The **transition to a sustainable Europe** with a circular, low-carbon economy has positive effects on growth, employment and well-being, including net job gains of up to 2 million jobs by 2050. But the transition is not inclusive by default. It leads to fundamental changes in production patterns, consumption behaviour and skill needs, and it requires an important reallocation of labour across sectors and regions. It could also agravate energy poverty.

Through its Europe 2020 Strategy and the Sustainable Development Agenda guided by the UN Sustainable Development Goals, the EU is committed to green and inclusive growth and economic development. To reach its ambitious climate and energy targets, the EU and Member States need to consider **social impacts from the outset** and promote a **just transition**. National Energy and Climate Plans need to ensure a fair and just transition and eventually social acceptance and public support.

# Climate inaction would have high socio-economic costs

Climate inaction would have significant socio-economic costs for Europe, with highest impact in southern Europe. It would reduce EU GDP due to socio-economic effects. Estimates of 6 types of impact already show a loss by up to 2% annually, and by more than 4% in Southern Europe. The effects would be strongest on mortality, coastal floods and labour productivity.

### Welfare losses (% of GDP) of climate inaction (2°C scenario)

### 0,5 0 source: ESDE 2019 (based on JRC (2018)) -0,5 -1 -1,5 -2 -2.5 -3 -35 -4 -4,5 Northern Central UK & EU Central Southern Europe Ireland Europe Europe Europe North South ■ River floods ■ Coastal floods ■ Labour productivity ■ Mortality ■ Agriculture Energy

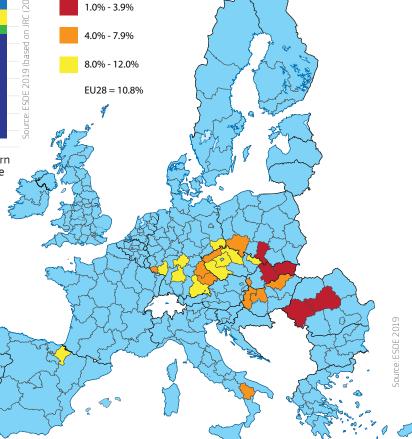
### Just transition requires policy actions for:

- stimulating investments, including in retraining and upskilling of the workforce
- accompanying labour market transitions and mobility
- addressing energy poverty
- incentivising changes of behaviour
- promoting fair burden sharing between sectors and regions

# Transition challenges vary considerably across regions

Climate change will impact all regions, including those with high share of employment in energy intensive industries and automotive manufacturing. Many of these regions are located in Central and Eastern Europe and have low adult participation in training.

Share of adults in training in regions with high shares of employment in energy intensive industries and automotive manufacturing



# Net employment effects of climate action are positive and imply significant labour reallocation

The transition to a low-carbon economy is expected to create more than 2 million new jobs in the EU by 2050, and more than one million by 2030. Job creation will notably occur in construction, renewable energy production, sustainable transport, food, waste management, business services and sustainable finance. Job losses will be concentrated in fossil fuel extraction and processing. Increased energy efficiency could lead to job reductions in utilities in the medium-term by 2030, but increasing electrification of transport and other services is expected to lead to job gains overall in the sector by 2050. Across the economy, and notably in car manufacturing, task profiles and skill requirements will change fundamentally.

### Employment implications in the EU at sectoral level, 2030

Sector	percent	thousands
Agriculture	0,5	40
Mining	-16,6	-93
Manufacturing	0,7	209
Utilities	-2,4	-72
Construction	1,1	160
Distribution, retail, hotels, catering	0,6	305
Transport, communications	0,5	64
Business services	0,7	473
Non-business services	0,3	142
Total	0,5	1228

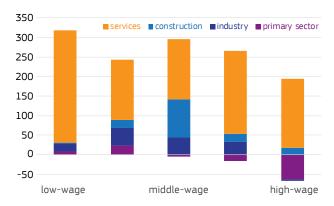
Source: ESDE 2019 (based on Eurofound (2019))

Note: Deviation from the baseline in % and in thousands of persons

### Climate action can mitigate job polarisation

Much of the expected employment creation will be in middle-skilled, middle-income jobs, notably in construction, waste management and in services more generally. This can counter job polarisation resulting from automation and digitalisation.

# Employment gains from climate action by skill-wage profile and sector, 2030



Source: ESDE 2019 (based on Eurofound (2019)

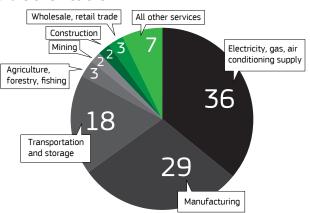
Note: in thousands employees

# More than 70% of jobs are in sectors that emit less and grow faster

Most of the employment in the EU is actually not in carbon intense sectors. 70% of the workforce works in sectors, which produce less than 10% of all  $\rm CO_2$  emissions. Construction, wholesale and retail trade and other services sectors together create more than 70% of gross value added and employ more than 75% of the workforce, while producing less than 12% of all  $\rm CO_2$  emissions. Employment also grows most strongly in these sectors. On the other hand, electricity production, transport, manufacturing, agriculture and mining sectors together produce close to 90% of all  $\rm CO_2$  emissions in the EU, while they account for 25% of gross value added and less than 25% of employment. If well managed, the shift towards a climate-neutral economy can provide employment opportunities for all skill levels.

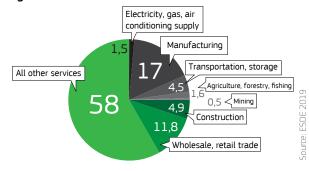
# CO<sub>2</sub> emissions, employment and value added across sectors in the EU

### Share of emissions



# Share of employment Electricity, gas, air conditioning supply Manufacturing Transportation and storage Agriculture, forestry, fishing 0,1 Mining Construction Wholesale, retail trade

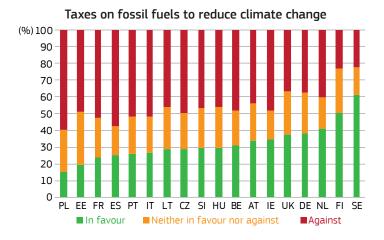
### Share of gross value added



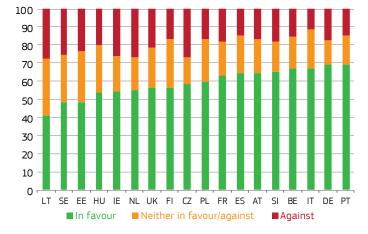
# Support for climate action is increasing among EU citizens

A majority of Europeans recognises their personal responsibility in reducing climate change. But views on the most effective policy measures vary widely, and for instance, only a minority is in favour of taxes on fossil fuels to reduce climate change, while a majority would support other measures such as banning sales of inefficient appliances and enhancing energy savings.

### Public support in the EU Member States for or against:



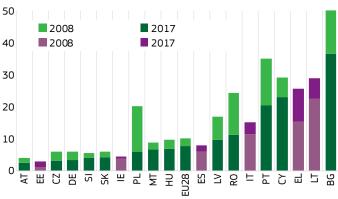
### Banning the sale of inefficient household appliances



# Unaffordable energy and poorly equipped homes affect households in several Member States

There have been positive developments in the EU as indicators of energy poverty have declined below 2010 levels on average. Yet, almost one household out of ten in the EU cannot afford to keep their house adequately warm or pay on time their utility bills. This may affect both low-income and middle-income households, notably if energy costs increase faster than total disposable household income. For this reason, energy poverty must continue to be addressed and energy efficiency measures, in particular in the vulnerable households, will be key.

# Population share facing difficulties to heat their homes for selected Member States, 2008 and 2017



Source: ESDE 2019 (based on EU-SILC 2017)

Note: Data included for Member States with significant changes only.

Source: ESDE 2019 (based on European Social Survey (2016)) Note: Data not available for all Member States.

The Commission has put in place an enabling framework of policies and programmes in support of a just transition to an environmentally sustainable and climate-neutral economy. It includes:

- the European Pillar of Social Rights which establishes, among other things, a right for access to essential services of good quality such as water, energy and transport;
- the European Structural and Investment Funds, and notably the European Social Fund, which offers financial support to meet the investment needs for reskilling, upskilling and retraining and transition support;
- the **European Globalisation Adjustment Fund**, which supports restructuring as a result of major structural change caused by globalisation or, as proposed by the Commission, the transition to a low-carbon economy;
- the Modernisation Fund of the EU Emission Trading System which promotes just transition in carbon-dependent regions in the beneficiary Member States;
- the InvestEU programme provides an EU budget guarantee to support investment and access to finance in the EU for sustainable infrastructure, research, innovation and digitalisation, SMEs, social investment and skills;
- economic policy coordination under the **European Semester** which helps make progress towards the Europe 2020 targets, including to lift Europeans out of (energy) poverty;
- the Initiative for Coal and Carbon-Intensive Regions in Transition which assists regions in mitigating the social consequences of the low carbon transition and define low-carbon transition strategies;
- the involvement of stakeholders, notably social partners, in the design and implementation of these policies and initiatives.