Highlights and preliminary findings

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International Labour Organization

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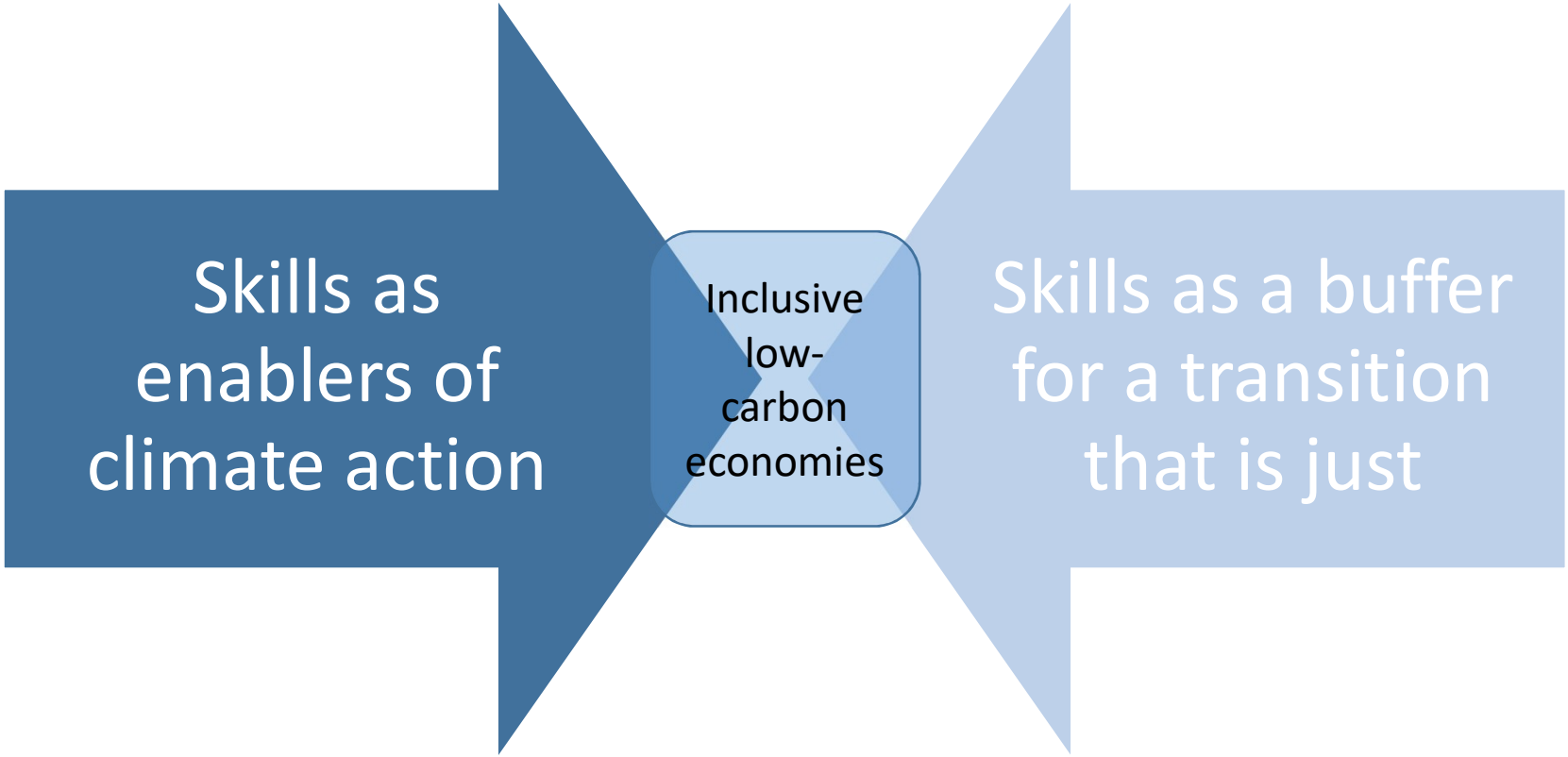
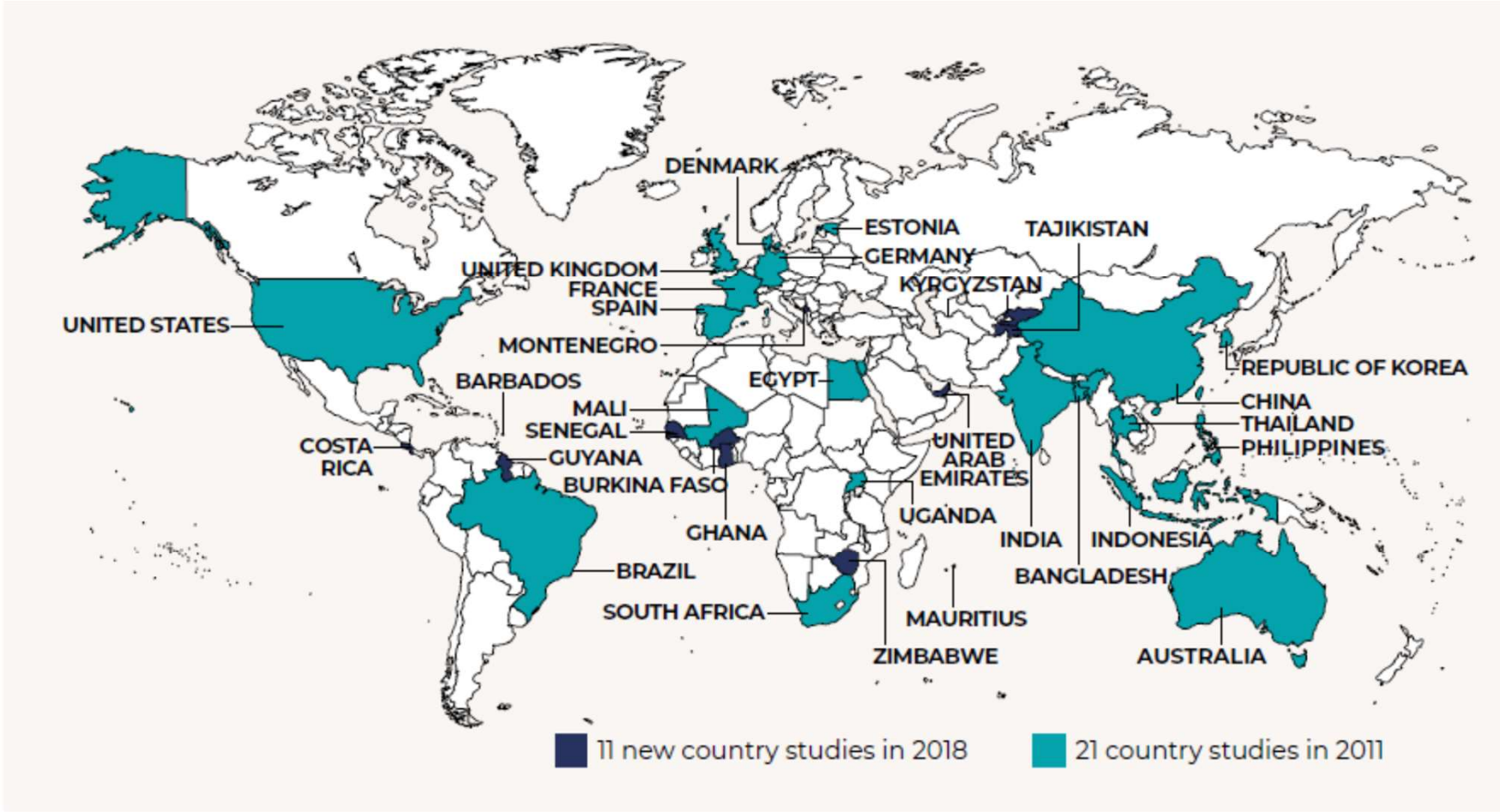
Based on Olga Strietska-Ilina (2019)

Skills: a pillar for a Just Transition & Climate Action

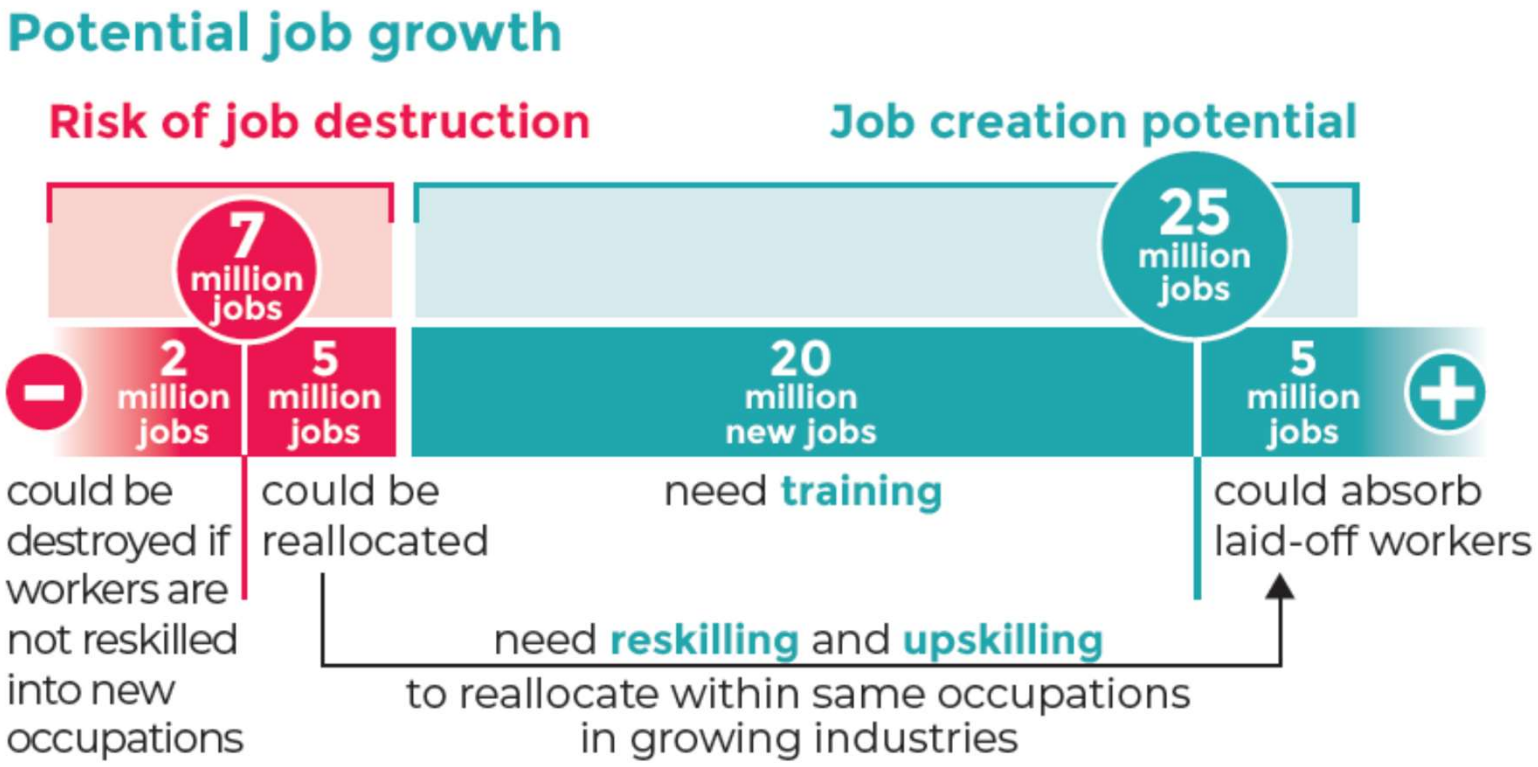


Understanding skills for JT and green jobs in 2011 & 2018



Far-reaching changes in labour markets as we shift towards low-carbon sustainable and resilient economies

Energy sustainability global scenario, 2030: potential job impacts

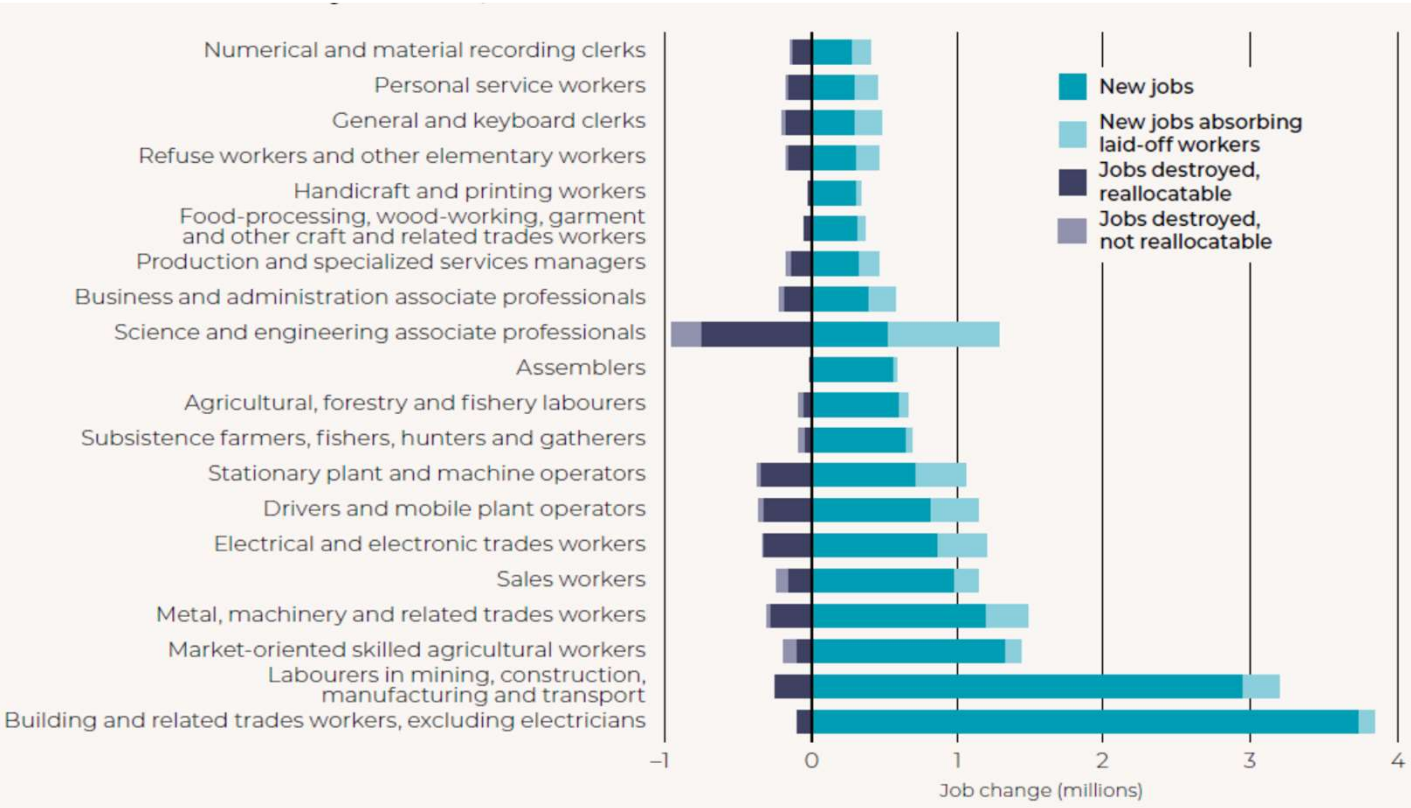


Job outlook – energy transition, 2030

Source: ILO calculations based on EXIOBASE v3 and national labour force surveys

Occupational outlook in the energy transition

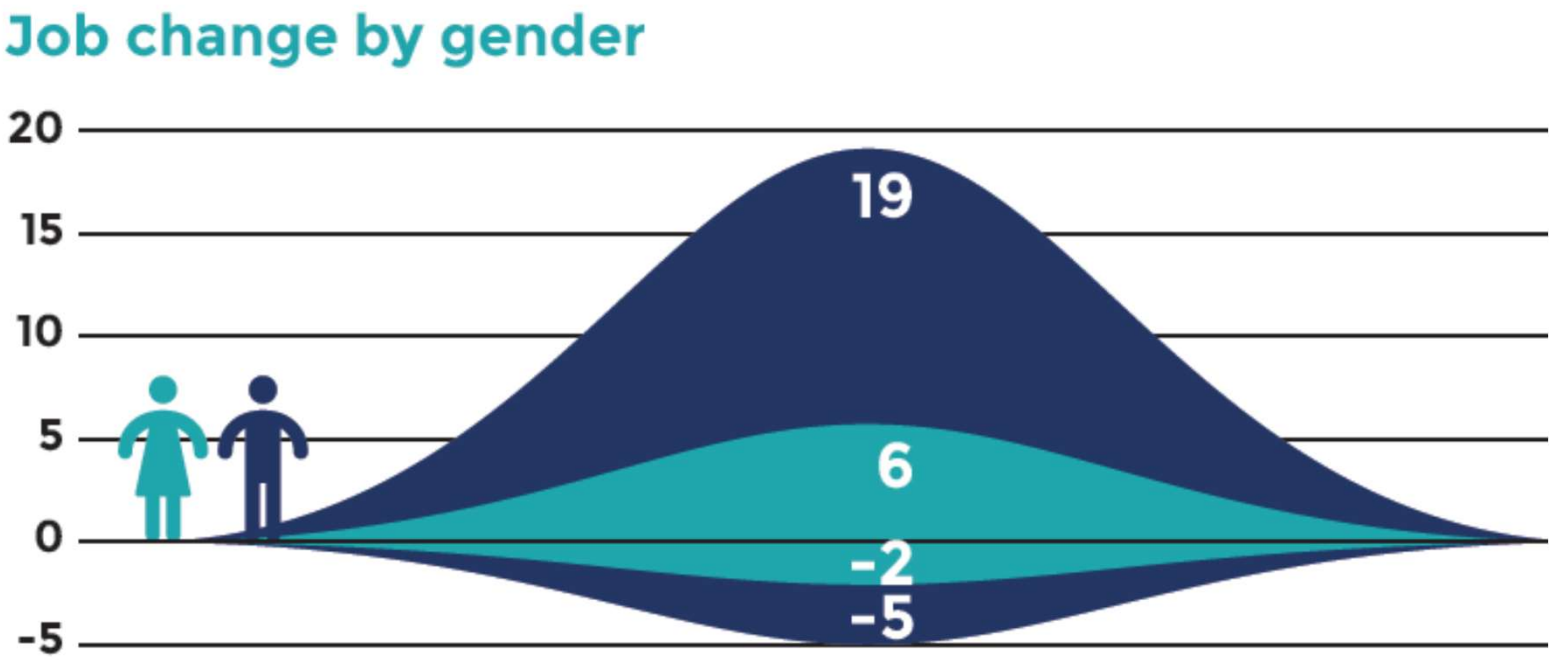
Occupations most in demand across industries in a global energy sustainability scenario, 2030



Note: Percentage difference in employment between the sustainable energy scenario (the 2°C scenario) and the business-as-usual scenario (the 6°C scenario) of the International Energy Agency (IEA) by 2030 (ILO, 2018). Detailed information on the methodology is described in ILO, 2018, pp. 39, 162–170.

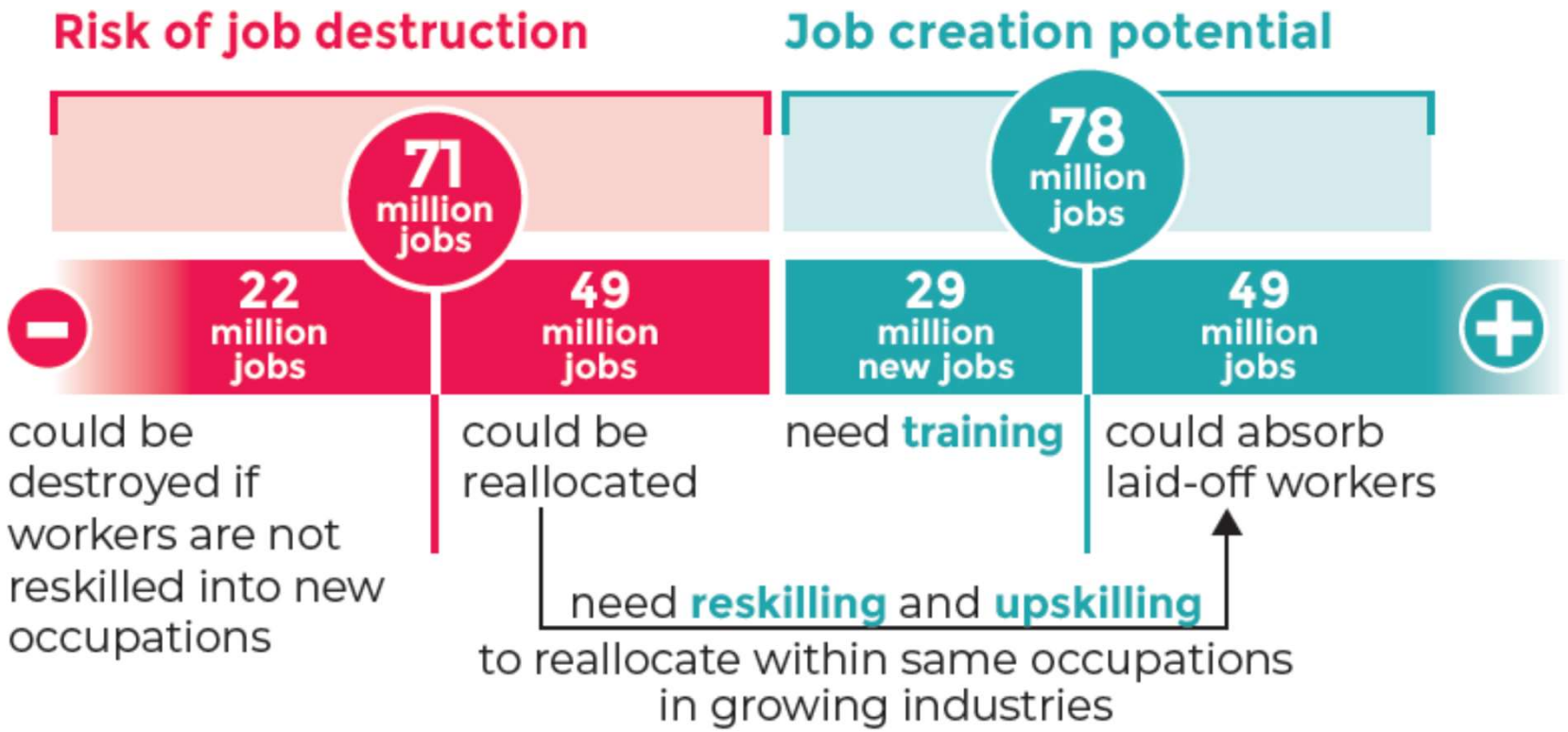
Source: ILO calculations based on EXIOBASE v3 and national labour force surveys.

Energy transition job outlook: gendered impacts



Great need for skills training: addressing negatively affected workers
+ ensuring equal opportunity

Circular economy global scenario, 2030: potential job impacts

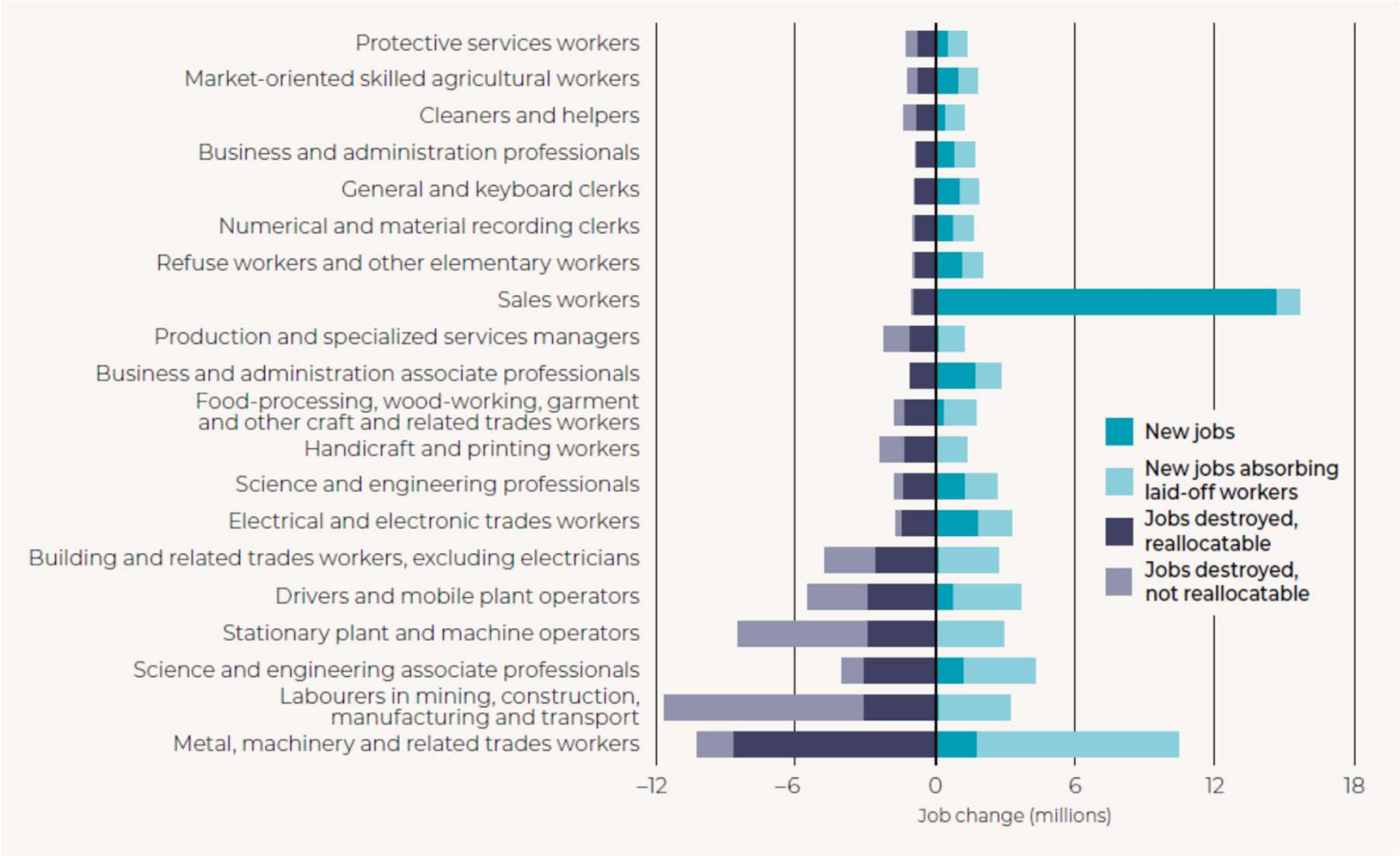


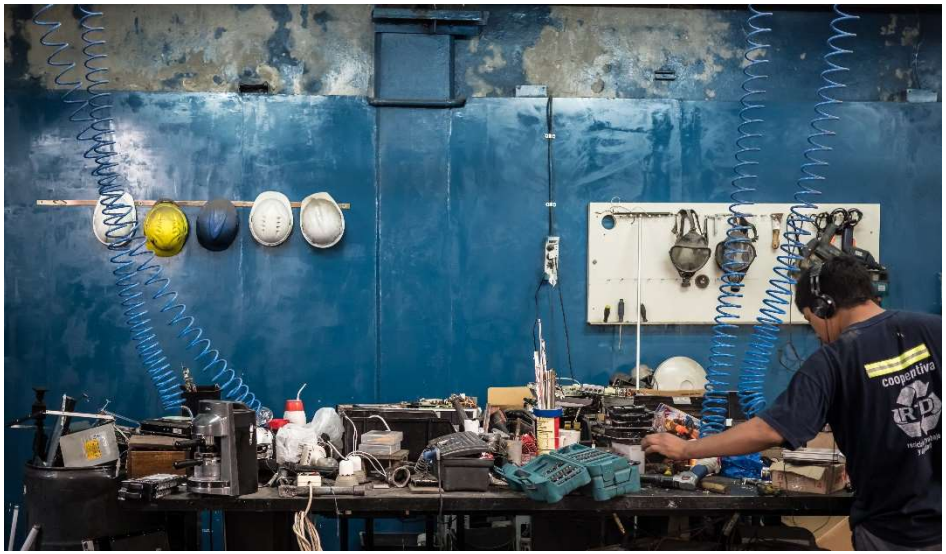
Job outlook – circular economy, 2030

Source: ILO calculations based on EXIOBASE v3 and national labour force surveys

Occupational outlook in the circular economy

Occupations most in demand across industries in a global circular economy scenario, 2030





Skills implications of the transition towards sustainability

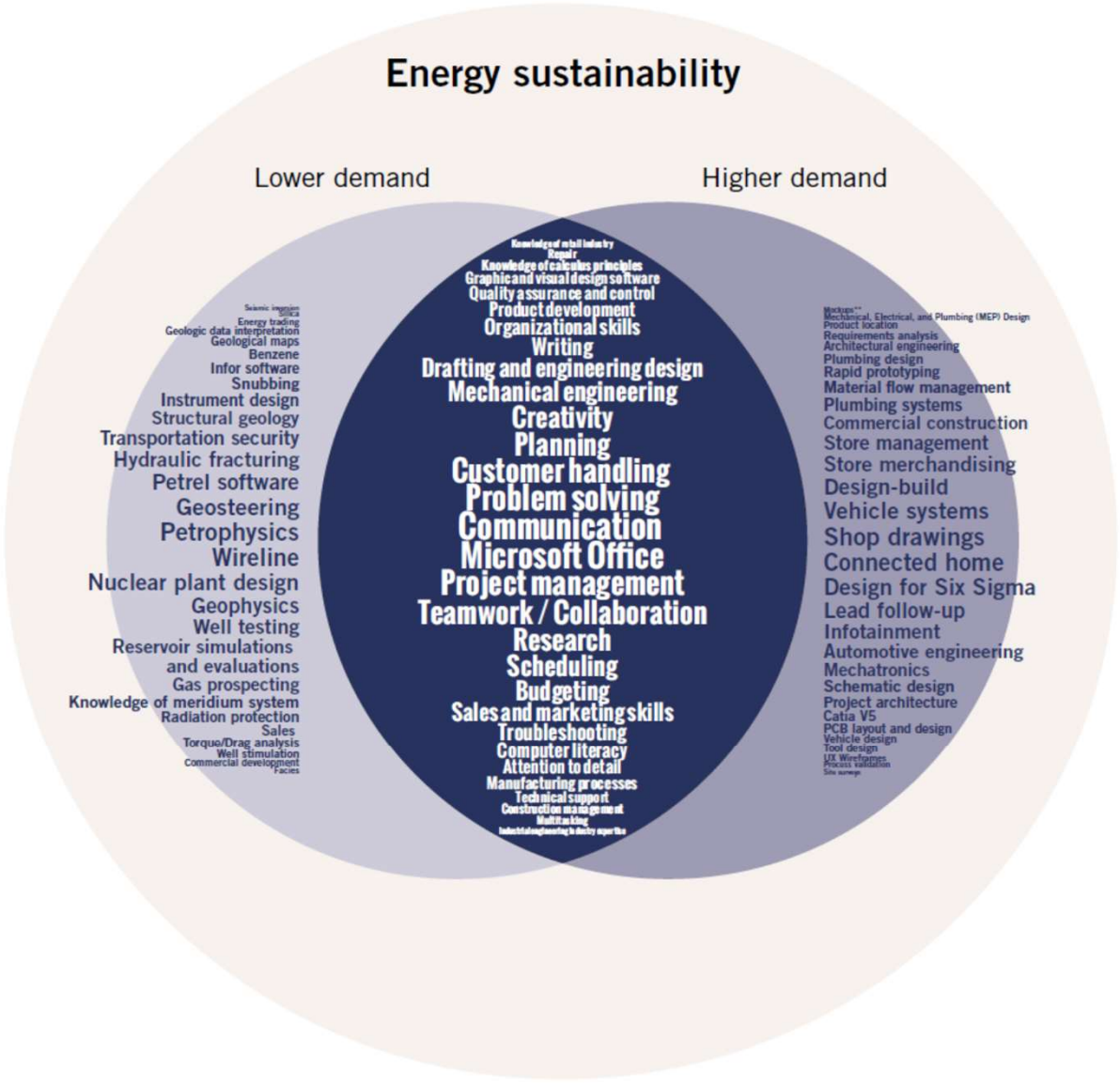
Top skills needed - energy sustainability scenario

High-skill occupations

Medium-skill occupations

Low-skill occupations

Overlap of core and technical skills for science and engineering professionals, in declining and in growing industries



Note: The blue area shows a large overlap of core and technical skills within the same occupation in both declining

Occupational changes in sectors: some examples

SECTOR	NATURE AND EXTENT OF OCCUPATIONAL CHANGE TO DATE	EXAMPLES OF NEW AND CHANGING OCCUPATIONAL PROFILES
Renewable energy 	One of the most significant sectors for development of new occupational profiles, spreading into closely related existing trades (solar energy systems installation)	**MSL:** solar photovoltaic/wind turbine/ biomass systems: installers, technicians, plant managers, quality engineers **HSL:** engineers and system designers (overlap with manufacturing)
Environmental goods and services, including water and waste management 	Significant occupational change in waste and recycling, including R&D functions to create new or improved waste management and recycling New occupations of environmental consulting and environmental auditing	**MSL:** environmental engineering technicians; soil, waste and water engineers (conservationists); environmental science and engineering technicians; health and other protection technicians **HSL:** atmospheric and space scientists; soil and water conservationists; landscape architects; environmental engineers (restoration planners, certification specialists, economists); climate change analysts; industrial ecologists; energy managers (auditors)

Changes in skills required, by skill level occupation (energy and circular economy scenarios)

SKILL LEVEL	NATURE OF CHANGE	TYPICAL SKILLS RESPONSE	EXAMPLE OCCUPATIONS
Low-skilled occupations	Occupations change in a generic way, e.g. requiring increased environmental awareness or simple adaptations to work procedures	On-the-job learning or short reskilling and upskilling programmes	Refuse/waste collectors, dumpers
Medium-skilled occupations	Some new green occupations Significant changes to some existing occupations in terms of technical skills and knowledge	Short to longer upskilling and reskilling programmes; TVET courses	*New occupations:* wind turbine operators; solar panel installers *Changing occupations:* roofers; technicians in heating, ventilation and air conditioning; plumbers
High-skilled occupations	Locus of most new green occupations Significant changes to some existing occupations in terms of technical skills and knowledge	University degree; longer upskilling programmes	*New occupations:* agricultural meteorologists, climate change scientists; energy auditors, energy consultants; carbon trading analysts *Changing occupations:* building facilities managers; architects; engineers

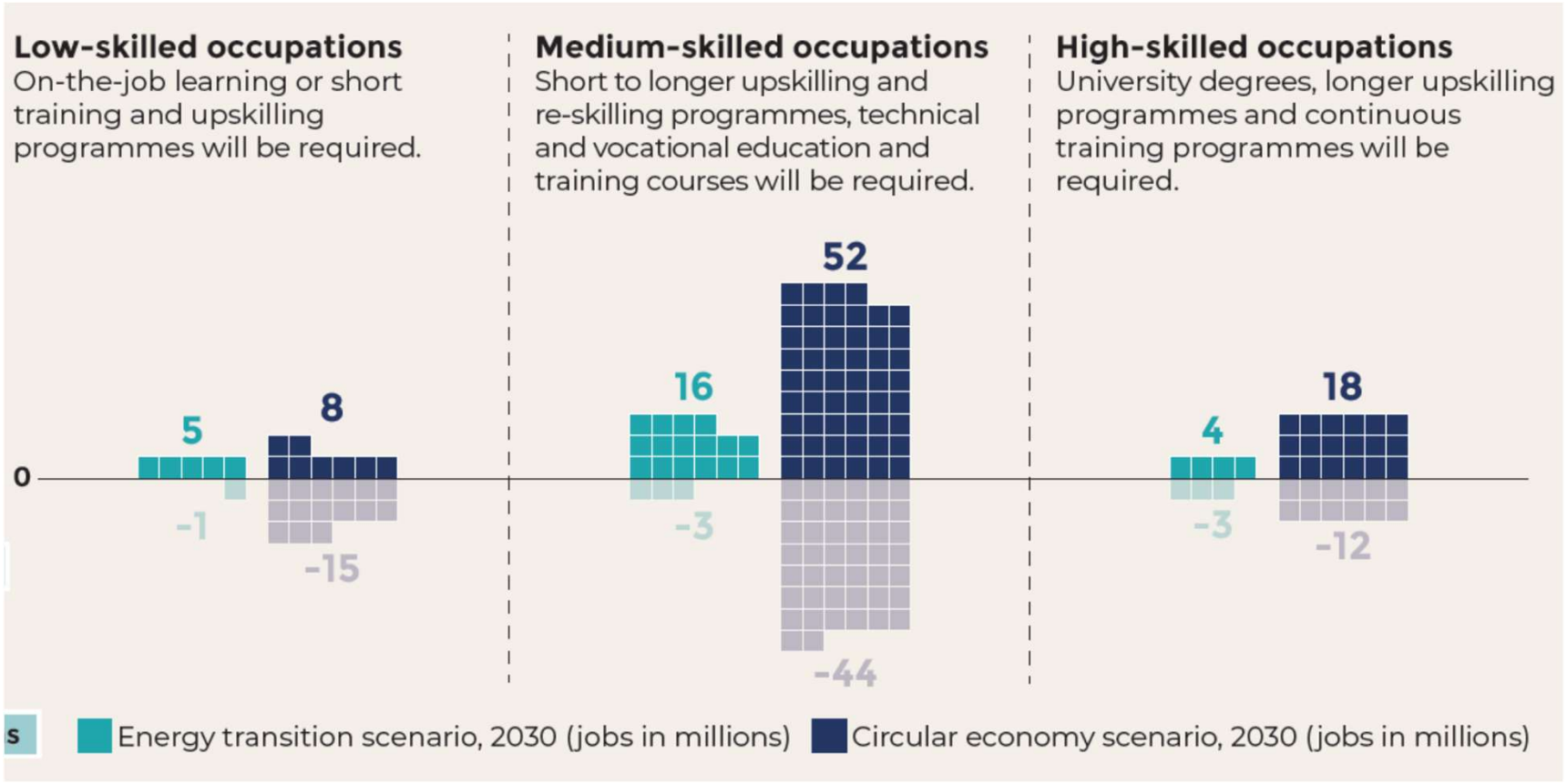
Source: "Skills for green jobs" country reports, ILO, 2018.

Which 3 sectors have the largest green skills gaps?

Energy, Agriculture, Construction, Others

Identify the top two sectors and discuss why you made the selection

Skilling, reskilling and upskilling required at all levels



Core skills, and not only specific technical skills are essential in the transition

REQUIRED ACROSS THE LABOUR FORCE	REQUIRED IN MEDIUM- TO HIGH-SKILLED OCCUPATIONS
• Environmental awareness and protection; willingness and capability to learn about sustainable development	• Analytical thinking (including risk and systems analysis) to interpret and understand the need for change and the measures required
• Adaptability and transferability skills to enable workers to learn and apply the new technologies and processes required to green their jobs	• Coordination, management and business skills that can encompass holistic and interdisciplinary approaches incorporating economic, social and ecological objectives
• Teamwork skills reflecting the need for organizations to work collectively on tackling their environmental footprint	• Innovation skills to identify opportunities and create new strategies to respond to green challenges
• Resilience to see through the changes required	• Marketing skills to promote greener products and services
• Communication and negotiation skills to promote required change to colleagues and customers	• Consulting skills to advise consumers about green solutions and to spread the use of green technologies
• Entrepreneurial skills to seize the opportunities of low-carbon technologies and environmental mitigation and adaptation	• Networking, IT and language skills to perform in global markets
• Occupational safety and health (OSH)	• Strategic and leadership skills to enable policy-makers and business executives to set the right incentives and create conditions conducive to cleaner production, cleaner transportation

Source: "Skills for green jobs" country reports, ILO, 2018.

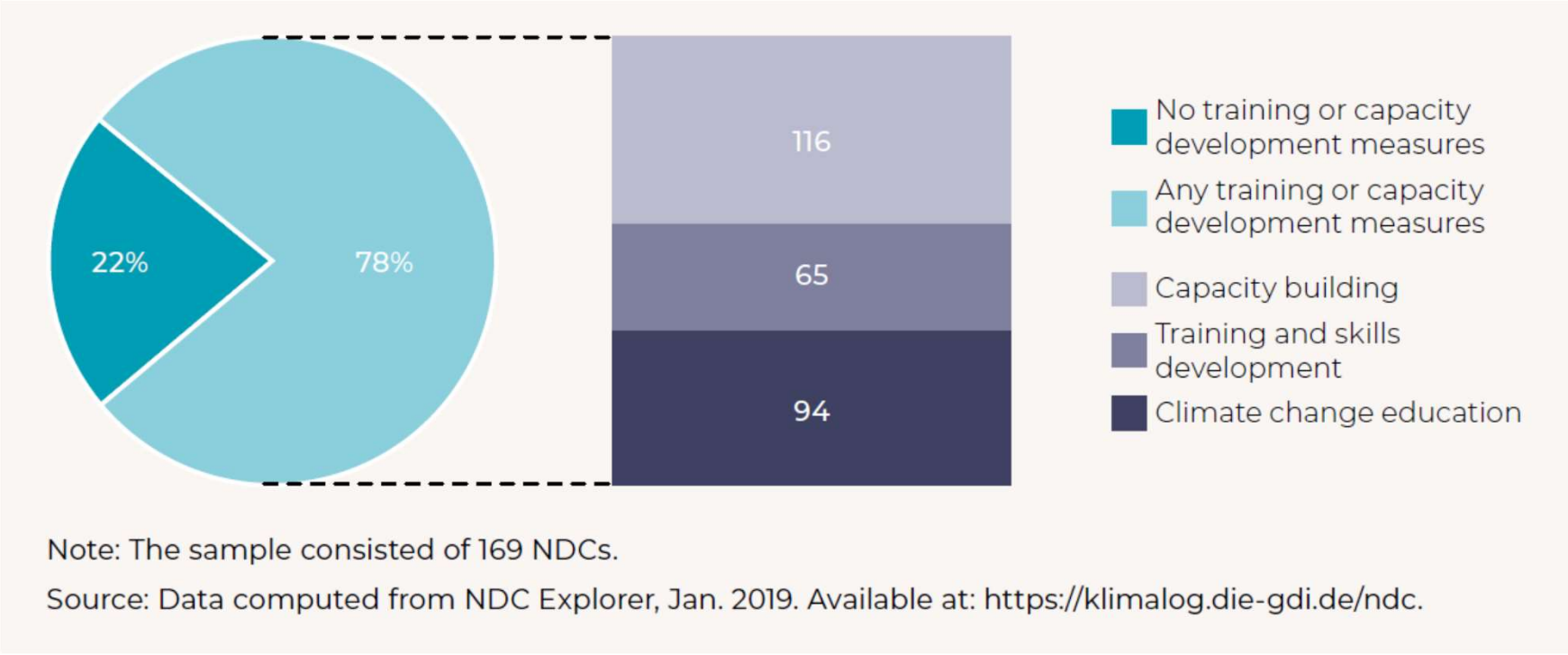
Skills development policies and a just transition – where do we stand & where should we go?

What prevents effective skill policies in a green transition?

Discuss at your table

Skills and capacity development in the NDCs

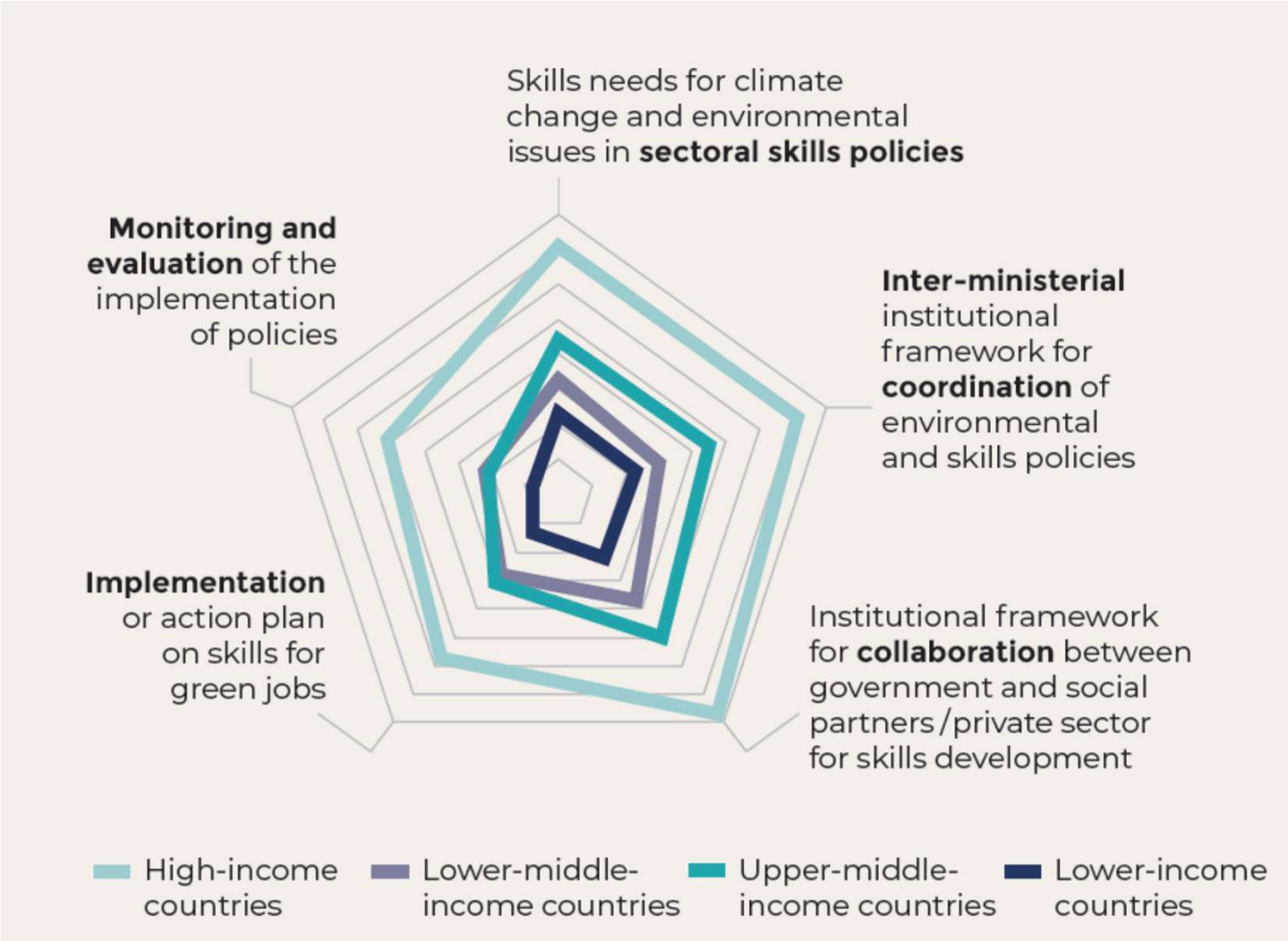
Share of countries that mention capacity and skill development in their NDC



Note: The sample consisted of 169 NDCs.

Source: Data computed from NDC Explorer, Jan. 2019. Available at: https://klimalog.die-gdi.de/ndc.

Key elements for effective skill policies for a JT and green jobs: where do we stand?



Examples of TVET measures to address skills for green jobs and a JT

TVET DEVELOPMENT MEASURES	COUNTRIES
Developing, adapting and/or updating the occupational standards for existing qualifications in national qualification systems to incorporate components related to skills for green jobs.	Estonia, Ghana, India, Indonesia, Republic of Korea, Philippines, Thailand.
Discussing relevant topics in national or sectoral skills councils and committees on education, research and development or skills development, which often include experts and other stakeholders.	Australia, Republic of Korea, Kyrgyzstan, Mauritius, Montenegro, Thailand, United Arab Emirates.
Adapting existing education programmes and qualifications and/or developing a small number of new ones, often sector-specific. Adapting TVET regulations.	Most countries adapt existing education programmes to some extent. New programmes are less common, but have been created in Barbados, Germany, Kyrgyzstan, the Philippines and Spain.

Some inspirations for policy and institutional initiatives

Institutional arrangements to anticipate skills needs for the green transition

France: The National Observatory for Jobs and Occupations of the Green Economy (Onemev), created in 2010, brings together a broad range of institutions including relevant national ministries and agencies, key public employment service organisations, the main TVET association, the national statistical institute, research bodies and regional employment and training observatories.

Some inspirations for policy and institutional initiatives

Coordination and consultation mechanisms

India : The Skill Council for Green Jobs (SCGJ) handles the Green Skill Development Programmes of India. Its objective is to identify skills needs within the green business sector, and to implement nationwide, industry-led, collaborative skills development and entrepreneur development initiatives. Its governing council includes representatives of ministries and employer bodies as well as individual employers.

Republic of Korea: The Green Growth Committee (GGC) includes among its members businesspeople, civil servants and representatives of government-funded think-tanks. It is responsible for establishing a five-year green growth plan and coordinating policies related to skills development formulated by various ministries . Some 16 local government bodies have also established regional green growth plans and created regional green growth committees. The GGC also created the Green Technology Centre to analyse future possibilities for green technological development.

Some inspirations for policy and institutional initiatives

An overarching framework for skills and training

Philippines: Philippines Green Jobs Act of 2016 is the country's first piece of legislation specifically designed to generate, sustain and incentivize "green jobs" in order to develop an environmentally friendly economy.

It promotes training for green jobs by mandating the Department of Education and the Commission on Higher Education to develop and implement curricula to support the skills and knowledge requirements of a green economy. It tasks the Technical Education and Skills Development Authority and the Professional Regulation Commission to develop training regulations and qualifications frameworks, respectively, to facilitate the certification of skilled and professional green manpower.

The National Green Jobs Human Resource Development Plan, incorporating the Just Transition framework, includes measures on education and skills development, labour market interventions, social protection, enterprise development, social dialogue, policy coherence, and financing.

Some inspirations for policy and institutional initiatives

Greening existing jobs in retrofitting

UAE: The Emirates Green Building Council for Sustainable Development currently offers a series of professional training programmes. The Dubai Energy Efficiency Training Programme is targeted on facilities managers and delivers training in how small changes in the daily management of buildings can make big differences in energy consumption patterns. Energy service and energy management companies have flourished, creating green jobs in various positions (e.g. energy managers, energy auditors, retrofitting project managers, and retrofitting and solar sale professionals)

Ensuring effective skills development for a JT and GJ

A Just Transition Partnership

A global alliance that mobilises governments, employers and the private sectors, trade unions, academia and civil society

for new transformational and high impact programmes to raise climate ambition with job and social inclusion for all.

To be announced at the side event to the Climate Action Summit

Thank you