Delivering the 2030 Agenda
and the Paris Agreement

UNECE

A Commitment Trifecta

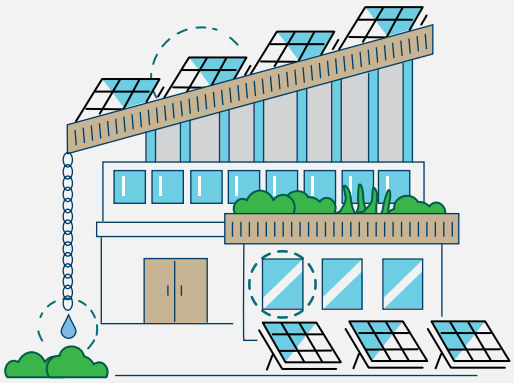
Bold action in three areas will deliver concrete, near-term outcomes and, longer-term, achieve the 2030 Agenda for Sustainable Development and the Paris Agreement. Country commitments are sought to:

1. achieve superior performance in buildings
2. address growing concentrations of methane in the atmosphere, and
3. modernize resource management.

High-Performance Buildings

- Deliver health and quality of life
- Improve employment, affordability, social equity, resilience, and carbon intensities
- Address clean energy and climate
- Manage water and land resources
- Provide mobility and technology access

Countries should commit to high-performance buildings in their plans and targets.



Passive Energy | Integrated Solar | Water Management

High-Performance Buildings

25%

of global warming is caused by methane emissions.

Methane Management

- Reducing methane emissions offers significant climate benefits, especially near term, as there is a large reduction potential, and cost-effective mitigation technologies are readily available.
- Managing methane delivers important improvements in air quality and safety.
- Managing methane can enhance the uptake of sustainable hydrogen and support a just transition

Countries should commit to significant actions on methane management.

Sustainable Resource Management

A comprehensive framework for responsible resource management would benefit communities worldwide and provide assurances to an investment community calling for tightened environmental, social, and corporate governance.

Countries should commit to a global framework for sustainable resource management.

Securing sustainable resources will require:

A Socio-Environmental-Economic Contract

Common sustainable finance principles

A resource management framework

Transparency/Traceability/Sustainability

Strategic environmental assessments

High-Performance Buildings

Buildings are central to meeting the sustainability challenge as they consume over 70% of the electric power generated, 40% of primary energy, and are responsible for 40% of CO_2 emissions from the energy services they require. Most of today's buildings will still be in use in 2050, and developing countries will need to accommodate 2.4 billion new urban residents by 2050.

Renewable energy technology alone cannot meet these requirements, despite recent improvements. The energy performance of buildings must be managed, and the capability to meet the challenge exists today.

High-performance buildings deliver on the 2030 Agenda by promoting sustainable urban development and providing opportunity (equity), employment (jobs), resilience and a long-term shared economy. Buildings are complex systems embedded in energy, communication, water, and mobility networks. Improving their performance will accelerate the sustainable energy transition by improving the efficiency with which buildings' energy services are provided.

Architects, building contractors, and engineers perfect building envelopes, getting the materials and design right and then ensuring precise construction techniques. Systems professionals deliver heating, ventilation, and air conditioning as well as other equipment. Energy suppliers can secure no- or low-carbon solutions to meet the systems' needs. Energy can be provided on-site in a distributed energy model or through a network connection. Information and communications technology connects a building to its built environment, monitors the indoor environment and systems, and tracks materials to enable circularity. Urban planners coordinate the range of networks serving buildings (energy, communications, sanitation, water, mobility).

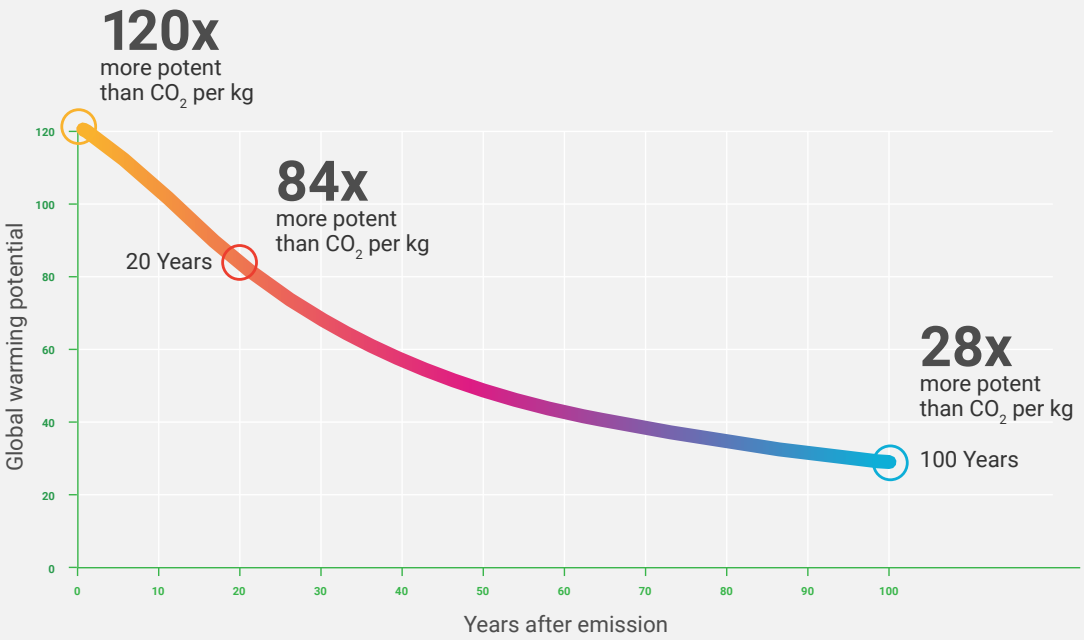
Climate action is achieved by reducing the energy requirements of buildings to a point at which residual needs can be met by no- or low-carbon energy sources, by increasing carbon stored in buildings, and by reducing the carbon emissions embedded in the materials and systems in buildings. High-performance buildings offer critical outcomes in terms of their energy and climate action (affordable and clean energy), resilience (affordability, weather disruptions in terms of heat, cold, and wind), health (good health and well-being, including both indoor and outdoor air), water (deluge, drought, contamination, sanitation), resource conservation (land use, materials, waste), mobility, and technology access.

Objectives, Targets, and Commitments

- Align building codes and their deployment with high performance targets; ensure new buildings are certified compliant; reduce the average energy requirement per square meter in the new building "fleet" and in existing buildings to best practice.
- Reduce CO_2 emissions associated with meeting buildings' energy needs; increase the amount of carbon "stored" in buildings; improve indoor air quality and reduce pollution-linked health issues.
- Improve the global supply chain for the construction business; reduce embedded carbon in buildings and building products and reduce waste; recover materials at the end of a building's life.

Methane Management

Direct and indirect warming combined over time



Methane is a potent greenhouse gas with 120 times the climate forcing effect of CO2. Global atmospheric concentrations of methane have grown nearly 150% from pre-industrial levels and are far above the natural range of the last 650,000 years. Global emissions from human activity are projected to increase another 20% by 2030.

Reducing methane emissions offers significant climate change benefits, especially in the near term, as there is a large reduction potential and cost-effective mitigation technologies are readily available. Achieving a 50% reduction in methane emissions by 2050 would reduce global temperatures 0.55°C.

Methane is not only a significant greenhouse gas, it also is a precursor to ozone and air pollution. It is emitted from three main sectors: fossil fuels, including oil, gas, and coal; waste, including solid waste and wastewater; and agriculture, including rice paddies, enteric fermentation, and manure. There is growing demand for natural gas, but that growth is at risk given the methane and CO_2 emissions. Proper emissions management would bring substantial near-term climate and economic benefits and would reinforce the sustainability credentials of natural gas.

UNECE has developed best practice guidance related to methane in the coal, oil, and gas sectors and is working with countries and partners to prepare a resolution for a declaration by the UN General Assembly when it meets in September 2021 of an International Decade for Methane Management. Such a resolution will require country support.

Objectives, Targets, and Commitments for Methane Management

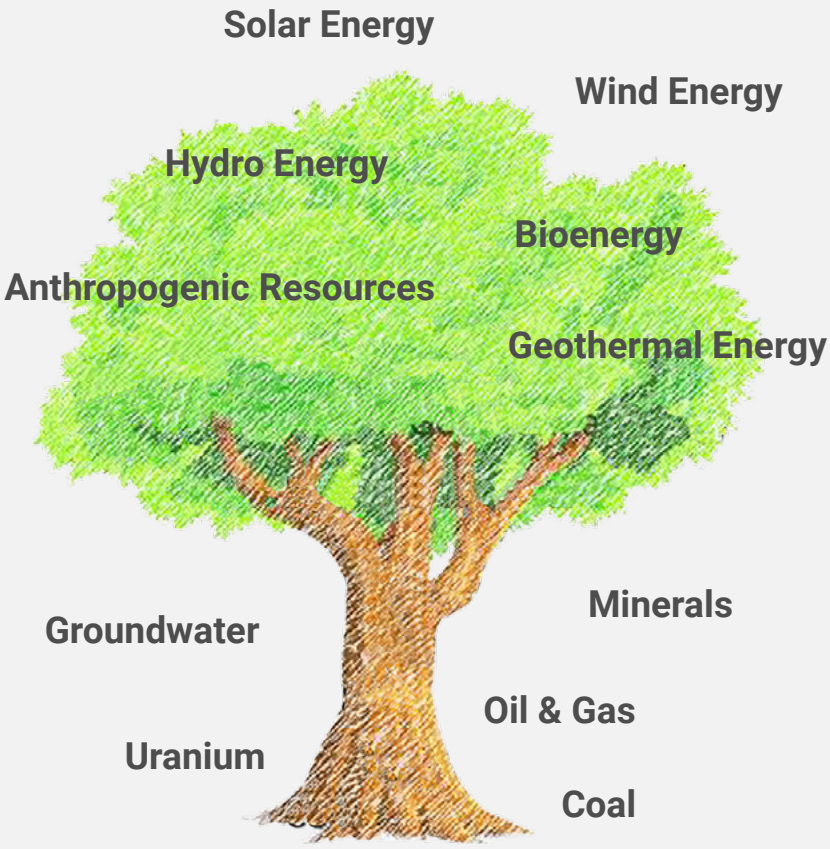
- Tightened Commitments/Convention
- Awareness of challenges and solutions
- Reduced atmospheric methane concentrations
- Detailed best practice guidance for all sectors
- Enduring Programmes and Structures
- Standards for coal mine closure including socioeconomic and environmental aspects
- Dissemination, demonstration, deployment
- Training, regulation, and outreach

An international decade for methane management could include the following activities:

- UN Member States add significant methane emission reductions to their NDCs
- Develop best practices, standards, protocols or a convention on methane
- Methane assessment and interactive tool (from CCAC)
- Bi-Annual Global Methane Forum
- International Methane Emissions Observatory reports
- Workshops/Seminars covering all emitting sectors (energy, agriculture, waste)
- Webinars on methane
- Case studies of concrete actions
- Sponsored research
- Scientific meetings in coordination with WMO, CCAC, and groups such as EDF
- Energy, Agriculture, and Landfill Methane Conferences and Fora
- Methane meetings with World Economic Forum
- European Union conference on methane
- UN Conference on Methane
- Methane meetings coordinated with global climate meetings
- Dissemination/deployment activities in other sectors

Sustainable Resource Management

Today's resource patterns are unsustainable in terms of their environmental and societal impact and in terms of ensuring the availability of resources both now and in the future. Developments in the extractive industries, including the supply of critical raw materials (CRMs), will determine the capacity of countries to attain the 2030 Agenda.



Sustainable development will depend on the optimal and responsible production and use of natural resources. Extractive industries recover raw materials from the earth, process them, and turn them into products and services for use by consumers. CRMs are particularly important in this regard to support green energy, e-mobility and digital transformations that are already underway.

The world's population is expected to increase to over 10 billion by 2050, and there will be a concomitant growth in demand for raw materials. The volumes of raw materials that are consumed continue to grow, and alongside that growth will be growth in the volumes of waste that are generated. Full value chain and cross value chain innovations are needed to moderate the volumes of resources consumed and reduce the volumes of waste that are generated. A holistic, systems and nexus approach to resource management would contribute to optimal and responsible production and use of natural resources and ensure their availability in the future.

The potential of extractive industries to contribute to sustainable development often is mired in financial, economic, social and environmental issues. Extractive industries have a staggering impact on climate change, with fossil fuels accounting for over 75% of global greenhouse gas emissions and nearly 90% of all carbon dioxide emissions. In addition, countries continue to

subsidize fossil fuel production and thereby extend their carbon footprints. The potential impacts of operations of extractive industries include local and downstream/ downwind environmental concerns linked to waste, air and water quality, and toxic or other effluents. The global energy transition will drive rising demand for lithium and other CRMs such as rare earth materials, so it will be essential that the mining and other extractive sectors adopt circular economy practices to reduce attendant environmental impacts, pollution, and social risks. While extractive industries generate millions of jobs, they can also have negative effects, with old infrastructure, limited implementation of safety regulations and insufficient personal protective equipment leaving many of the millions formally and informally employed in this sector or living nearby at risk of illness, injury or death.

Objectives and Targets for Sustainable Resource Management

There is a need for global, principles-based action to develop a coherent framework for resource industries if the world is to meet its climate objectives and deliver quality of life at the community level. The UNECE proposes action on a framework for resource industries that would include:

a. Social Contract: A comprehensive Socio-Environmental-Economic Contract to operate is needed that integrates quality of life, just transition, climate change mitigation and adaptation, and environmental stewardship.

b. Sustainable Finance Taxonomy: Investors should move towards ESG focused funding based on a common sustainable finance taxonomy.

c. Sustainable Resource Management System: The industry should align with a shared principles-based, integrated, Sustainable Resource Management Framework.

d. Supply Chain Traceability: Stakeholders can develop a comprehensive framework for traceability, transparency, and sustainability in extractives related to supply chains.

e. Strategic environmental assessments of plans and programmes help mitigate possible negative impacts and can be a comprehensive planning tool that promotes governance and innovation by weighing environmental and health impacts of alternatives, identifying solutions, and engaging authorities and the public.