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NEST ASSOCIATION
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development of trade, business and
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Round Table
The project “CIRECON” program Erasmus+
Development of circular economy
in European Union

Socio-economic aspect of clean energy transition

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Green economy

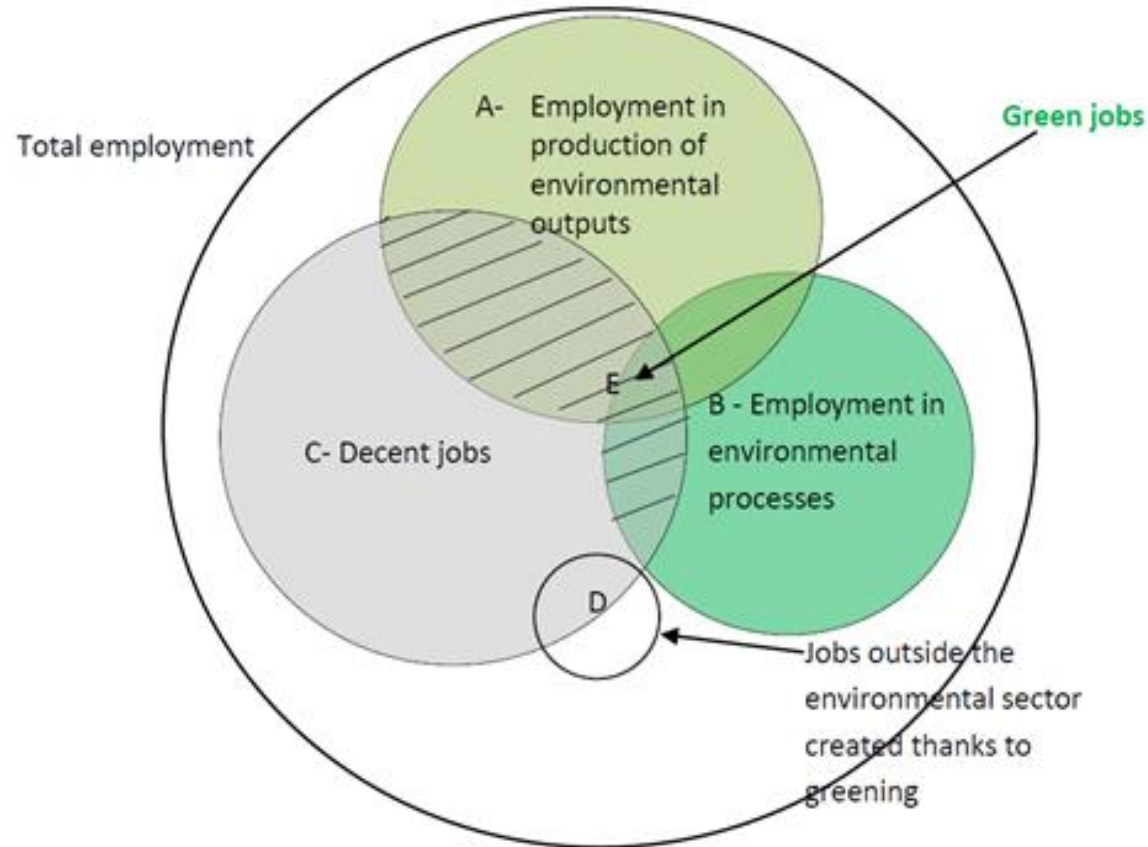
“improved well-being and social equality,
while significantly reducing
environmental risks and
ecological scarcities” (UNEP, 2011)



Green growth

“growth that is efficient in its use of natural resources, clean in that it minimises pollution and environmental impacts, and resilient in that it accounts for natural hazards and the role of environmental management and natural capital in preventing physical disasters” (World Bank, 2012)

Green jobs



Source: ILO, 2013.

Green jobs are decent jobs that:

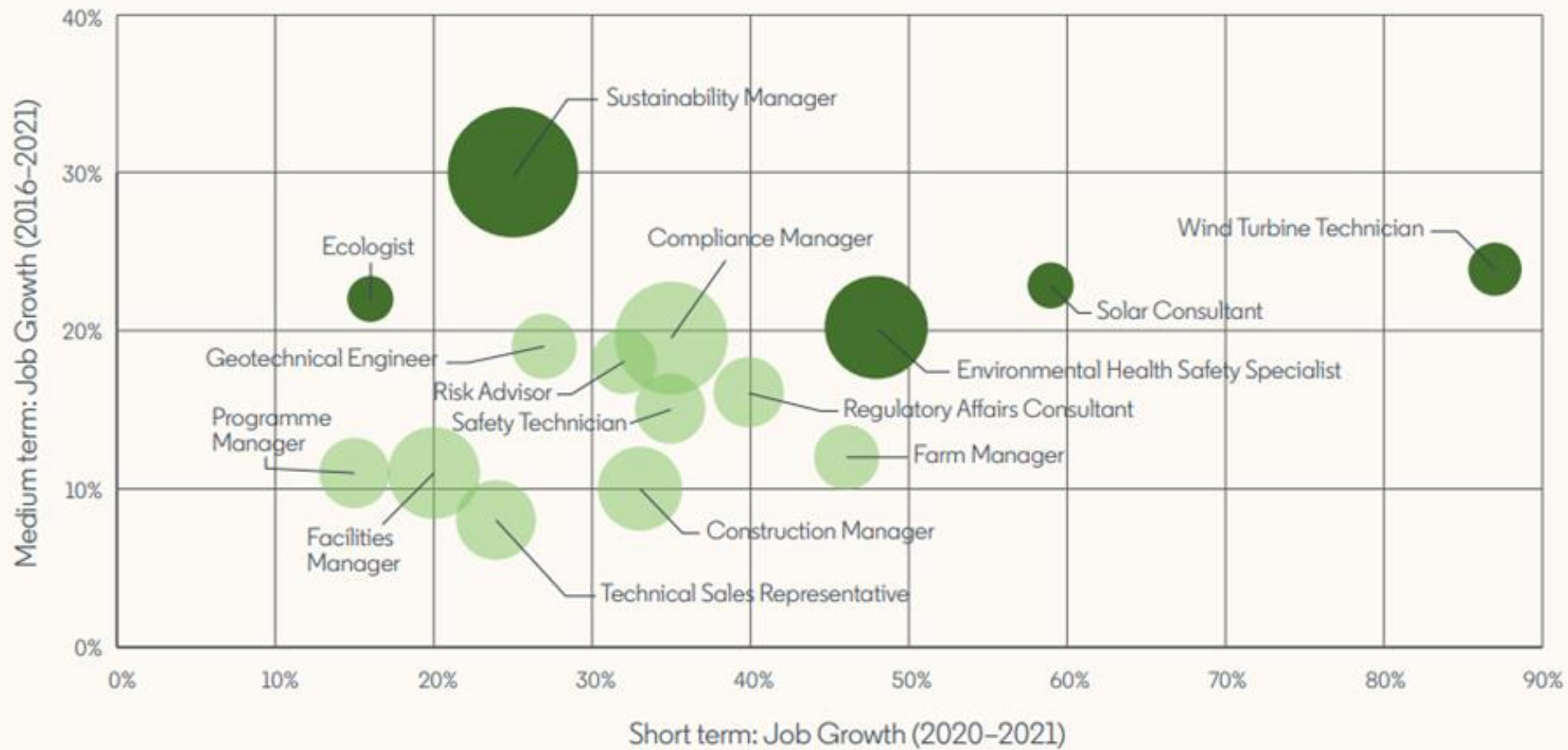
- Reduce consumption of energy and raw materials,
- Limit greenhouse gas emissions,
- Minimize waste and pollution,
- Protect and restore ecosystems,
- Support adaptation to the effects of climate change.

Need for green jobs and green skills

- ▶ **Green job** - helps to reduce negative environmental impact and contributes to environmental, economic and social sustainability of enterprises and economic sectors.

	Loss of job due to:	Green job:	Link to other sectors:
Energy	Closing coal-fired generating stations	Operation of wind turbines	Sourcing biomass from agriculture or forestry sector for bioenergy
Manufacturing	Closing energy inefficient industry based on old technology	Manufacture of energy efficiency equipment	Providers of energy efficiency services
Recycling	Displacement of recycling workers in informal economy by mechanized recycling	Recycling operations meeting high standards of environmental protection (and of health and safety)	Materials businesses (paper, glass, metals...)

Fastest growing green jobs globally



Bubble size indicates share of countries in the sample where the job was among the fastest-growing in 2016-2021. Smallest: 5%; Largest: 50%. Bubble shade indicates type of job. Dark: Green job; Light: Greening job.

Green skills

- Since there is no uniform definition of green jobs and green skills, therefore they cannot easily be integrated into existing occupational and industrial classification systems.
- In April 2022, the EC published a classification system of skills for the green transition - 381 skills and 185 knowledge concepts.
- ILO and CEDEFOP (2011) listed 11 skills necessary for green jobs.
- Maclean et al. (2018) defined a list of the generic green skills and those needed in large and medium companies.
- Vona et al. (2018) - a set of skills that are used more intensively in green occupations relative to non-green ones.

ILO and CEDEFOP (2011) listed 11 skills necessary for green jobs

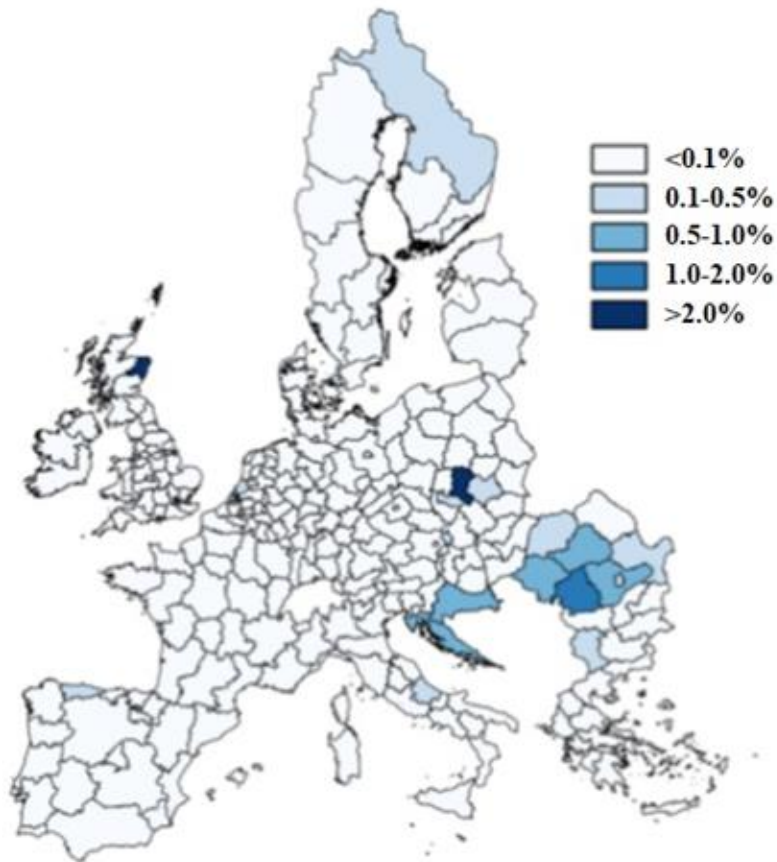
1. Strategic and leadership skills;
2. Adaptability and transferability skills;
3. Environmental awareness and willingness to learn about sustainable development;
4. Coordination, management and business skills;
5. Systems and risk analysis skills to assess, interpret and understand both the need for change and the measures required;
6. Entrepreneurial skills;
7. Innovation skills;
8. Communication and negotiation skills;
9. Marketing skills to promote greener products and services;
10. Consulting skills;
11. Networking, IT and language skills to perform in global markets.

The most needed skills for medium and large organisations

1. Knowledge and understanding of international and national standards and laws in the field of environment and circular economy.
2. Assessment of the impact of the product life cycle (compilation of inventory of inputs and discharges into the environment, measurement and assessment of the impact of identified inputs and discharges, interpretation of results for decision makers).
3. Green procurement (identification and ordering, assessment of the impact of the use of products, resources or services on the overall end product or service, interpretation of results for decision makers).
4. Revision and evaluation of the certification process, analysis of environmental data.

Regional employment in fossil fuel extraction and energy intensive industries (NUTS2 level)

Share of employment
fossil fuel extraction and mining



Share of employment
energy intensive industries and
automotive manufacturing

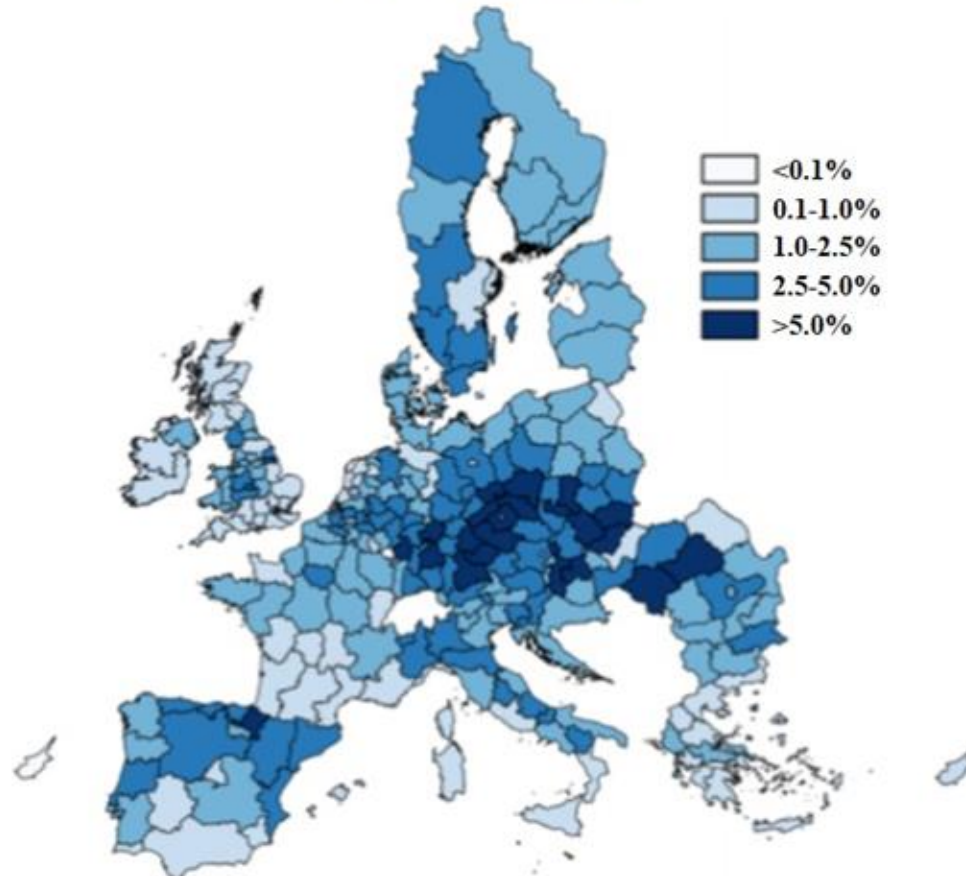
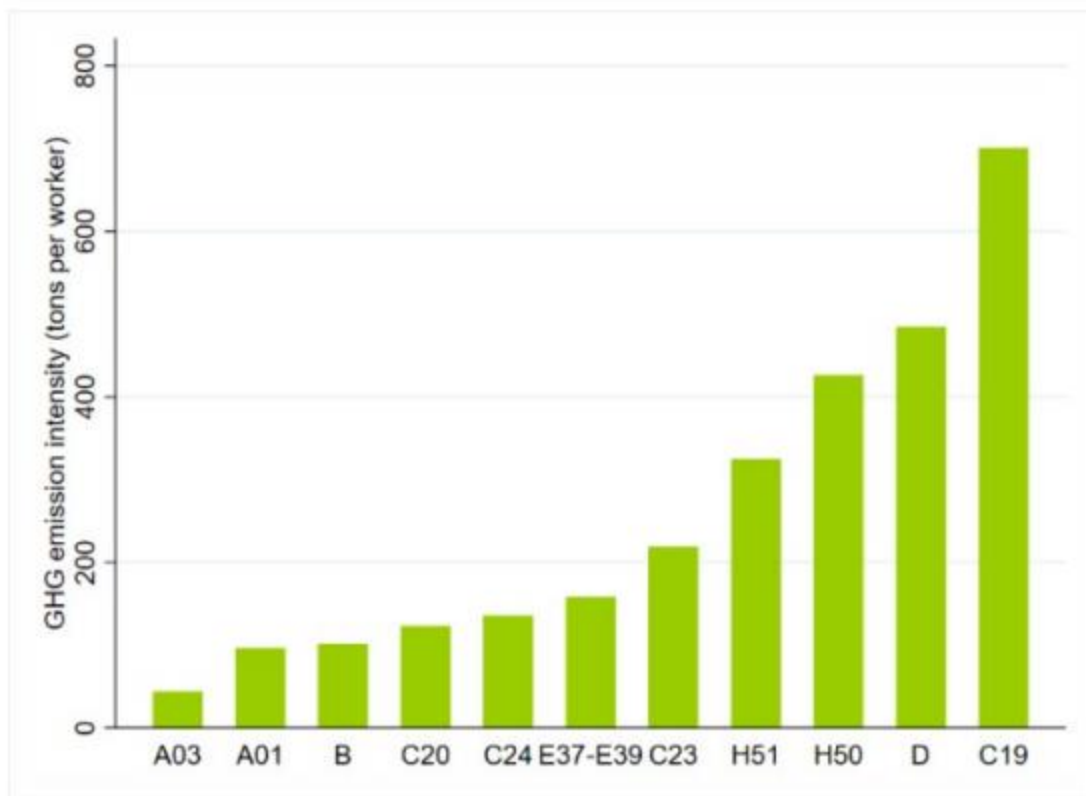


Figure 3: **Economic activities with the highest greenhouse gas emissions per worker, EU27, 2020**



- A03: Fishing and aquaculture
- A01: Crop and animal production
- B: Mining and quarrying
- C20: Manufacture of chemicals and chemical products
- C24: Manufacture of basic metals
- E37-E39: Sewerage, waste collection & treatment, remediation activities
- C23: Manufacture of other non-metallic mineral products
- H51: Air transport
- H50: Water transport
- D: Electricity, gas, steam and air conditioning supply
- C19: Manufacture of coke and refined petroleum products

Source: Air Emissions Accounts, ESTAT.

Conclusion

- ▶ A transition plan that includes clearly defined goals and measures that ensure: social welfare, economic diversification and the fight against energy poverty.
- ▶ Additionally, an accompanying financial plan providing financial resources is as prerequisites for the implementation of a green transition.
- ▶ There is no single recipe for implementing a fair energy transition, as areas with one industry are very different from each other and each is defined by its own social, political, economic or cultural factors.
- ▶ Understanding better which groups and regions are going to be particularly affected, is important to inform effective policy measures, targeted to where the highest needs arise.
- ▶ To facilitate the green transition, adequate and effective investment in education, training and skills will be key.