

The importance of a continued focus on climate action in support of UNCT engagement with Governments in Europe and Central Asia

Issue-based Coalition on Environment and Climate Change for Europe and Central Asia



Key messages

Climate change is here and is having global and local impacts:¹

- During 2021, atmospheric CO₂ concentrations reached a record level, 50 per cent higher than pre-industrial levels.
- 2021 was the world's sixth warmest year on record. The Northern Hemisphere surface temperature was at 1.09°C above the 20th century average.
- In 2021, a total of 432 catastrophic events were recorded, which is considerably higher than the average of 357 annual catastrophic events for 2001–2020.
- In 2021, Arctic sea-ice fell to its lowest July extent on record.
- 80 per cent of people displaced by climate change are women.
- By 2030, more than 2 per cent of total working hours worldwide will be lost because of heat stress on labour productivity.
- With high or very high confidence, we can see that, in Asia, health and well-being are being adversely impacted by heat, malnutrition, mental health and displacement.
- Similarly, in the European region
 - adverse impacts on mental health are being observed
 - structural changes and shifts in species ranges and behaviours are being seen in all ecosystems
 - agricultural and crop production is being impacted.
- Key risks in Europe include
 - risks to people, economies and infrastructures due to coastal and inland flooding
 - stress and mortality to people due to increasing temperatures and heat extremes
 - marine and terrestrial ecosystems disruptions
 - water scarcity to multiple interconnected sectors
 - losses in crop production, due to compound heat and dry conditions, and extreme weather.

Background

One of three action points that emerged from the Annual *Regional Collaborative Platform for Europe and Central Asia* meeting and the Resident Coordinators and RCP Member Meeting on 5 April 2022 was: “IBC Environment and Climate Change to support development of key messages on importance on continued focus on climate action in support of UNCT engagement with Governments”.

This note responds to the action point. It looks at why climate change must continue to be a leading focus of communications between UNCTs and Governments in Europe and Central Asia (ECA), combined with some broad recommendations for action. A more comprehensive set of policy actions that might be taken across sectors and within key sectors is presented in annex; the policy actions are based upon practical recommendations made to individual ECA programme countries.

¹ Sources include Sixth Assessment Report, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, Feb. 2022

Climate change impacts are now being observed:²

- Widespread, pervasive impacts to ecosystems, people, settlements and infrastructure have resulted from observed increases in the frequency and intensity of climate and weather extremes, including hot extremes on land and in the ocean, heavy precipitation events, drought and fire weather.³
- Overall adverse economic impacts attributable to climate change, including slow-onset and extreme weather events, have been increasingly identified.
- **Climate change:**
 - has caused impacts on human health, livelihoods and key infrastructure, in urban and rural settings
 - is contributing to humanitarian crises where climate hazards interact with high vulnerability
 - has adversely affected physical health of people globally and mental health of people in the ECA region, and occupational health and safe at work as temperatures rise
 - has caused substantial damages, and increasingly irreversible losses, in terrestrial, freshwater and coastal and open ocean marine ecosystems
 - has reduced food and water security, through increases in frequency and intensity of extremes, so hindering efforts to meet SDGs.
- The triple planetary crises of climate change, pollution and nature loss are severely impacting human rights, including the rights to adequate food, water, education, housing, health, development and life.
- The climate crisis is this generation's defining human and child's rights challenge and is already having a devastating impact on the well-being of children also in the ECA region. The *Children's Climate Risk Index*⁴ shows that 9 countries in the region are ranked low-medium risk, 12 are ranked medium-high risk.
 - 41.9 million children (57%) in the region are exposed to more than six heatwaves per year
 - 32.4 million children (49%) in the region are highly exposed to water scarcity
 - 7.5 million children (10%) in the region are highly exposed to riverine floods

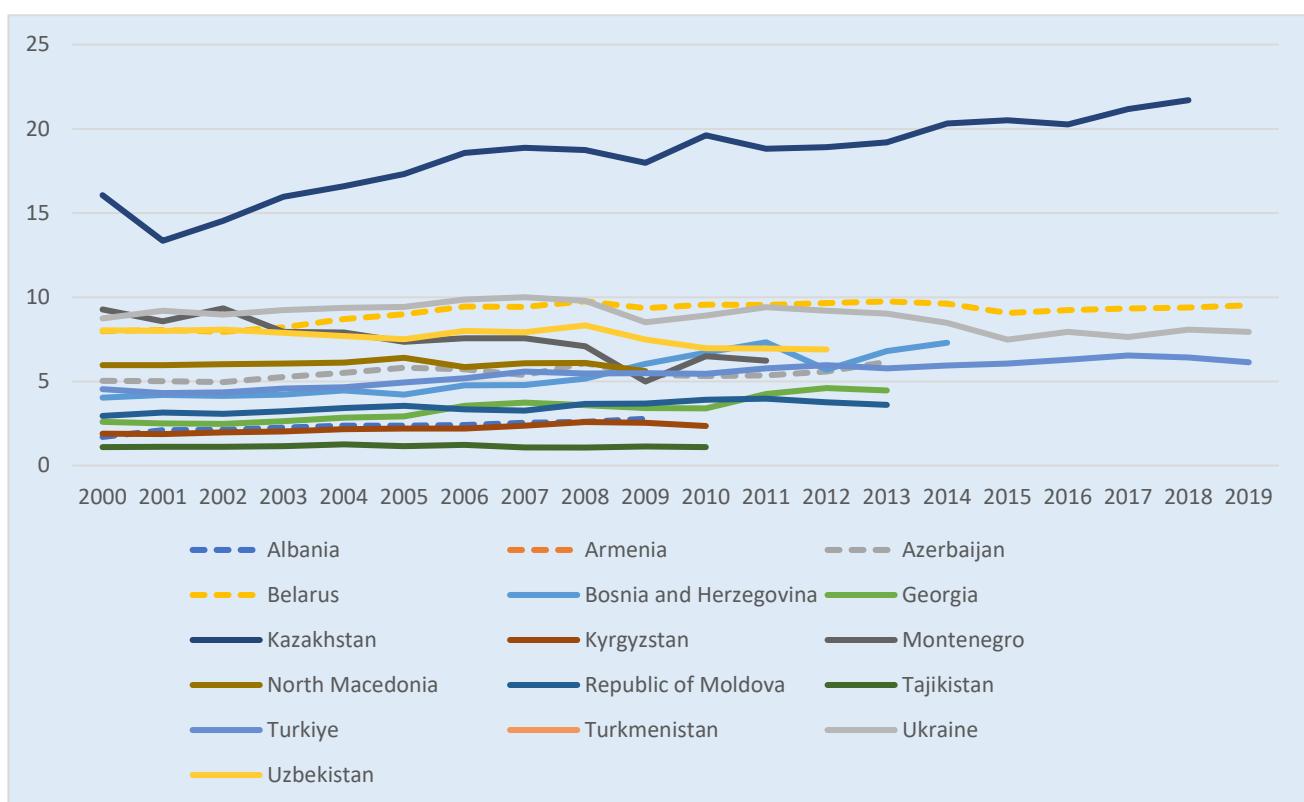


Figure 1: Total greenhouse gas emissions without LULUCF (t CO₂ equivalent) per capita, 2000–2019⁵

² Based upon Sixth Assessment Report, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, February 2022.

³ Insights into the state of the climate can be found in WMO statements: <https://public.wmo.int/en/our-mandate/climate/wmo-statement-state-of-global-climate>.

⁴ UNICEF (2021), The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index. New York: United Nations Children's Fund. <https://www.unicef.org/media/105376/file/UNICEF-climate-crisis-child-rights-crisis.pdf>

⁵ UNDESA SDG Indicators Database (indicator 13.2.2; no data for Serbia) and UNECE Statistical Database, accessed 13 July 2022

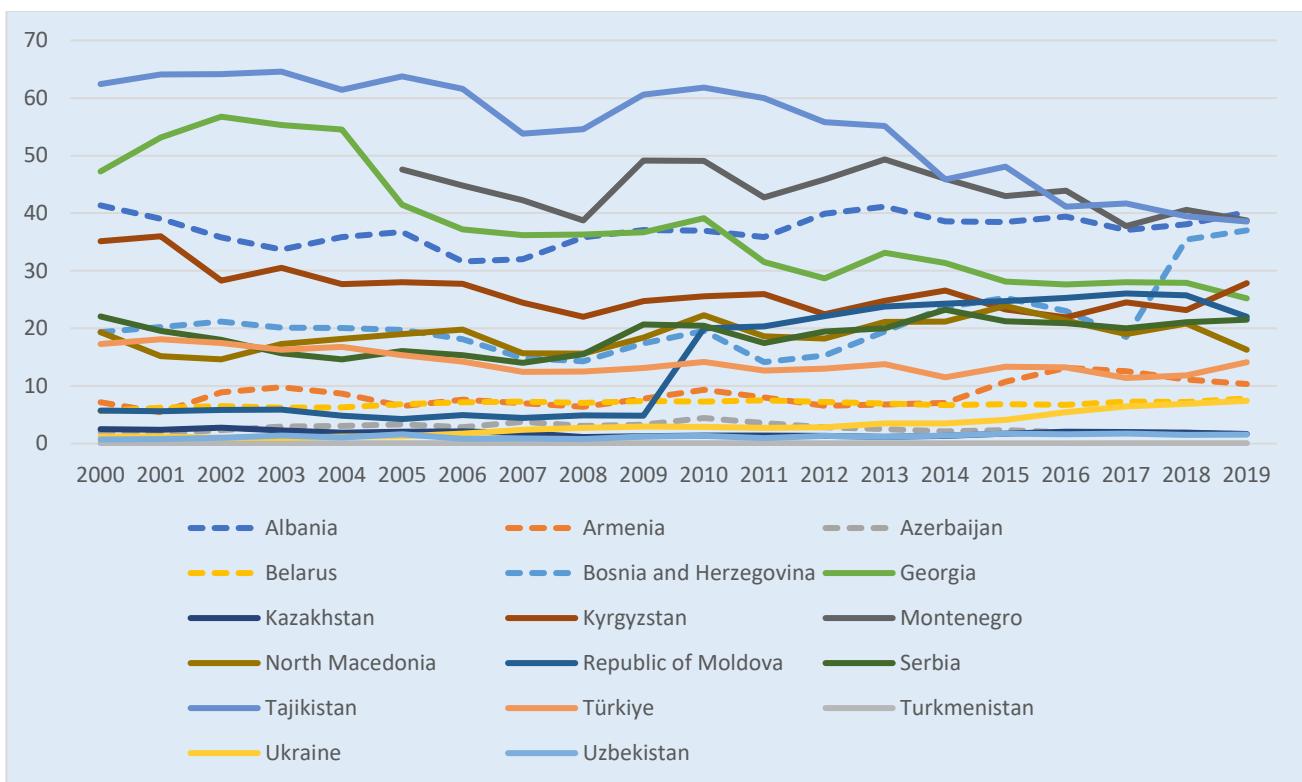


Figure 2: Renewable energy share in the total final energy consumption (per cent), 2000–2019⁶

The **mitigation** commitments being made are inadequate to keep temperature rises below 2°C (let alone 1.5°C). Programme country Governments should be encouraged to:

- Keep NDC commitments under review and ratchet up ambition as soon as feasible, while also ensuring the needs and priorities of children, in particular, are addressed in them.
- Develop NDCs and Long-term Strategies (LTSs) in a consistent, coordinated manner, so that the short-term and medium-term commitments are consistent with the longer-term objectives.
- Develop and adopt a national mitigation strategy and related action plan, aligned with international commitments and ensuring a just transition of the workforce.
- Base national mitigation strategies (i.e. just transition plans) on social dialogue and develop them together with social partners and other key stakeholders.
- Develop a low-emission development strategy, in line with other recent strategies, with an action plan.
- Integrate mitigation issues into national and local policies, strategies, plans, programmes and budgets, notably in housing, transport, agriculture, urban planning, industry & mining, health and energy sectors.
- Ensure financial and human resources for the implementation of these different strategies and plans and continue funds mobilization.
- Strengthen institutions and capacities:
 - Strengthen the human capacities of the authorities that are most relevant for mitigation by establishing climate change units with a clear mandate for mainstreaming climate change in their sector and for coming together in a working group.
 - Promote and enhance coordination across relevant national institutions in the implementation of economic, social and environmental policies to make the relevant policies and actions coherent and effective.
 - Raise the level of expertise at national, regional and municipal levels, through capacity-development programmes in climate change issues, including just transition and green job creation.
 - Make legal and institutional preparations for implementation of projects under carbon market mechanisms. Designate a body for implementing such projects and entrust it with preparing ready-to-offer projects to investors.
- Reduce coal consumption and prioritize phase-out of coal.

⁶ UNDESA SDG Indicators Database (indicator 7.2.1).

- Take practical measures:
 - Make just transition plans and take measures to phase out coal fast, increase use of natural gas as an interim replacement if necessary but limit investment in assets that will be stranded later.
 - Invest in renewables and work on electricity networks and storage solutions.
 - Take measures to improve energy efficiency of buildings, including social housing, as a priority, but also in energy-intensive industries.
 - Shift from fossil fuels in transport and mobility and, where possible, from personal cars towards electric and public transport and active mobility modes.
 - Switch from fossil fuel subsidies, which are both regressive and encourage consumption and thus greenhouse gas (GHG) emissions, to social assistance measures for poor and vulnerable individuals and households affected by increasing prices and declining incomes.
 - Consider effects of mitigation measures on human well-being and ecosystems, including in transboundary basins, and facilitate cross-country coordination and discussion of such measures.
 - Invest in afforestation and raise awareness of farmers about mitigation.
 - Address the root causes of social inequality and injustice that contribute to putting people in vulnerable situations and at greater risk of suffering climate change impacts.
- Include those most affected – notably youth – as part of the solution to combat climate change, ensuring their equitable, effective and meaningful participation in climate action.

The **war in Ukraine** is impacting energy security and efficiency, but the climate crisis continues, so programme country Governments should be encouraged to:

- Avoid fresh investment in oil or coal sectors, except for emission controls. For example, new activities in exploration, development, production, import, export or use will likely lead to stranded assets.
- Reflect carefully on any fresh investment in the gas sector, except for emission controls or when replacing oil or coal sector assets, production or consumption.
- Rapidly transform the energy sector towards sustainable renewable sources as not only critical for mitigating climate and air pollution but also contributing significantly to energy security and sovereignty.

Climate change is impacting economies and society, above all persons in vulnerable situations. Governments should be encouraged to implement **adaptation** measures:

- Ensure that:
 - all climate measures that have an impact on the rights of indigenous peoples are implemented with their free, prior and informed consent
 - policies are based on gender disaggregated data and mainstream gender considerations
 - adaptation investments benefit all, including people and communities in vulnerable situations.
- Develop and adopt a national adaptation strategy and related action plan, building on a national climate change risk and vulnerability assessment and which support a just transition for all.
- Base the national adaptation strategy on social dialogue and develop it together with social partners and other key stakeholders.
- Develop and adopt a national strategy on disaster risk management taking an all-risk approach. Integrate climate change scenario modelling into the disaster risk profile.
- Ensure financial and human resources for the implementation of the strategies and action plans and continue fund mobilization for adaptation actions.
- Promote and enhance coordination across relevant national institutions in the implementation of economic, social and environmental policies to make the relevant policies and actions coherent and effective.
- Integrate climate change adaptation issues into national, sectoral and local strategies, plans, programmes and budgets, with measures to increase resilience of economic sectors.
- Facilitate communication, coordination and joint development and implementation of adaptation strategies and plans among countries in transboundary basins.
- Promote the genetic improvement of priority plant and animal species and improved connectivity between ecosystems, taking into threats posed by climate change.
- Recognize that many components of agrobiodiversity would not survive without human interference; local knowledge and culture are integral parts of agrobiodiversity management.

Annex: Possible policy actions

This annex lists possible actions, starting with holistic policies and strategies, then looking at key sectors and closing with education, communication and awareness. Please review all actions under a heading as safeguards are sometimes listed separately.

Contents

Policies and strategies	6
Strategies.....	6
Legislation.....	6
Institutions.....	7
International actions	7
Monitoring and information.....	8
Processes	8
Energy.....	8
Taxes, subsidies and funding.....	8
Renewable energy	9
Energy efficiency	10
Energy sector reform.....	10
Spatial planning and regional development.....	11
Regional and local development	11
Urban areas	11
Rural areas.....	11
Housing and construction, retrofitting and renovation	11
General	11
Energy efficiency	12
Energy sources.....	12
Insulation.....	12
District heating	12
Metering	12
Materials.....	13
Transport	13
Public transport	13
Traffic management	13
Vehicles with internal combustion engines	13
Low-emission vehicles	13
Fuels.....	13
Agriculture, aquaculture and forestry.....	14
Forestry and green areas.....	14
Agriculture	14
Industry and waste	14
Education, skilling and reskilling.....	15
Communication, awareness	16
Some key resources:.....	17

Policies and strategies

Strategies⁷

1. Develop and adopt national climate change mitigation and adaptation strategies (i.e. just transition plans) and related action plans, aligned with international commitments and building on a national climate change risk and vulnerability assessment; cover all relevant sectors, include specific measures and suitable economic instruments to reach climate change mitigation and adaptation targets.
2. National just transition plans on mitigation and adaptation should be based on social dialogue and developed together with social partners and other key stakeholders.
3. Governments should invest public funds in greening the economy and direct fiscal revenue towards social protection and active labour market policies to foster job creation and help workers to adjust to environmental sustainability policies
4. Integrate climate change scenario modelling and jobs into the national disaster risk profile.
5. Develop and adopt a national strategy on disaster risk management taking an all-risk approach, complemented by a relevant national action plan taking into account disaster risk reduction (DRR) and climate change adaptation measures, in compliance with national commitments and international instruments recognized by the country, especially the Sendai Framework for Disaster Risk Reduction 2015–2030.
6. Ensure communication, coordination and joint development of adaptation strategies and plans as well as their implementation by the riparian countries in transboundary basins.
7. Facilitate communication and coordination in implementing of mitigation measures (e.g. dams and reservoirs) within the riparian countries in transboundary basins to prevent negative effects and find synergies within such measures.
8. Ensure financial and human resources for the implementation of these strategies and action plans and continue fund mobilization for just transition, including adaptation and mitigation actions.
9. Explore the opportunity of developing a joint work plan or alignment of the national disaster risk management and climate change adaptation action plans, [also taking into account technological hazards and industrial accident risks].
10. Integrate climate change and just transition issues into sectoral and local policies, strategies, plans, programmes and budgets, particularly in the housing, transport, agricultural, urban planning, health, energy and industrial sectors, including the mining sector, [and that potentially cascading effects of natural hazards into technological risks are considered].
11. Develop a low-emission development strategy, with social and jobs dimensions at the centre, in line with other recent strategies, with an action plan and secure funding for implementation.
12. Integrate concrete actions on protecting the population's health from climate change, including at work, along with mechanisms for monitoring their effects and effectiveness in future national strategic documents on climate change adaptation and mitigation and on DRR.
13. Integrate natural capital and ecosystem management in socioeconomic planning to address climate vulnerability and the nexus between food, energy and biodiversity.
14. Implement policies and measures to increase the resilience of economic sectors to natural and man-made hazards caused or exacerbated by climate change, including natural hazards triggering technological risks.

Legislation

1. Review the existing environmental and sectoral legislation and identify where provisions are required to effectively address mitigation and adaptation goals, objectives and targets.
2. Assess the need for a coherent and overarching climate law, develop and adopt.

⁷ The greening of economies in the context of sustainable development and poverty eradication will require a country-specific mix of macroeconomic, industrial, sectoral and labour policies that create an enabling environment for sustainable enterprises to prosper and create decent work opportunities by mobilizing and directing public and private investment towards environmentally sustainable activities. The aim should be to generate decent jobs all along the supply chain, in dynamic, high value-added sectors which stimulate the upgrading of jobs and skills as well as job creation and improved productivity in more labour-intensive industries that offer employment opportunities on a wide scale.

- A climate law must take into consideration the economic, environmental, social, education and training, and labour portfolios need to provide an enabling environment for enterprises, workers, investors and consumers to embrace and drive the transition towards environmentally sustainable and inclusive economies and societies
- 3. Develop legislative packages required to achieve goals set out in the national climate-related policies and international commitments. This should be done by Government, with public participation and in consultation with workers' and employers' organizations.

Institutions

1. Establish a tripartite and inter-ministerial body on climate change and just transition issues to inter alia: address climate change issues; procure studies on climate change impacts in different sectors, e.g., for the health priorities of water safety and food security; coordinate and monitor adaptation and mitigation activities; also coordinate funds mobilization for climate change; raise awareness on adaptation and technology transfer issues at different levels; and integrate climate change issues into strategies policies, programmes, plans and investment projects. The body should allow effective interministerial cooperation, requiring careful consideration of its positioning in the government's structure and its composition.
2. Provide national platforms for enhancing cooperation in knowledge-sharing, policy advice and education for climate change issues, just transition and disaster preparedness and mitigation.
3. Establish joint transboundary and cross-sectoral bodies to deal with the multi-hazard and multi-risk nature of disaster risk management – including for transboundary rivers.
4. Strengthen human capacities, including their understanding of the socioeconomic consequences of climate change, of the authorities most relevant for climate change mitigation and adaptation by establishing climate change units in all relevant institutions with a clear mandate for mainstreaming climate change in the relevant sector.
5. Raise the level of expertise at the national, regional and municipal levels, through capacity-building and training programmes in climate change issues, just transition and disaster risk management.
6. Support development of multi-hazard early warning systems for climate and weather induced hazards at national and regional level that aim to generate, disseminate and use timely, accurate, actionable and inclusive warning information to enable individuals, communities and organizations to prepare in advance and respond appropriately to a hazard in order to reduce the possibility of harm or loss.

International actions

1. Establish mechanisms and administrative structures for regular development of emissions inventories and emissions projections in accordance with international methodologies and for reporting.
2. Develop capacities for the compilation and regular update of a national air emission inventory, following international standards. Alternatively, make the inventory compatible in terms of categories and emission sources data with GHG inventories developed in under the UNFCCC and the Paris Agreement.
3. Finalize legal and institutional preparations for implementation of projects under carbon market mechanisms. Designate a body for implementing projects under carbon market mechanisms and entrust it with preparing ready-to-offer projects to investors.
4. In cooperation with industry representatives and social partners, engage in developing a range of investment projects in the energy and waste sectors which reduce GHG emissions or enhance sequestration and which are therefore eligible for funding from carbon market mechanisms.
5. Strengthen efforts to attract foreign capital, through donors and international projects, opening up to private enterprises and exploiting the opportunities offered by environmental international instruments.
6. Support joint bodies and implementation of transboundary arrangements to ensure coordination and dialogue on climate change mitigation and adaptation, and just transition, between the riparian countries in transboundary basins.
7. Support international cooperation in forecasting and warning provision related to climate and weather induced hazards, particularly in transboundary context.

Monitoring and information

1. Support the broader creation, dissemination and use of climatic and meteorological information and data among various stakeholders at the central and local levels, to advance preparedness for and resilience to extreme weather events.
2. Ensure development and sustainable operation of early warning systems, in particular for riverine and flash floods, severe storms mudflows, accidental water pollution and heat and cold waves.
3. Develop and implement tools and methodologies in water-stressed and vulnerable regions to identify adaptation responses and reduce the impact of droughts and floods, support the development of web and mobile applications to monitor precipitation and glaciers.
4. Promote scientific cooperation and citizen science to assess and monitor changes in water resources and raise awareness and capacities of policymakers on related risks and measures to prepare for such risks
5. Evaluate indicators used in each national action plan, use the lessons learned from the evaluation in setting up a new national action plan for the next implementation period and report regularly, annually or biannually on the progress of the action plan with substantive information, including qualitative and quantitative data and costs and benefits of measures, and increase public information and awareness of the results of the actions.
 - o Establish or strengthen availability of and access to basic labour market data, where needed, and carry out ex ante assessments of the employment and socioeconomic impacts of environmental policies to inform policy choices.
6. Set up a monitoring framework for the evaluation and reporting of the state of implementation of the national strategies on climate change and DRR, providing indicators that present quantitative estimates of impacts and effects.
7. Set up a geoportal for spatial information that integrates satellite and aerial data, including relevant information on climate-change-related issues, using modern technologies, and make it publicly accessible.

Processes

1. Ensure gender equality, including equal participation of women and men in the decision-making processes regarding climate change, greenhouse gas emissions and adaptation and mitigation.
2. Ensure effective public access to information and effective and inclusive public participation in decision-making on plans, programmes, policies, strategies and legislation related to climate matter.
 - o Actively promote and engage in social dialogue, at all stages from policy design to implementation and evaluation and at all levels from national to enterprise level in line with applicable international labour standards most relevant to the just transition framework, to forge consensus on pathways towards environmental sustainability with decent work.
3. Introduce strategic environmental assessment (SEA) as a support tool to develop sound and coordinated sustainability policies that integrate climate change, include climate change considerations (mitigation and adaptation, linked to DRR) as an explicit part of SEA and apply SEA to policy documents in the housing, transport, agriculture, land use, urban development, energy, industrial and mining sectors, at the national and regional levels.
4. Involve the authorities of protected areas and UNESCO designated sites (World Heritage, Biosphere reserve and Global Geoparks) in strategies, plans and monitoring frameworks as a learning model of sustainable development

Energy

Taxes, subsidies and funding

1. Ensure transparency for consumers as regards the costs of social policy support for energy consumption as well as of support for renewable energy sources through feed-in tariffs.
2. Reform coal subsidies provided to industry and households.
3. Stop subsidizing the energy sector; in particular, make electricity prices to private households and large enterprises fully reflective of costs, including the costs of production, grid operation and measures to reduce environmental impacts.
4. Consider establishing an emissions trading scheme.
5. Reinvest revenues from an emissions trading system in further climate change mitigation or adaptation instead of being absorbed into the State budget.

6. Introduce economic incentives, e.g., a feed-in tariff, for electricity produced from renewable energy sources.
7. Establish an energy efficiency fund as soon as possible for financing measures to improve energy efficiency in industry and households. The fund should be fed with a tax on electricity consumption by industrial customers and be supplemented by international funding and other funding sources. Companies implementing an energy audit and energy-saving measures could be exempted from this tax.
8. Introduce or extend the use of revolving funds and incentive mechanisms for the private sector, for both households and businesses, in particular for the use of biomass, waste and biofuels as energy sources and for investing in cogeneration plants.
9. Introduce economic incentives encouraging the purchase of cleaner technologies, abatement techniques, monitoring devices, techniques for the development and use of renewable energy sources, rational energy production/use etc. in the taxation and custom system.
10. Regularly implement impact assessment analyses of existing economic incentive mechanisms in order to adjust them accordingly.
11. Formulate accompanying policies through social protection, including unemployment insurance and benefits, skills training and upgrading, workforce redeployment and other appropriate measures to support enterprises and workers in sectors negatively impacted by the transition to sustainable development
12. In consultation with social partners, use public investments to develop infrastructure with the lowest possible adverse environmental impact, to rehabilitate and conserve natural resources and to prioritize resilience in order to reduce the risk of displacement of people and enterprises; direct fiscal revenue towards social protection and active labour market policies to foster job creation and help workers to adjust to environmental sustainability policies; and use public procurement to incentivize a shift to environmentally sustainable goods and services and promote social inclusion by ensuring that enterprises, in particular MSMEs and disadvantaged groups, are able to apply for public purchases.

Renewable energy

1. Conduct a comprehensive study on the potential of renewable energy sources (such as solar, wind, geothermal, biomass waste and residues, and agricultural waste), their job creation potential and the necessary investments for their development and adopt targets accordingly.
2. Promote the full exploitation of the solar and wind energy potential, also in line with the targets set in the country's nationally determined contribution (NDC).
3. In consultation with social partners, invest in the skilling, upskilling and reskilling of workers needed to accelerate the energy transition as well as the quality of jobs within the sector.
4. Significantly increase the share of renewable energy sources in primary energy production.
5. Develop sound policies to promote the application of renewable energy, while respecting air and water protection and nature conservation.
6. Favour ensuring funds for the use of renewable energy sources, which at the same time improve air quality and minimize the adverse effects of climate change.
7. Encourage electric power companies and private domestic and foreign investors, and seek foreign assistance, to support the implementation of renewable energy projects.
8. Develop renewable energy sources (hydropower, solar and wind power, and biomass) in accordance with the goals of the national strategy for sustainable development. Various scenarios should be developed and discussed in forums with a high level of public participation. Targets for renewable energy sources should be adopted by the Government within the framework of the general energy policy, the national strategy for sustainable development and relevant spatial plans.
9. Apply hydropower plant site selection criteria based on international best practices. Consider application of the principles of the Hydropower Sustainability Assessment Protocol developed by the International Hydropower Association.
10. Revise all legal and strategic documents that regulate and foresee hydropower construction to ensure that the site selection criteria applied to hydropower plants are based on international best practice, which excludes hydropower construction in protected areas and areas with high hydro-morphological and biodiversity status.
11. In cooperation with neighbouring countries that are pursuing a similar path in energy sector development, conduct a transboundary study into the cumulative and combined effects on the environment of planned

(small) hydropower plants and associated new infrastructure construction, taking into consideration seismic and climate change effects.

12. Undertake further research and development of cleaner coal processes, as well as environmentally sound processes using renewable energy resources – to be done by Government and energy enterprises. Governments, in consultation with social partners, should also consider the jobs implications of said developments and processes.
13. Elaborate and implement a grid modernization plan, including to accommodate increased generation of wind and solar energy. Increase investments to reduce losses in the electricity transmission and distribution grid and make grid improvements in line with the targets and needs of a higher share of variable renewable energy.
14. Improve the enabling environment for businesses and conditions for investors in renewable electricity production by verifying and, if necessary, adapting requirements on grid connection to avoid exceeding connection costs.
15. Simplify, streamline and harmonize licence procedures for facilities based on renewable energy and introduce a one-stop-shop for investors to obtain all the necessary permits for the construction of renewable energy plants. Offer support to possible investors.
16. Develop alternatives to coal-, lignite-and gas-fired power plants, by developing scenarios with high efficiency step-up technology and enhanced use of renewable energy, taking into account environmental impacts.
17. Introduce regulations to promote electricity and heat production from renewable energies.
18. Incentivize the penetration of renewable energies, such as photovoltaics, geothermic heat pumps and biogas, in housing, street lighting, public utilities, etc., as a partial alternative to the use of fossil fuels.

Energy efficiency

1. Continue to give priority to energy efficiency within energy policy.
2. Increase energy efficiency to reduce electricity and heat demand.
3. In consultation with social partners, invest in the skilling, upskilling and reskilling of workers needed to accelerate the energy efficiency as well as the quality of jobs within the sector.
4. Improve the energy efficiency targets to a level that is more consistent with the country's potential.
5. Review and adjust the electricity price structure to encourage energy saving and energy-efficiency improvements.
6. Improve the collection of electricity bills and introduce special support measures for those who cannot afford to pay full price.
7. Increase investments required to reduce losses in the electricity transmission and distribution systems.
8. Favour ensuring funds for energy efficiency and the promotion of circular economy activities, which at the same time improve air quality, minimize the adverse effects of climate change and improve the quality of jobs.
9. Improve integration of energy efficiency into the reform of the energy sector and in other public policies, including using of socioeconomic instruments and tariff policy promoting energy efficiency.
10. Promote measures designed to improve the energy efficiency of buildings to reduce energy costs for final energy users.
11. Restructure and possibly privatize the energy sector to improve energy efficiency, taking into account national conditions and interests, as an urgent requirement for energy conservation.
12. Continue and intensify awareness- and capacity-building regarding energy efficiency measures and their implications for jobs. Public awareness campaigns should show the economic and environmental benefits of reduced fuel consumption.

Energy sector reform

1. Introduce measures to stimulate changes towards using more sustainable fuels in the energy sector.
2. Gradually introduce environmental audit of energy-related activities.
3. Enhance diversification of energy sources.
4. Strengthen environmental impact assessment for energy-related projects.
5. Carry out SEA of energy sector plans and programmes under development are based on international best practice and provide greater transparency and public engagement.
6. Develop and adopt a long-term climate-resilient national energy strategy in accordance with national priorities and carry out an SEA of the strategy.

7. Take into account the impacts of climate change on hydrology when planning for new hydropower facilities, by ensuring that their design and management are able to cope with more frequent extreme weather events under a range of projected climate change scenarios.
8. Promote actions to decrease the energy demand for cooling purposes.
9. Address the negative influences of climate change on the productivity of the hydropower sector resulting from changes in water availability.

Spatial planning and regional development

Regional and local development

1. Elaborate and implement local adaptation plans, which also consider both the quality and quantity of jobs.
2. Integrate local climate change adaptation and mitigation measures into local development plans and programmes.
3. Develop local DRR strategies in line with the Sendai Framework.
4. Guarantee the security and safety of water supply to the population during floods and droughts, properly reflect climate change concerns in the design of new water supply and sanitation infrastructure and water management infrastructure and address them during the maintenance of existing ones.
5. Implement water-sensitive land measures regarding drought and flood risks (e.g., aquifer protection from contamination, non-structural measures and construction-free areas regarding flood mitigation), and early warning systems and contingency plans.

Urban areas

1. Introduce climate change mitigation and adaptation, as well as DRR, in policy documents related to urban development.
2. Include climate change adaptation and mitigation measures in spatial and urban planning (particularly for risk-bearing activities such as industrial operations).
3. Promote among cities the signing and implementation of the Covenant of Mayors and the development and implementation of sustainable energy and climate action plans.
4. Support at municipal level the implementation of measures that would achieve GHG emissions reduction.
5. Promote the implementation of nature-based solutions in urban areas to increase adaptation to climate change.
6. Provide guidance and support for the redesign and retrofitting of urban infrastructure (civil and historical buildings).
7. Promote the increase of the percentage of pervious surfaces in urban areas by considering the introduction of specific minimum values for new urban developments and for the regeneration of existing parts of urban areas. Consider planning for pervious areas when renovating urban infrastructure, especially transport infrastructure.
8. Conduct inventory, vulnerability and risk assessment of infrastructure facilities and industrial installations (such as tailing management facilities) in and close to urban areas.
9. Introduce specific zoning requirements to mitigate GHG emissions and energy efficiency in urban areas.
10. Elaborate, maintain and update the maps of flood-prone areas, and where possible create multi-hazard and multi-risk maps.

Rural areas

1. Introduce climate adaptation planning in rural settlements, paying special attention to economic diversification and implications for jobs.
2. Introduce specific zoning requirements to mitigate GHG emissions and energy efficiency in rural settlements.
3. Tailor the design of rural settlements to local climatic conditions (in terms of sun orientation, prevailing wind direction, pervious surfaces, establishment of green infrastructure).

Housing and construction, retrofitting and renovation

General

1. Integrate disaster risk management and climate change adaptation aspects into construction, zoning and other relevant regulations.

2. Introduce incentives for investments in low-carbon buildings.
3. Fully exploit the potential for GHG emissions reduction from the housing sector, including through renovation.
4. Revise the regulations to increase energy efficiency and use of renewable energy sources for new and existing buildings (both civil and historical), in line with international near-zero-energy building standards.
5. Develop social measures to support vulnerable users.
6. Introduce carbon taxation for sectors such as housing and commercial, to incentivize the switch to more sustainable technologies, taking into account the needs of poor and vulnerable groups.
7. Include human settlements in the considerations about climate change adaptation and therefore included in future studies and strategies to be implemented in the country.

Energy efficiency

1. Implement measures for energy efficiency in residential and commercial buildings, including by applying new technologies and tax incentives.
2. Adopt policies to ensure high energy-efficiency standards for construction and housing sectors as well as for efficient equipment and appliances.
3. Introduce, control and enforce the application of energy consumption standards for the construction of new buildings and the renovation of existing buildings.
4. Develop a national low interest loan programme to rehabilitate buildings to improve their energy performance and to waive legal fees for the regularization of illegal housing where the occupants have introduced energy-saving equipment.
5. Design and implement appropriate incentives for reducing electricity consumption in residential buildings.
6. Create incentives to stimulate more economic use of energy sources, considering the concerns of poor and vulnerable parts of the population.
7. Support research and development and demonstration projects for new technology and techniques to enhance energy efficiency in buildings.

Energy sources

1. Promote the use of low-carbon technology (heat pumps, renewables) and cleaner fuels such as natural gas instead of liquid and solid fuels by individual households.
2. Introduce measures to stimulate changes towards using more sustainable fuels and the use of better heating appliances in the housing sector.
3. Ensure fuel switching from the utilization of electricity for space heating to the use of natural gas or connection to district heating systems.
4. Develop financing products to support beneficiaries of renovations and the use of renewable energy in buildings.
5. Incentivize (or make investments) to spur the utilization of geothermal water as an energy source, particularly in the heating of settlements.

Insulation

1. Improve thermal insulation of houses, starting in large urban areas, to reduce the consumption of fuel during winter.
2. Introduce a funding programme to promote insulation measures for residential and public buildings (e.g., soft loans and tax rebates).

District heating

1. Foresee district heating for new and existing neighbourhoods and buildings.
2. Introduce a funding programme to connect flats and buildings to district heating or the gas grid.
3. Introduce cost-reflective prices for district heating in cooperation with responsible local authorities.
4. Improve the energy efficiency of old district heating systems in apartment buildings by subsidizing technical provisions and rehabilitation of buildings.

Metering

1. Install a metering system to allow a switch from area-based to consumption-based pricing as soon as possible. Measures to enlarge or overhaul the network should always include the installation of a metering system.

2. Stimulate awareness of energy use by the inhabitants of apartment buildings by the installation of individual meter systems.

Materials

1. Use local materials for the housing sector, to reduce its energy intensity and their carbon footprint.
2. Introduce incentives to reduce the carbon footprint of the housing sector and to introduce modern technologies in the cement industry by using carbon footprint calculations.
3. Prescribe the integration of traditional materials, morphologies and aesthetic shapes with contemporary techniques and technologies for the design and construction of new rural housing.

Transport

1. Integrate climate change adaptation issues into transport policies and strategies.
2. Invest public funds in greening the economy and use public investments to develop infrastructure with the lowest possible adverse environmental impact, to rehabilitate and conserve natural resources and to prioritize resilience in order to reduce the risk of displacement of people and enterprises.

Public transport

1. Support municipalities to abate air pollution from transport by improving their public transport system, in particular by using clean and energy-efficient transport modes.
2. Encourage municipalities to invest in better public transport with lower greenhouse gas (GHG) emissions, public transport lanes and more safe walking and biking zones, especially in urban areas.
3. Renew the public transport fleet, including by using a green public procurement system and favouring electric and gas-powered buses.
4. Consider the possibility of modal shifts from road to rail transport and for a multimodal shift.

Traffic management

1. Encourage municipalities to limit urban driving by applying low emission zones that are forbidden to high emission vehicles.
2. Encourage municipalities with heavy traffic and high levels of pollution to apply user fees in congested areas.
3. Introduce and enforce regulations to restrict the use of the most polluting vehicles in urban areas.

Vehicles with internal combustion engines

1. Adopt emission standards for vehicles and technical specifications; set up inspection and maintenance programmes to enforce emission control standards.
2. Introduce or tighten the mandatory annual test of the safety, roadworthiness and exhaust emissions of all vehicles, including an assessment of the emissions of each vehicle tested.
3. Review motor vehicle-related taxes, with a view to making them supportive of environmental protection.
4. Reform the vehicle registration tax and the excise duty on imports of passenger motor cars by considering environmentally relevant factors such as emission standards, including CO₂, the age of the vehicle and type of motor fuel.

Low-emission vehicles

1. Prepare for infrastructure that accommodates the use of electric cars and electric bicycles.
2. Adopt policies to ensure high energy-efficiency standards for vehicles.
3. Stimulate the demand for low emission vehicles and the move of transportation to low emission modes.
4. Introduce measures for renewal of the passenger vehicle fleet, favouring fuel economy through the “feebate” system of charges and rebates, whereby energy-efficient or environmentally friendly practices are rewarded while failure to adhere to such practices is penalized.
5. Provide fiscal incentives encouraging buyers to purchase new cars, with progressively higher incentives, the lower emission rates will be, and scrap old ones.

Fuels

1. Implement emission performance standards and promote the use of biofuels according to the national legislation.
2. Promote the use of “clean” and good quality fuels, also with a targeted policy on the import of used cars.

3. Promote the use of less polluting fuels both through incentives and by setting up distribution networks over the whole territory.
4. Adjust the duty rates on gasoline and diesel as well as the separate tax on these products so that they help promote fuel saving behaviour and the import and use of cleaner fuels.

Agriculture, aquaculture and forestry

Forestry and green areas

1. Implement a just transition programme for the adaptation and mitigation of forestry use to climate change.
2. When formulating policy and legal documents for the forestry sector, consult with social partners, and take into account cross-sectoral issues, such as climate change and decent work.
3. Encourage the development of carbon offset forestry projects.
4. Conduct a specific study on the incidence of forest fires under changed climatic conditions in the country.
5. In cooperation with industry representatives, engage in developing a range of investment projects in the forestry sector that reduce GHG emissions or enhance sequestration and which are therefore eligible for financial funding from carbon market mechanisms (Article 6 of the Paris Agreement).
6. Prioritise biodiversity and the use native tree and shrub species, well adapted to the local climate, when developing and restoring green areas.

Agriculture

1. Integrate adaptation, mitigation and just transition issues into agriculture policies and strategies.
2. Address the issue of the increasing climate change vulnerability of the agricultural sector and the jobs and livelihoods that depend on it.
3. To enhance agriculture's adaptation to the impacts of climate change, ensure that the respective roles and responsibilities are clearly defined and distributed throughout the governmental bodies at various levels.
4. Investigate the selection of climate resistant crops and the optimization of fertilizer use.
5. Stimulate minimum tillage and modern manure management in fields to minimize GHG emissions.
6. Improve the awareness of farmers about climate change mitigation and adaptation measures, including by investing in the skilling, upskilling and reskilling of workers.
7. Further focus on establishing national emission-reduction goals for agriculture.
8. Incentivize (or make investments) to spur the utilization of geothermal water as an energy source, in particular in aquaculture and agriculture.
9. Address rain-fed and irrigated land in policy documents on climate change adaptation.
10. In cooperation with industry representatives, engage in developing a range of investment projects in the agricultural sector that reduce GHG emissions or enhance sequestration and which are therefore eligible for financial funding from carbon market mechanisms.
11. Prepare an action plan on adaptation to climate change in the agricultural sector taking into consideration the different agroecological conditions in the country and focusing on sustainable land and water management in changing climate conditions, and involving local rural communities. Promote the implementation of the action plan at all levels and by the population involved in agriculture.
12. Develop action plan to promote locally diverse food production systems, the accompanying local knowledge, culture and skills of the food producers.
13. Adopt selected management practices and approaches, including management of micro-organisms, sustainable soil management, conservation agriculture, and agroforestry, which are the less reported practices in Europe and Central Asia compared with other world regions.

Industry and waste

1. Establish national emission-reduction goals in industrial processes and waste management.
2. Adopt policies to ensure high energy-efficiency standards for industry as well as for efficient equipment.
3. Promote the use of natural gas as a cleaner combustible input, instead of coal, lignite or oil, for industrial activities.
4. Promote the incorporation of climate-related risks into the corporate governance of major state-owned entities.
5. Address GHG emissions from the waste sector through an integrated approach.

6. Assess and address the impacts of extreme weather events on the industrial and mining sectors, to prevent, prepare for and respond to accidents caused by these events.
7. Support national efforts to adapt and strengthen resilience to climate-related hazards and natural disasters, by considering climate risks (extreme weather events) in assessing risks at industrial installations and assessing potential consequences of industrial accidents caused by extreme weather events.

Education, skilling and reskilling⁸

1. Governments, in consultation with social partners, should
 - 1.1. support the transitioning to more environmentally sustainable economies by reviewing skills development policies and strategies to ensure they support responsive training, capacity development and curricula reviews
 - 1.2. encourage policy dialogue and coordination among education authorities and labour ministries to coordinate skills development policies and technical and vocational education and training systems with environmental policies and the greening of the economy; and consider concluding bipartite or tripartite agreements on skills' development;
 - 1.3. match supply and demand for skills through skills needs assessments, labour market information and core skills development, in collaboration with industry and training institutions;
 - 1.4. give high policy priority and allocate resources to the identification and anticipation of evolving skills needs and the review and alignment of occupational skills profiles and training programmes;
 - 1.5. encourage acquisition of both generic skills and skills in science, technology, engineering and mathematics and incorporation in curricula for basic training and lifelong learning.
2. Governments and social partners should:
 - 2.1. engage in social dialogue for responsive and collaborative labour market institutions and training systems, and coordinate stakeholder needs at all stages of education and skills policy development and implementation;
 - 2.2. promote equal access to opportunities for skills acquisition and recognition for all, in particular for young people, women, workers who need to be redeployed, including across borders, and for owners and workers of MSMEs by offering specific training services, ensuring suitable timing and duration and promote supportive policies to enable individuals to balance their work, family and lifelong learning interests; (c) promote work-related training and practical experience as part of the training process in order to increase the employability of jobseekers;
 - 2.3. formulate a holistic skills development policy to promote skills for green jobs that are coherent with environmental policies, including means for appropriate recognition through certification of skills; (e) foster peer learning among enterprises and workers, as well as education and training in green entrepreneurship to spread sustainable practices and the use of green technologies;
 - 2.4. assist businesses, particularly MSMEs, including cooperatives, in their engagement with governments and training providers with regard to management and skills upgrading of their current workforce, anticipation of future occupational profiles and skills needs, and workers' acquisition of portable and employable skills.
3. Develop and implement climate change education and public awareness programmes and policies targeting early childhood education, primary school and higher education.
4. Promote interdisciplinary climate knowledge and scientific cooperation for just transition, climate change mitigation and adaptation.
5. Promote cultural diversity and cultural heritage safeguarding for just transition, climate change mitigation and adaptation.
6. Promote girls in STEM (Science, Technology, Engineering and Mathematics).
7. Redirect technology, science, finance and ingenuity to transform economies, ensure equality and promote a sustainable future for all, including young people, women, and indigenous and ethnic minorities. This requires leadership from governments, international organizations, the private sector and civil society, as well as the active involvement of the most affected groups. Young people, women and indigenous and ethnic minorities should be priority target groups and key actors in understanding and addressing climate change.

⁸ Drawing upon the ILO Just Transition guidelines.

8. Estimate the costs of inaction and undertake cost-benefit analysis for different sectors.
9. Support schools and training institutions to implement climate change education through a whole-school approach. Dedicated teaching and learning resources for teachers on climate change education for sustainable development
10. Implement a national (and possibly subnational) programme on strengthening climate change education for sustainable development. Support the capacities of education policymakers and teacher training institutions to strengthen their educational responses to mitigate and adapt to climate change.

Communication, awareness

1. Mobilize youth networks, including young men and women scientists, to promote mitigation and adaptation to climate change by encouraging their engagement as knowledge holders, innovators and leaders in policy processes, as well as in education and public awareness campaigns. Building capacities of youth to become today's and tomorrow's drivers of green economies, green growth and sustainable development will be a particular priority. Such action will not only tackle climate change in the long term but will also respond to major concerns regarding youth employability and livelihoods, and will enhance their recognition and inclusion as key actors in the development of our societies. Promote action, initiatives, organizations and networks developed by youth, both women and men, from local to global, to address climate change challenges.
2. Support inclusive social development, fostering intercultural dialogue and promoting ethical and gender mainstreaming principles in relation to climate change mitigation and adaptation.
3. Regularly and systematically implement measures aimed at raising awareness on climate-change-related issues among the stakeholders and communities.
4. Regularly implement measures to raise awareness on climate change mitigation, adaptation and impact reduction and early warning on natural and anthropogenic hazards caused by natural climate variability and anthropogenic climate change.
5. Develop clear and concise messages to communicate and raise awareness among citizens.
6. Support the use of broadcast media and training of journalists in disseminating the scientific knowledge available to explain the changes occurring and inform people about the environmental, social, economic, political and technological challenges of global warming.
7. Share not only stories of climate change victims to raise public awareness and make government authorities face up to their responsibilities, but also share success stories, about men and women and communities developing creative solutions to deal with global warming and learning to benefit from traditional knowledge to limit the effects of disturbances.
8. Museums, cultural institutions and heritage site interpretation centres can be key actors for raising awareness and promoting dialogue around climate action.
9. Artists play an important role in raising awareness, whether by photographers documenting the wonders of the natural world, films about climate change or youth initiatives to engage young people.

Some key resources:

The update NDC Synthesis Report issued for COP 26 in Glasgow (2021): “Nationally determined contributions under the Paris Agreement. Revised note by the secretariat”, FCCC/PA/CMA/2021/8/Rev.1, available at <https://unfccc.int/documents/307628>.

The NDC synthesis issues in the framework of the global stocktake (2022): “A synthesis report on the overall effect of Parties’ nationally determined contributions and overall progress made by Parties towards the implementation of their nationally determined contributions, including the information referred to in Article 13, paragraph 7(b), of the Paris Agreement”, available at <https://unfccc.int/documents/461517>.

ILO (2019) *Working on a warmer planet: The impact of heat stress on labour productivity and decent work*, available at https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_711919.pdf.

UNDP (2018). *Climate change adaptation in Europe and Central Asia: Adapting to a changing climate for resilient development*, available at <https://www.undp.org/content/undp/en/home/librarypage/climate-and-disaster-resilience/climate-change-adaptation-in-europe-and-central-asia.html>

Climate Vulnerable Economies Loss Report, V20: The Vulnerable Twenty Group, available at <https://www.v20.org/resources/publications/climate-vulnerable-economies-loss-report>.

ILO (2018) *World Employment and Social Outlook 2018 – Greening with jobs*, available at https://www.ilo.org/weso-greening/documents/WESO_Greening_EN_chap1_web.pdf.

ILO green jobs assessment model, ILO; available at https://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/genericdocument/wcms_678011.pdf.

ILO (2015) *Guidelines for a just transition towards environmentally sustainable economies and societies for all*, available at https://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_432859.pdf.

C40 Cities, “Mayors and unions collaborate to avert sky-rocketing energy poverty crisis with emergency action to boost jobs via relief, renewables and retrofits”, press release, 20 April 2022, available at <https://www.c40.org/news/mayors-unions-energy-poverty-crisis-action-plan/>.

International Chamber of Shipping, “UN Global Compact and shipping industry confirm formation of ‘people-centred’ Task Force to ensure Just Transition to net-zero”, press release, 10 November 2021, available at <https://www.ics-shipping.org/press-release/un-global-compact-and-shipping-industry-confirm-formation-of-people-centred-task-force-to-ensure-just-transition-to-net-zero/>.

FAO (2019) *The State of the World's Biodiversity for Food and Agriculture*, available at <https://www.fao.org/3/CA3129EN/CA3129EN.pdf>.