urban planning, outline targets, implement a range of recognized A&R solutions, and report commitments. The campaign has signatory cities reporting a total of 194 planned climate-related projects with 77% at , scoping or feasibility stage.

Acknowledging some of the organisations working towards this future

Cities Race to Resilience, Regions 4,

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Address technical capacity, finance, and data gaps for cities and regions in the Global South facing resource constraints.
- Prioritize funding for cities and regions to effectively implement A&R actions. Enhance mechanisms for international funding to flow down to the local level.
- Setup collaborative networks to help cities and regional governments tap for support in integrating resilience across all aspects of urban planning, for example through Sustainable Energy Access and Climate Action Plans (SEACAP) development under programmes such as the Covenant of Mayors for sub-Saharan Africa (CoMSSA).
- Support with capacity building and technical assistance to pledge, move towards implementation, and report on adaptation and resilience-building activities through working with Race to Resilience partners like ICLEI, CDP, UNEP and GCoM to ensure that the work that is happening at the local level is recognised, rewarded and showcased at the highest level

Sources and references

Regions4 Progress Report, 2023.
Cities Race to Resilience Report, 2023.
Race to Resilience Progress Report, 2023.
CDP, Cities on the route of 2030, 2021.

Human Settlements

Planning and Locally-led Principles for Adaptation



2030 Target

- Operationalisation of National Adaptation Plans and Locally-Led Principles, enabling adaptation in a country-driven localised and consultative manner



Progress to date

Countries are increasingly submitting NAPs or Adaptation components in their NDCs to the UNFCCC – however, implementability remains a challenge. 80% of Parties included an adaptation component in their NDCs, which according to the 2022 NDC Synthesis Report, have more detailed information in recent years than past NDCs. 23% of Parties indicated that they have developed a NAP, while others (45 %) identified their intention to do so (UNFCCC, 2022).

47 developing countries have submitted NAPs to the UNFCCC as of 2023 – 4 of which have been updated or submitted for the first time since COP 27 (NAP Global Network, 2023). However, analysis by the NAP Global Network indicates that only 50% of these NAPs come equipped with robust implementation strategies and 45% have costings of adaptation actions. Multiple obstacles still need to be overcome to ensure NAPs are locally-led, robust, and actionable. These include governance, granular data access and availability, finance, and capabilities.

Some countries have successfully demonstrated how to ensure their NAP is an inclusive process. For instance, Bangladesh has combined bottom-up and top-down approaches, organizing consultations across levels.

The Global Center on Adaptation launched the Global Hub on LLA to address a critical gap in capacity and resources to fully operationalize NAPs in a locally-led manner.

Acknowledging some of the organisations working towards this future

WRI, GCA, IIED, Adaptation Fund

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Resolve the barriers to locally-led adaptation (LLA) by enhancing financing to foster investment in local capacities to manage funds and adaptation processes.
- Through Hubs and Platforms support sharing of information, connecting and inspiring local communities and practitioners around the world with the latest knowledge and solutions for LLA.
- Deploy further assistance and support from the UN Development Programme (UNDP), the UN Environment Programme (UNEP) and the Green Climate Fund (GCF) in supporting countries developing NAPs.

Sources and references

World Resources Institute, Technical perspectives: 3 Things to Know About the Adaptation Components of Countries' Updated NDCs, 2022
UNFCCC, NDC Synthesis Report, 2022
UNFCCC, NDC Synthesis Report, 2023
NAP Global Network, NAP Trends, accessed 17 November 2023

Human Settlements

Greening Urban Areas



2030 Target

- USD 1 trillion invested in nature-based solutions for communities in urban areas



Progress to date

Nature-based solutions in urban areas have numerous environmental, social and economic benefits, from reducing carbon emissions, to increasing resilience, improving air quality and wellbeing of urban dwellers. The concept of "Nature-Based Solutions for Cities" is gaining momentum, emphasizing the use of natural processes to address urban environmental challenges.

Many collaborative efforts were launched recently to foster the emergence of nature-positive cities, such as the "Playbook for Nature Positive Infrastructure Development," a joint effort by WWF, FIDIC, and others, focusing on integrating natural elements into infrastructure projects. The "Urban Nature Program," a collaboration between UNEP, the World Bank, and ICLEI, aims to embed nature-based solutions in urban planning. Similarly, ICLEI's "Cities for Nature" initiative encourages local governments to prioritize natural habitats in city landscapes. The World Economic Forum leads the "Nature Positive Cities Initiative", advocating for urban areas that enhance biodiversity and ecosystem services. UNEP has released the Lighthouse Cities Program which Germany has funded to include Nature in transition plans for Cities and regions.

These initiatives collectively represent a significant stride towards sustainable and resilient urban development, aligned with environmental conservation principles.

Acknowledging some of the organisations working towards this future

UNEP; ICLEI; World Bank; C40; WRI; WEF

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Integrate nature into cities climate and urban policies and plans.
- Setting clear goals for green and blue spaces. This to be aligned with Race to Zero and Race to Resilience campaigns, contributing to global agendas like the Sharm el Sheikh Adaptation Agenda and the 2030 Breakthroughs.
- Report cities progress on the CitiesWithNature Action Platform, as recognized by the Convention on Biological Diversity (CBD). Setting science-based targets for climate and nature is essential, along with aligning these with Local and National Biodiversity Strategies and Action Plans (LBSAPs and NBSAPs).
- Increased investment in nature and ecosystem restoration is crucial, involving innovative financing and private sector partnerships.
- Support policy alignment across multiple levels, recognizing the link between climate change and biodiversity loss, ensuring consistency between National Determined Contributions (NDCs) and NBSAPs, and incorporating biodiversity and ecosystem restoration into various sectoral and development plans.

Sources and references

Cities for Nature Platform, ICLEI, 2022; Playbook for Nature Positive Infrastructure Development. WWF, 2023; Nature Positive Cities Initiative. WEF, 2023.

Finance

Race to Zero Finance Partners members are leading the way on net zero transitions. However, without sufficient, efficient and fair mobilisation and provision of finance, we will fail to protect people and our planet from climate change, and there will be no just transition.

Emerging Markets are estimated to need USD 2.4 trillion /year by 2030, with approximately USD 1 trillion coming from external sources to meet the Paris Agreement and SDG goals (IHLEG, 2023). We need to reform the global financial architecture to unlock investments in emerging markets and developing economies, boosting investment in innovative, shovel-ready projects and addressing unsustainable debt levels.







There is an urgent need to catalyze greater investment into climate adaptation and resilience. Current investments in adaptation constitute only a fraction of what is needed. Prompt action to reduce, prepare for, and better manage risks is economically imperative, and there are immediate opportunities to do so to avoid costly and catastrophic future impacts.



Finance

2030 Targets

Source

<p>Public Finance Adaptation</p> 	<ul style="list-style-type: none"> Public finance actors increase provision of climate finance and allocate 50% of climate funds to adaptation and resilience. 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Private Finance Adaptation</p> 	<ul style="list-style-type: none"> Private sector integrates physical climate risks into investment decisions and continues to innovate mechanisms for financing adaptation and resilience so as to enable the mobilization of the USD 215-387 billion that will be needed annually across public and private sources. 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Insurance Finance Adaptation</p> 	<ul style="list-style-type: none"> Global property and casualty insurance sector has an industry capabilities framework, actively supports project implementation, and institutionalizes a longer-term industry approach to climate adaptation. 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>MDB Finance Adaptation</p> 	<ul style="list-style-type: none"> Multilateral Development Banks and Development Partners support scaling-up private finance by providing dedicated resources to support credit enhancement and de-risking of adaptation investments. 	<p>Sharm El Sheikh Adaptation Agenda</p>
<p>Finance for Net Zero</p> 	<ul style="list-style-type: none"> Around USD 3.5 trillion annually of capital investment will be needed on average between now and 2050 to build a net-zero global economy. 	<p>IEA</p>
<p>Private Finance for Net Zero</p> 	<ul style="list-style-type: none"> FIs should support the global economy reducing their emissions by half by 2030 through their financing activities. This includes supporting sector transition to net zero. 	<p>Race to Zero</p>

Finance

2030 Targets

Source

<p>Finance for Developing Countries</p> 	<ul style="list-style-type: none"> To meet SDGs and Paris Agreement goals, USD 2.4 trillion is needed in EMDCs (other than China) by 2030 for climate-related investments, a four-fold increase from current levels. 	<p><u>IHLEG</u></p>
<p>MDB Financing for Green Transition</p> 	<ul style="list-style-type: none"> USD 250 - 300 billion per year is needed by 2030 from MDBs and other development finance to meet the green transition targets. 	<p><u>IHLEG</u> <u>G20 Expert Group</u></p>
<p>Concessional Finance for Developing Countries</p> 	<ul style="list-style-type: none"> Concessional financing of USD 150-USD 200 billion annually will be needed by 2030 (more than 4 times existing levels) to finance adaptation and build resilience, address loss and damage, restore nature and support a just transition in the early phase out of coal. 	<p><u>IHLEG</u></p>

Key:  Adaptation and Resilience

 Finance

 Mitigation

 Biodiversity

Public Finance Adaptation



2030 Target

- Public finance actors increase provision of climate finance and allocate 50% of climate funds to adaptation and resilience.



Progress to date

While there has been a notable increase of global adaptation flows from domestic and international public sources (~USD63bn in 2021/22 versus ~USD45bn in 2019/20), much focus still remains on mitigation (CPI, 2023). However, the provision of international public finance for adaptation declined by 15% (UNEP 2023).

Nearly all adaptation finance tracked was funded by public actors (98%) with development finance climate portfolios increasingly prioritizing adaptation (CPI 2023).

Nevertheless, there is a significant shortfall in public finance available for adaptation, with an urgent need for a larger proportion of public finance and grant-based resources for climate action to be allocated to adaptation and resilience in line with the Glasgow Pact call for doubling the developed country provision of adaptation finance to developing countries by 2025.

Acknowledging some of the organisations working towards this future

Adaptation Fund; MDBs and DFIs; Global Center on Adaptation

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Support the Bridgetown Initiative creating affordable to finance for climate-vulnerable countries as a necessary condition to increase investments in adaptation and resilience in climate-vulnerable countries.
- Scale instruments like debt swaps or debt relief can also alleviate debt while directing funding towards broader economic and development objectives.
- Develop country-specific, comprehensive resilience and adaptation plans, aligned with economic development strategies that translate into investment projects.
- Enhance financial and technical support from the MDBs and bilateral agencies and ensure that financial flows for adaptation adequately targets investments in human capacity to ensure the effectiveness and responsiveness of investment in resilient infrastructure (including natural infrastructure).

Sources and references

Sharm El Sheikh Adaptation Agenda Report , 2023.
CPI, Global Landscape of Climate Finance, 2023.
DB, Scaling Adaptation Finance in the Private Sector , 2022.
UNFCCC, Paris Agreement, 2015
UNFCCC, Glasgow Climate Pact, 2021

Private Finance Adaptation



2030 Target

- Private sector integrates physical climate risks into investment decisions and continues to innovate mechanisms for financing adaptation and resilience so as to enable the mobilization of USD 215 - 387 billion that will be needed annually across both public and private sources.



Progress to date

While private finance for adaptation and resilience is urgently needed currently only 2% of tracked adaptation and resilience finance comes from private investors (CPI, 2023).

Nevertheless, the private sector has been substantially mobilizing in the face of growing climate shocks and are starting to integrate physical climate risks, as evidenced by 18,700 companies disclosing climate risks through CDP in 2022. 85% of the 556 FIs disclosing to CDP assessed their portfolio exposures to climate-related risks yet there is room for private sector consistency and harmonisation in climate risk disclosure (CDP, 2022).

A significant positive development is that companies are increasingly required to disclose information about climate-related risks and opportunities (e.g. IFRS S2) contributing to a global baseline in sustainability disclosure to help close the valuation gap towards 2030. Significant engagement of the private finance sector is needed, including collaboration among the private and public sectors, MDBs and DFIs.

Acknowledging some of the organisations working towards this future

Investors; Banks; Insurers; Financial Service Providers including data providers, as well as financial regulators.

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Develop adaptation and resilience capacity for corporates and financial institutions to better incorporate physical climate risks into strategy and decision-making processes.
- Support collaboration between the private and public sector, including MDBs and DFIs for innovation and unlocking private finance for adaptation and resilience, including de-risking.
- Accelerate implementation of standards such as IFRS S2 in order to account for material climate risks and opportunities.
- Elevate the connectivity of adaptation and resilience and nature and connect inter-relationship of nature-related risks/opportunities to material climate risks or opportunities for corporate and financial institutions, and disclosure of these.

Sources and references

Sharm El Sheikh Adaptation Agenda Report, 2023.
CDP, Financial Services Disclosure Report, 2022
DB, Scaling Adaptation Finance in the Private Sector, 2022.
UN Environment Programme, [Adaptation Gap Report](#), 2023.
CPI, Global Landscape of Climate Finance, 2023.

Insurance for Adaptation and Resilience



2030 Target

- Global property and casualty insurance sector has an industry capabilities framework, actively supports project implementation, and institutionalizes a longer-term industry approach to climate adaptation.



Progress to date

Progress is being made on both micro and macro-level capability frameworks in the insurance industry as this year's report on Insurance for Adaptation and Resilience from Marsh McLennan shows. Micro-level efforts involve the International Cooperative and Mutual Insurance Federation (ICMIF) and United Nations Office for Disaster Risk Reduction (UNDRR partnership) partnership to benchmark insurers on disaster risk reduction. Macro-level initiatives aim to establish public-private pooling mechanisms to support vulnerable countries affected by large-scale events.

Insurers are increasingly involved in risk-reducing projects in various markets, with an emphasis on ex-ante risk reduction. Several projects, primarily supported by the Insurance Development Forum, are moving from discussion to action.

The insurance sector is rapidly scaling up its focus on climate adaptation, with a strong emphasis on embedding climate risk reduction in operational plans. Initiatives like the Nairobi Declaration on Sustainable Insurance reflect geographic opportunities. International insurance regulators are working on facilitating local market action on climate adaptation.

Acknowledging some of the organisations working towards this future

Insurance Development Forum; Insuresilience; CDP ; Marsh McLennan; ZurichRe; SwissRe

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Deploy the global property and casualty insurance capabilities framework to actively supports project implementation, and institutionalise a longer-term industry approach to climate adaptation.
- Offer more efficient allocation and financing options bringing the expertise in risk assessment and pricing from the insurance sector to support proactive risk mitigation and adaptation solutions, particularly regarding risk engineering for other sectors.
- Apply across all priority systems, including the creation of innovative offerings to extend coverage to vulnerable populations such as EMDEs and conflict-affected areas, applying risk engineering principles to both public and private sectors, and ensuring that capital projects prioritize resilience.

Sources and references

Sharm El Sheikh Adaptation Agenda Report, 2023
Marsh McLennan, Building a Resilient Future, 2023
CDP, Nature in Green Finance: Bridging the gap in environmental reporting, 2022.

MDB Finance Adaptation



2030 Target

- Multilateral Development Banks and Development Partners support scaling-up private finance by providing dedicated resources to support credit enhancement and de-risking of adaptation investments.



Progress to date

Most multilateral organizations focus on mobilizing private finance for climate mitigation and only a few prioritize adaptation activities, with AfDB, EBRD, and GEF being the leaders in mobilizing substantial volumes of private finance for adaptation (SAA, 2023).

Moreover, private finance mobilization is a minor objective for only 18% of all MDB's portfolios (OECD 2023), and among them, just about half include climate as a core objective. The limited size of investment opportunities in adaptation poses challenges in building a compelling business case and achieving the necessary scale to attract private investors.

MDBs and IFIs through blended concessional finance instruments play a catalytic role in de-risking adaptation investments, unlocking private sector finance, and supporting the creation of project pipelines in emerging economies. Moreover, access to below-market rate finance for adaptation supports credit enhancement for developing countries in debt distress at high risk of debt distress.

Acknowledging some of the organisations working towards this future

MDBs ; UNEP FI

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Align efforts of MDBs to better track climate adaptation finance and to improve their financing approach. As part of that, they develop new methodologies for determining the types of activities that can contribute to climate adaptation.
- Boost private finance mobilization, projects and programs with banks, investors, insurers and corporations, and other private actors. According to a 2022 survey on public finance providers' portfolios for private mobilization, guarantees, syndicated loans, and project finance are pivotal to spur private finance for climate action.

Sources and references

Sharm El Sheikh Adaptation Agenda Report, 2023.
OECD, Private Finance Mobilised by Official Development Finance Interventions, 2023
EIB, Joint Methodology for Tracking Climate Change Adaptation Finance, 2022.
EIB, Joint Report on Multilateral Development Banks, 2021 .
ODI, Multilateral development banks need a bolder vision and urgent reform to tackle the climate crisis, 2022.

Finance for Net zero



2030 Targets

- Around USD 3.5 trillion annually of capital investment needed on average between now and 2050 to build a net-zero global economy (Source: Energy Transition Commission, 2023).



Progress to date

Despite the urgent need to decarbonise, most of the conversation to mobilise public climate finance still rests on 'billions'.

This capital reallocation is underway but is not occurring at the pace or scale needed.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Public finance (e.g. provided by publicly owned development/infrastructure banks) to play an important role in scaling up technologies and first-of-a-kind developments that are essential for sector transition towards 2030 targets, incorporating a just transition. By actively supporting sector transition, public finance can over time transition away from carbon intensive sectors and assets.
- Use subsidy reform combined with carbon pricing to generate an estimated USD 2.8 trillion in annual government revenues or savings by 2030.
- Companies in all high emitting sectors to present credible, comprehensive and detailed new transition plans that include reducing emissions “up and down the value chain” – from production to distribution and use.

Acknowledging some of the organisations working towards this future

public sector ; private financial institutions ; MDBs and DFIs.

Sources and references

IEA, Net Zero by 2050 Scenario Report, 2021; Energy Transition Commission, Financing the Transition: How to make the money flow for a net zero economy, 2023 .

Private Finance for Net Zero



2030 Target

- FIs should support the global economy reducing their emissions by half by 2030 through their financing activities. This includes supporting sector transition to net zero.



Progress to date

Nearly 700 financial institutions from across 50 countries are members of Race to Zero Partners, including asset owners, asset managers, and banks, and setting interim 2030 and 2025 targets. Around 40% of global financial markets are committed to net zero through Race to Zero Partner Initiatives, despite headwinds such as attacks on ESG commitments, and the need for regulation and policy supportive of net zero.

In developing countries, further locally-driven collaboration is needed within the finance sector for net zero finance to be relevant to the regional context. Regional networks such as that of the Glasgow Financial Alliance for Net Zero (GFANZ) in Africa, Latin America and the Caribbean, and in Asia Pacific are an important step towards this.

Acknowledging some of the organisations working towards this future

Race to zero partners ; GFANZ; financial institutions; private sector.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Enact regulations such as carbon pricing and clarity on competition law.
- Foster global coordination to scale up climate finance, including transition finance.
- Reform the financial architecture to help create the enabling environment to finance transition to net zero.

Sources and references

Race to Zero Campaign (RtZ), 2023; UN-Convened, Net-Zero Asset Owner Alliance (NZAOA) , 2023; IIGCC et al., Paris Aligned Asset Owners (PAAO), 2022; The Net Zero Asset Managers initiative (NZAA) , 2023; UNEP FI, Net-Zero Banking Alliance Report (NZB), 2022.

Finance

Finance for Developing Countries



2030 Target

- To meet SDGs and Paris Agreement goals, USD 2.4 trillion is needed in EMDCs (other than China) by 2030 for climate-related investments, a four-fold increase from current levels



Progress to date

Finance provision and mobilization to developing countries continued to fall short of needs, particularly in developing and low-income economies. Less than 3% of the global total (USD 30 billion) went to or within least developed countries (LDCs), while 15% went to or within EMDEs excluding China. The ten countries most affected by climate change between 2000 and 2019 received just USD 23 billion; less than 2% of total climate finance. Developing countries are not able to access capital at a reasonable cost.

“A Climate Finance Framework: decisive action to deliver on the Paris Agreement” proposed by Professor Nicholas Stern and Dr Vera Songwe sets out what is needed (over USD 2 trillion by 2030 for emerging markets and developing countries outside China). The framework covers the scope of what is needed; mitigation especially a shift to clean energy; adaptation and resilience, loss and damage; the protection and restoration of nature, and a just transition. It also proposes priority action areas: trust including delivering on the USD 100 billion and GCF replenishment; debt, including international liquidity, pandemic and natural disaster debt clauses; private sector finance including de-risking; domestic markets, including technical assistance; and transforming the MDB system, including MDBs adopting country-driven strategies.

Acknowledging some of the organisations working towards this future

IMF; World Bank; MDBs; private sector; philanthropies; public sector

SAA is convening stakeholders to deliver on this target. join via: adaptation@climatechampions.team

Actions and enablers

To make the 2030 targets a reality, the following solutions and Means of Implementation are recommended:

- Implement real economy policies for developing countries to reduce risks and make investment profitable.
- Combine real economy and financial sector climate-related actions with a major increase in the scale of finance provided by Multilateral Development Banks (MDBs), together with changes in MDB strategy and approach to help mobilise greatly increased private investment.
- Develop better data to enable private finance to assess the true risks associated with developing countries.
- Build capacity of key stakeholders as well as bringing them onboard to own the framework. This should also include provision of technical assistance.
- Accelerate Public-private partnerships and attract private finance through GCF, World Bank and project pipelines.

Sources and references

IHLEG Report on Climate Finance, 2023 .
Finance for Climate Action, 2022

MDB Financing for Green Transition



2030 Target

- USD 250 - 300 billion per year is needed by 2030 from MDBs and other development finance to meet the green transition targets (Source: G20 Expert Group, 2023).



Progress to date

Together, several new initiatives have moved the agenda forward with clear emphasis on effective debt management, timely relief, and long-term debt sustainability; on scaling up MDBs' financing for development and climate, on risk management and building up financial resilience to help developing countries cope with climate impacts, and on policy reforms to guide these actions.

These include initiatives reforming the international financial architecture (Bridgetown Initiative, the UN's SDG Stimulus Plan, the V20's Accra-Marrakech Agenda, the Summit for a New Global Financing Pact, the Nairobi Declaration), initiatives focused on private sector finance such as the B20 and GFANZ, a push on MDB finance through the G20, and a special focus on Africa through the Africa Climate Summit.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Catalyse the private investment and finance at the centre of MDB strategy and operations.
- Adopt a whole-of-MDB approach to co-create investment opportunities with the private sector, develop pipeline and provide de-risking and credit-enhancement tools.
- Accelerate access to finance from MDBs. The G20 Expert Group on Strengthening Multilateral Development Banks has called for radical change, including tripling in annual lending levels to US\$390 billion by 2030. This is a key topic for MDBs and their shareholders towards 2030.

Acknowledging some of the organisations working towards this future

MDBs; private sector; philanthropies; public sector

Sources and references

IHLEG Report on Climate Finance, 2023 .
G20, The Triple Agenda Report, 2023

Finance

Concessional Finance for developing economies



2030 Target

- Concessional financing of USD 150-USD 200 billion annually will be needed by 2030 more than 4 times existing levels to finance adaptation and build resilience, address loss and damage, restore nature and support a just transition in the early phase out of coal.



Progress to date

Just USD 1 billion of new concessional finance was committed to private sector transactions during 2021 for climate finance projects.

These remain severely underfunded even while they do not yield revenue streams needed to attract private financing and fiscal resources are limited.

Actions and enablers

To make the 2030 targets a reality, the following actions and Means of Implementation are recommended:

- Triple concessional finance by 2030, with bilateral climate finance tripling to USD 90 billion by 2030.
- Double adaptation finance from the 2020 level and triple it by 2030.
- Call to increase replenishments to triple IDA's annual lending by 2030, a recommendation by the G20 High Level Expert Panel on MDBs.
- Financing nature can yield revenue streams for developing countries.

Acknowledging some of the organisations working towards this future

MDBs; private sector; philanthropies; public sector

Sources and references

IHLEG Report on Climate Finance, 2023.

