

EU climate and energy policies: effects on employment

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Future megatrends that shape the world of work:

- **decarbonisation of production and consumption**
- digitalisation, automation, AI, robotization
- demographic change and population movements

Former research at ETUI: `Greening Industry-creating jobs`; `Energy transformation at times of austerity`; `Just transition at Ruhr`;

Current research at ETUI:

- Monitor **sectoral employment trends** according to **energy intensity (steel, chemical, automobile sectors)**
- **Green jobs creation (EGGS sector)**

Transition to low (zero) carbon economy

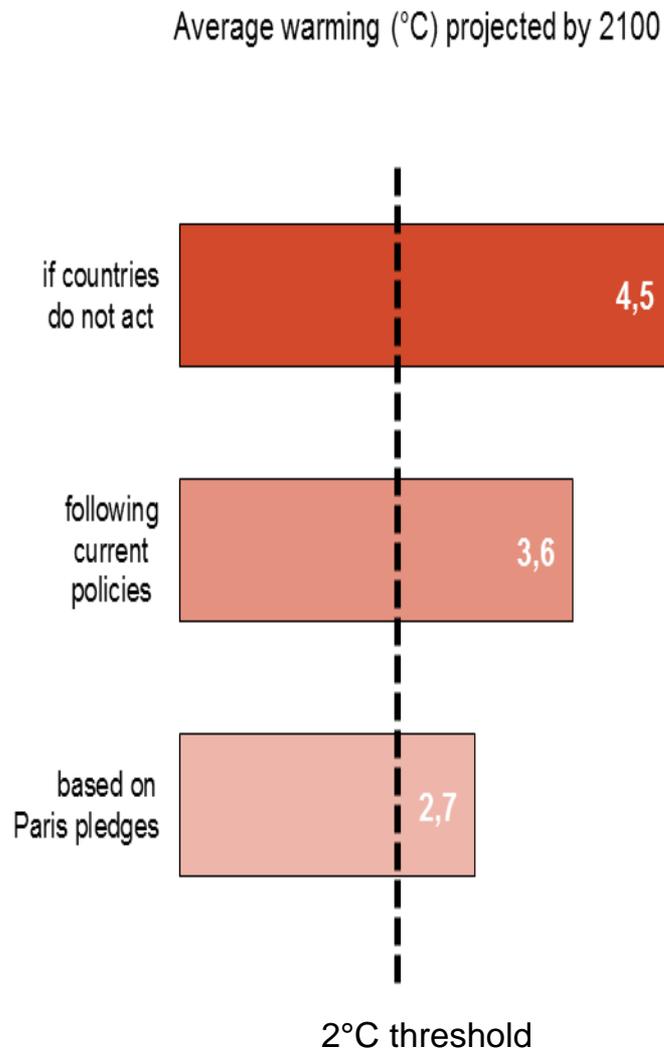
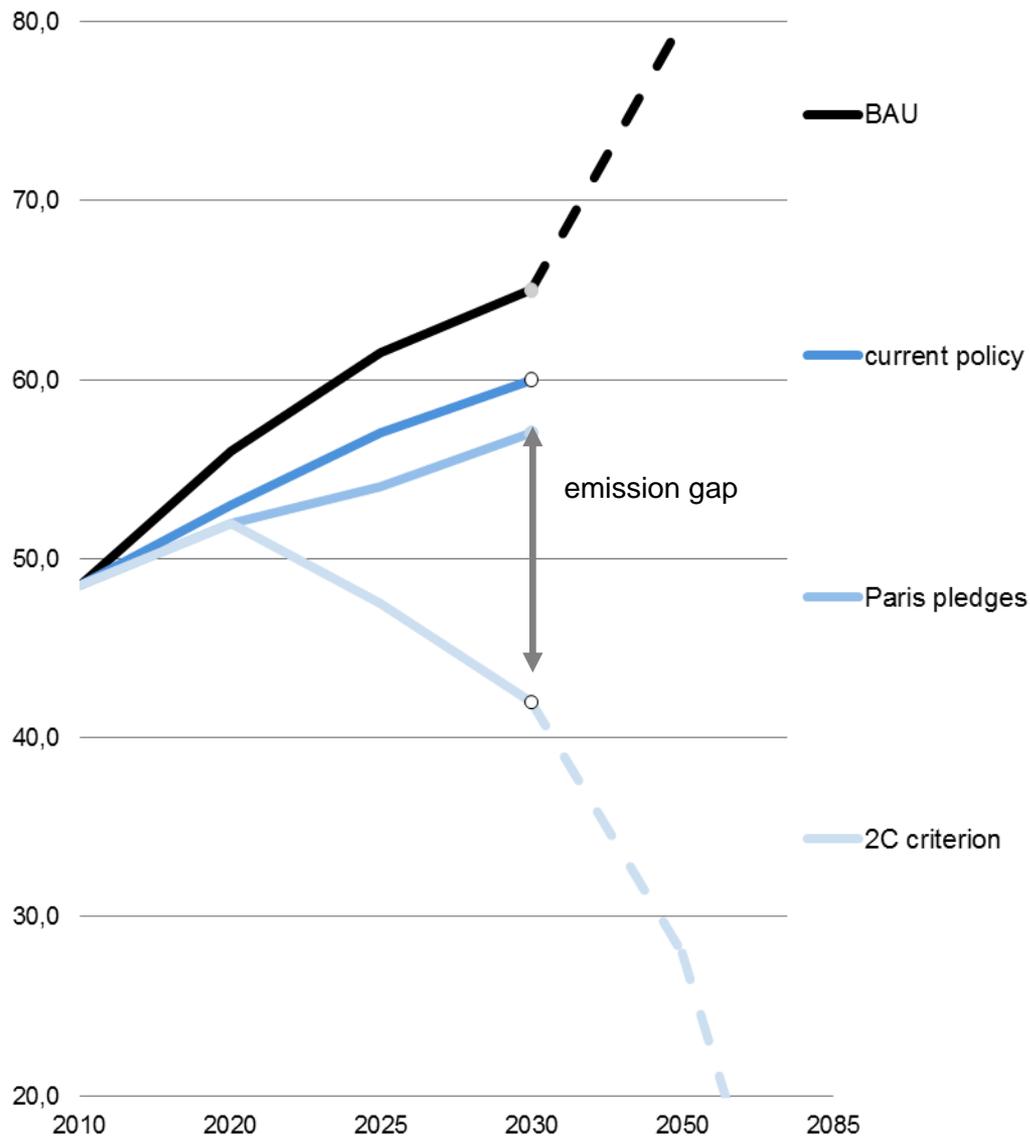
This means: a **restructuring of the entire economy**

Main message after COP21: the world (and Europe) is far away from the 2C pathway: the emission gap is HUGE

The EU needs to do twice as much effort as it did between 1990 and 2020 to reach carbon neutrality and the exit from fossil fuel by 2050!

So far limited impact on jobs; Much more to come, **etui.**
³we need to be prepared!

Global CO2 emission scenarios after Paris COP21

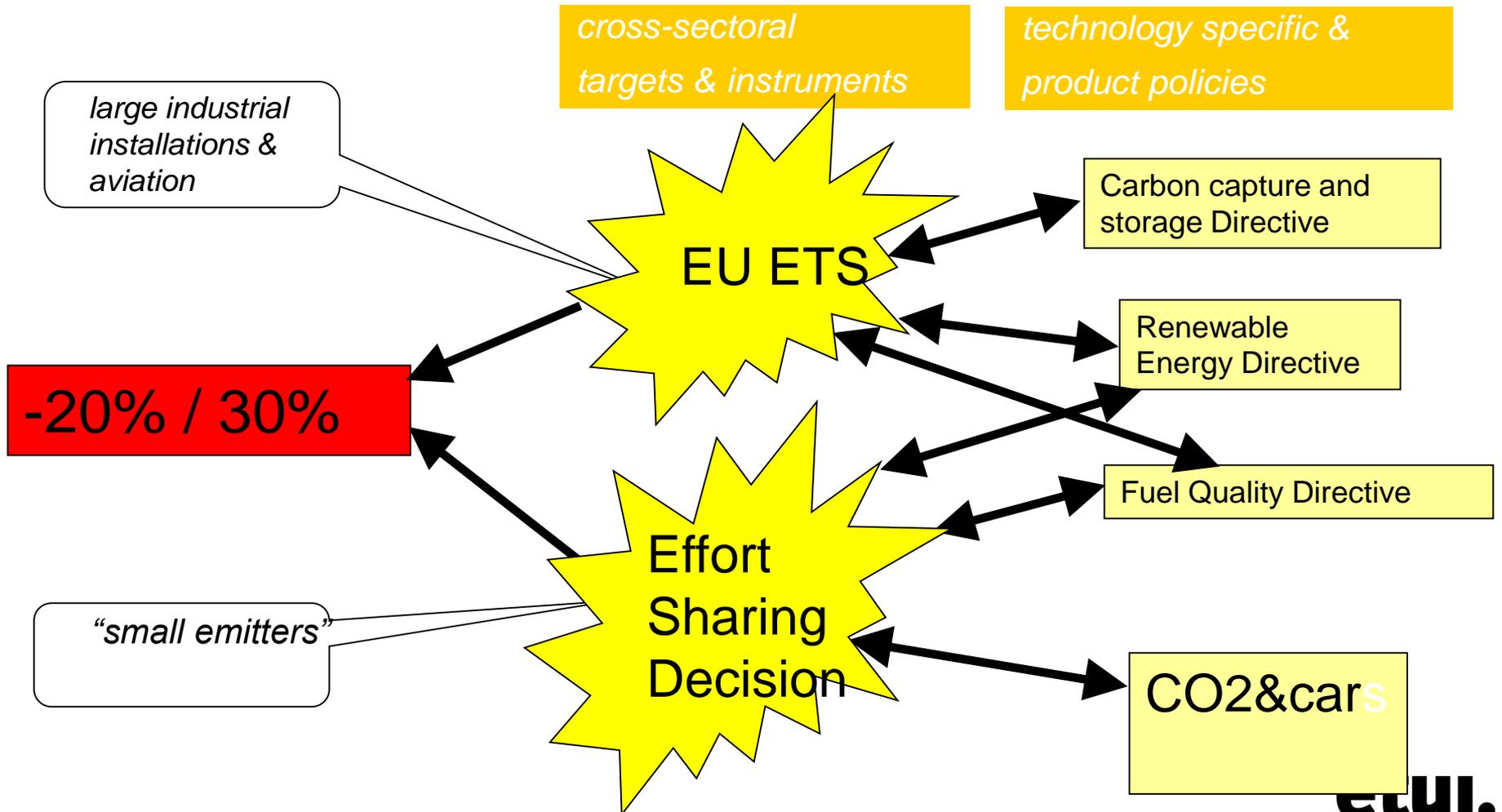


Source: UNEP, 2015

Source: Climate Action Tracker, 2015

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The EU Climate Package at a glance: lack of policy consistency + employment dimension not addressed



The challenge of the transition to a low-carbon economy on jobs in Europe

Will genuinely transform jobs, in quantitative and qualitative terms

No major aggregate impact on number of jobs, but

- - New jobs are being created (EGGS sector),
- - Existing jobs will be transformed (`greened` jobs)
- - Jobs will also disappear
- - Job quality (not just green, but decent)!
- - With huge differences by region, branch and LM segment!

Novelty: this is a **policy driven process**, so managing its effects can and **SHOULD** be planned from the outset **etui.**

Challenge of measuring the employment effects of the transition to a zero-carbon economy

Each year millions of jobs are being created and destroyed

Effects of globalisation, technological change and the economic cycles mixed up with those of climate policies

Difficult to link employment change to individual policies

What is a green job, a `black job` or a greened job?

Not only the EGSS (environmental goods and services) sector is green (although that includes parts of chemical and construction industries also, see sectoral breakdown later)

Challenge of measuring the employment effects of the transition to a zero-carbon economy

Energy intensive industries are not identical to `black jobs`: steel, chemical even cement industries have their contributions to greening the economy /depending also on the life-cycle of products/, while the fossil fuel extraction, processing and power generation do not have/ - these jobs have no long term future

Services in general greener, but not all services are green jobs (financial services, platform economy – indirect effects: e.g. Amazon and delivery)

Social, welfare and care services have high future potential to create low emission jobs

Challenge of measuring (estimating) the employment effects of the transition to a zero-carbon economy

With all these in mind, be careful with making future employment forecasts;

- Painting a `rosa` picture about green job creation (millions of jobs projected in renewables) – earlier forecasts (e.g. 2.2-2.7 Mn by 2020) were too optimistic - while not taking resulting job losses into account – **what matters is the net effect**
- Especially at times of `dark politics` potential and expected job losses should be addressed openly (no worker, no region can be `written off`)
- At the same time: no return to the jobs of the 60`s and 70`s as populists might promise

Overall employment trends

Between 2008 and 2013 8.6 Million jobs were destructed in manufacturing and construction. Between 2013 and 2016 the total number of jobs reached 2008 levels, **but nearly 3 million jobs in manufacturing disappeared** (EU Job Monitor 2017).

Between 1957 and 2015, **German coal mining jobs down from 607 th to 14.5 th > zero by 2022**

In **Britain** 250 th coal mining jobs lost since 1980.

In **Poland** jobs in coal mining shrank from **400 th** in the early nineties to **100 thousand** nowadays.

China plans to cut coal mining jobs by 1.5 million (same trends in Canada, Australia, but not in the US now).

Employment trends in energy intensive industries (2007-2014)

Number of employees in selected NACE sectors at full-time equivalent (thousands)

	Mining of Coal and Lignite (B)		Steel and basic metals (C24)		Chemicals (C20)		Manufacturing (C)	
	2007	2014	2007	2014	2007	2014	2007	2014
EU27	271	194	1,100	935	1,237	1,100	32,049	27,740*
Czechia	29	19	56	43	30	27	1,234	1,077
Germany	42	20	267	261	326	335	6,889	7,093
Spain	8.4	3.6	76	57	96	79	2,371	1,612
Italy	n.a.	n.a.	135	115	117	102	3,772	3,148
Poland	135	116	67	60	71	74	2,368	2,226
UK	5.9	3.7	99	70	124	98	3,329	2,456

Note: * 2013

Source: Eurostat, 2017, Annual detailed enterprise statistics for industry (NACE Rev. 2, B-E)

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Employment trends in energy intensive industries

Mainly negative trends, with main reason the crisis, but there is also a structural shift.

Between **2007 and 2014** (last year with detailed Eurostat data) more than **4 million manufacturing jobs disappeared** in the EU27

Germany was the only MS to create industrial jobs, while **Spain, Italy and the UK together lost 2 million**

The steepest decrease was in coal mining (Poland has most of these jobs although the decline there was moderate)

The steel sector is rather stable, job losses are characteristic but moderate

Employment trends in energy intensive industries

The chemical sector is rather stable, job creation occurred in Germany and Poland

The automobile sector (NACE C29, C30) also stable between 2008 and 2014, DE, PL (+), ES, IT, F (-)

4 million manufacturing jobs were lost (2008-2014) in the EU27, while at the same time 792 thousand new jobs were created in the EGGS sector.

Two major lessons:

1/ employment changes no direct result of climate policies;

2/ Direct job creation in EGGS sector is far too low to compensate for job losses in industry

Employment in the EGSS sector and in its subsector: production of renewable energy

	Environmental Goods and Services Sector (EGSS), total		Renewable Energy production (part of EGSS)		
	2007	2014	2007	2011	2014
EU27	3,376	4,164	351	837	645
Czechia	n.a.	91	n.a.	26	12
Germany	101	504	19	88	66
Spain	n.a.	n.a.	7	n.a.	n.a.
Italy	n.a.	n.a.	n.a.	n.a.	n.a.
Poland	329	449	n.a.	n.a.	73
UK	n.a.	348	n.a.	n.a.	10

Source: Eurostat, 2017, Employment in the environmental goods and services sector [env_ac_egss] and (env_ac_egss3)

<http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

Employment in the EGSS sector

Regarding the environmental goods and services sector (Eurostat) sectors relevant for the protection of environment and for greening the economy, systematic and standardised data by Eurostat are rather scarce.

Accordingly, the EGSS sector saw a job creation of nearly **800 thousand between 2007 and 2014 in the EU27 and total number of jobs reached nearly 4.2 million** (almost four times as much as employment in the chemical industry)

It must be emphasized that Poland had almost as many EGSS jobs as Germany, but Germany had the biggest increase (five times).

Employment in the EGSS subsector, `production of renewable energy

In the production of renewable energy, Eurostat figures show a rather modest job creation: 645 thousand in 2014 (double of 2007)

The 2014 level is a substantial setback compared to 2011 (**a job loss of nearly 200 thousand**) due to **low investment activity** (and support) for renewable energy generation.

Clean energy investments in the EU were collapsing after 2011, 2016 investment levels were nearly 50% lower than in the year 2011.

A major policy failure related to austerity policies and regulatory uncertainty, due also to the malfunctioning of the EU ETS with its carbon price of 5 EUR. **etui.**

Employment in the EGSS subsector, `production of renewable energy

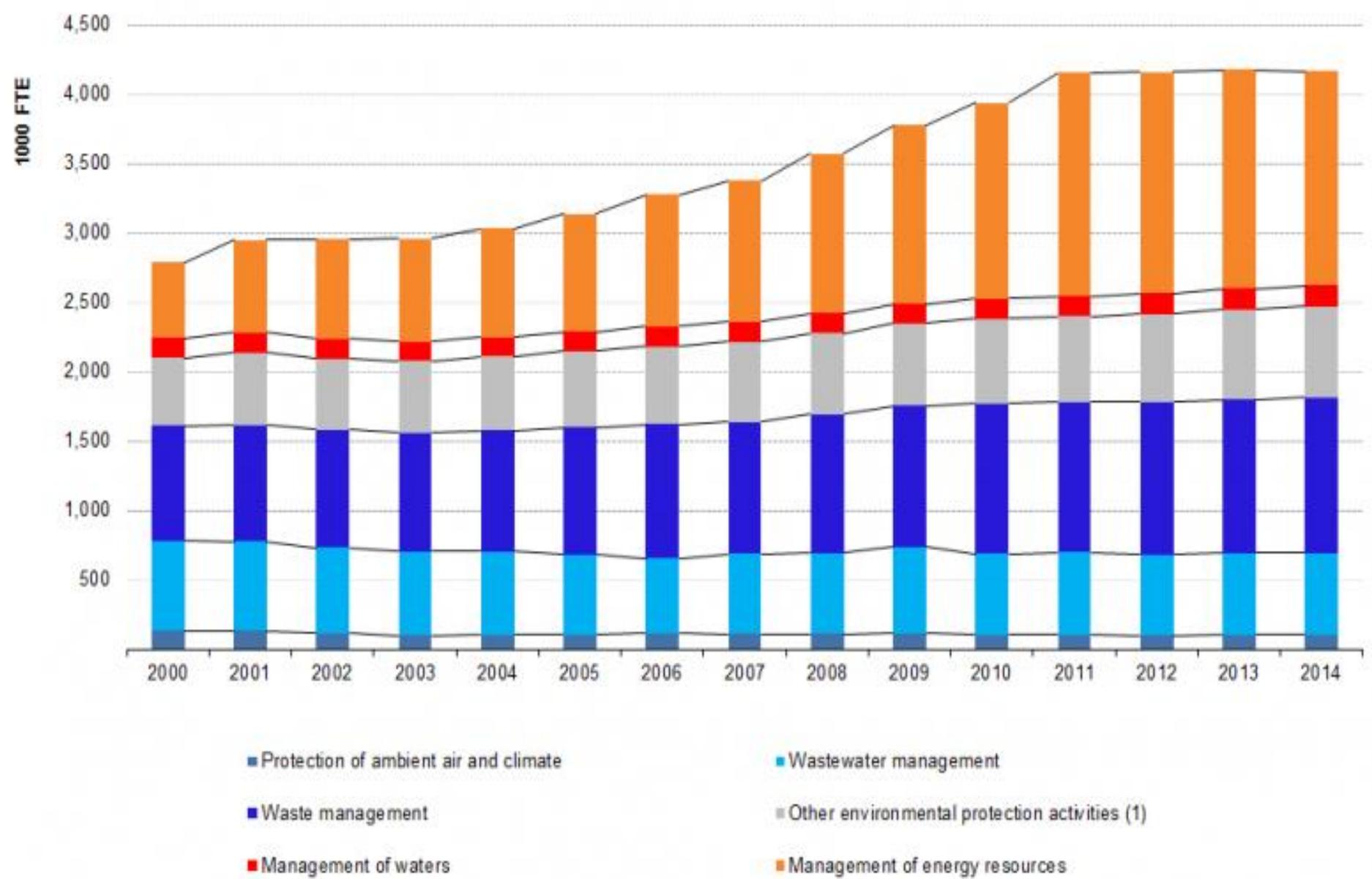
According to Eurostat: in Germany 66 thousand workers in renewable energy generation (down from 88 thousand in 2011). National German sources put total employment in renewables (generation and manufacturing + indirect employment) in 2014 to 371.400.

For the year 2014 the EUObserver (2015) puts the total employment in the renewable energy sector in Germany to 347 thousand, in France to 169 thousand followed by the UK, Spain and Italy (98, 82 and 60 thousand, respectively). For the EU28 the total number was 1.1 **Million jobs. Former projections by 2020 to have 2.2-2.7 million jobs are out of reach now.**

Breakdown of employment in the EGSS sector

NACE_R2/TIME	2007	2011	2014
Total - all NACE activities	3,376,000	4,153,000	4,164,000
Agriculture, forestry and fishing	240,000	298,000	334,000
Mining and quarrying; manufacturing	467,000	616,000	577,000
Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management	1,178,000	1,345,000	1,422,000
Construction	814,000	1,171,000	1,104,000
Services	677,000	723,000	727,000

EGSS employment by main activities (EU28) – Eurostat 2017



Trade union role: active policy role and social dialogue to meet the challenge

Trade unions committed to more ambitious climate policy at the same time demand a framework for **just green transition**

**This makes a comprehensive policy approach necessary:
climate + employment + training + social + industrial policy**

Such a comprehensive policy framework does not exist yet

Current employment policies are not fit to cope with the more ambitious climate policy that would be needed for the 2050 targets

Managing labour market transitions would need a European Employment Fund for the Green Transition - 'Just transition Fund' now supported by EP

Just burden sharing during the transition - job quality and managing job transitions

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`Proactive` Just Green Transition

- *just* concerns the issue of inequality; the ecological transition should not leave anyone behind (both the safety net dimension and the proactive ‘managing change’ dimension are equally important in this regard)
- *green (zero carbon) in face of* re-emerging climate scepticism and populism
- *transition* emphasises the **change** (or even revolution) that needs to take place, and be managed
- jobs of the past cannot be preserved and there is no way back to the 1960s/70s.
- The crisis makes it more difficult: **signs of backtracking (low investments, reversal in clean energy, fossil fuel ,revival‘)** –
- „any job here and now“ – is the demand of the hour?

Conclusions

Huge employment changes of the past years not due to climate policies, but to economic processes: crisis, technological change globalisation.

Still the effect of climate policies appear in structural shifts, but hard to link one to one to individual policies.

One thing is clear: due to low investment activity `green job` creation was lower than expected.

Lesson: We cannot keep each individual jobs. Job losses in certain sectors (e.g. coal mining) are unavoidable (even necessary).

These are just a small fraction of employment change that happens anyway. The important thing is to manage this properly.

Why is this special: Greening the economy (and phasing out coal) is a common interest of society, the price of the employment change **MUST** be financed by the society.

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