BANCO DE DESARROLLO DE AMÉRICA LATINA Y EL CARIBE

América Latina y el Caribe
Cada camino, una oportunidad

Workshop “Just Transition: Green and Blue Jobs in the Americas”

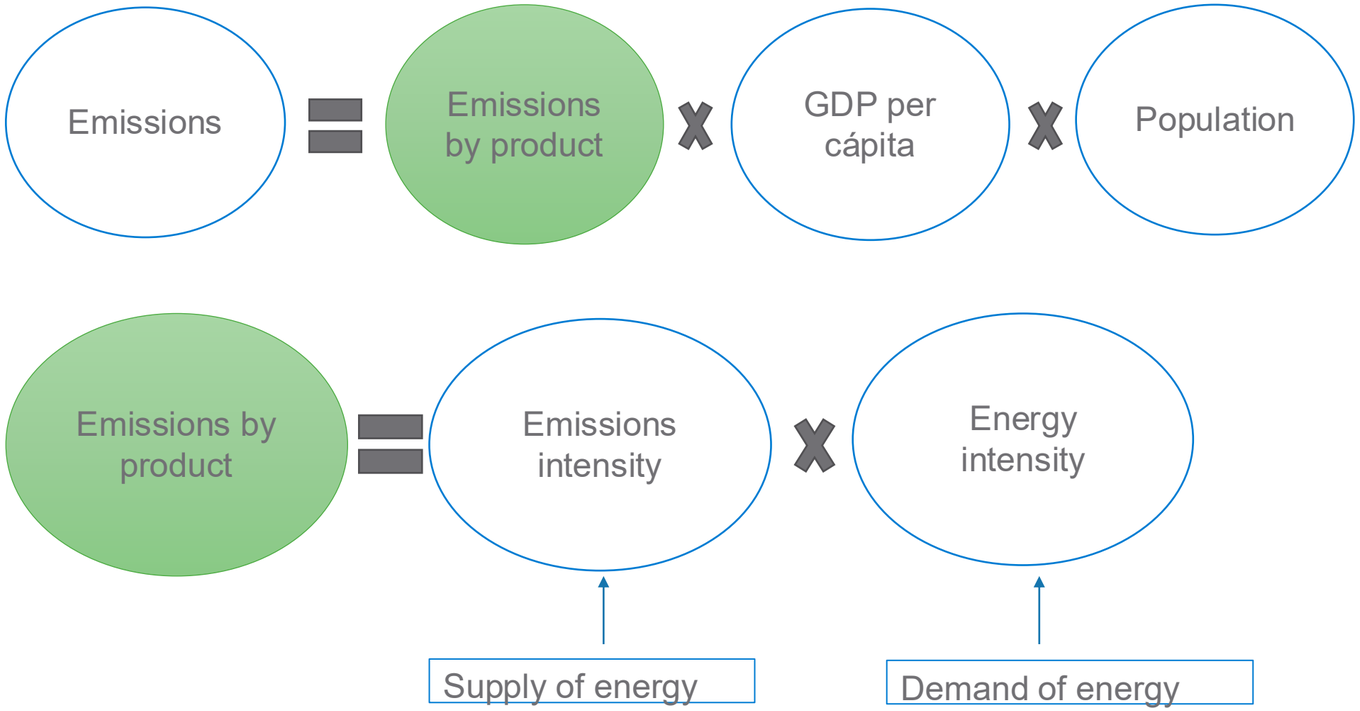
Energy transition and green jobs

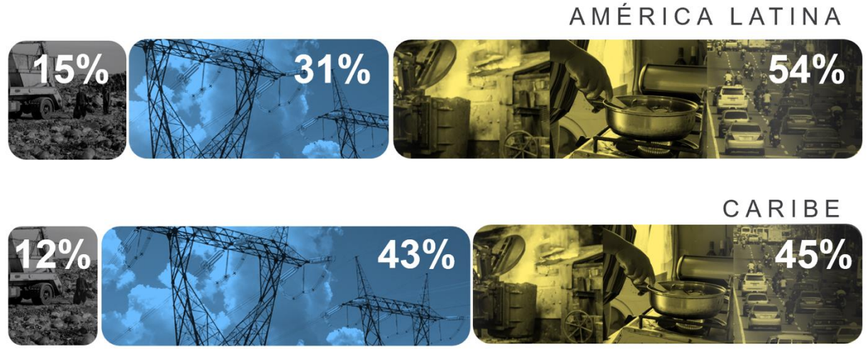
Lian Allub, February 26th, 2026

Energy transition and emissions

Energy transition is not just how we produce energy but also how we use energy

To reduce emissions we should work on both sides





Changes in emissions intensity and energy intensity implies the transformation in labor markets.

Energy transition and green jobs

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ONET classifies 1100 occupations with an 8 digits disaggregation

Green jobs -> jobs that are going to increase demand due to the energy transition, which includes jobs that are going to be be created or change the requirements of skills due to the energy transition

Are classified in 3 groups:

- *Green New and Emerging Occupations*: Jobs that arise from the shift towards a new economy. Example: Air quality controllers; wind energy engineers; photovoltaic panel installers

- *Green Enhanced Skills Occupations*: Significant change to the work and worker requirements of an existing occupation. Examples civil engineers; plumbers; recyclable material collectors

- *Green Increased Demand Occupations*: an increase in the employment demand for an existing occupation. Examples Electricians; welders;

Note: Non green jobs are not necessarily jobs related to polluting activities

Energy transition and green jobs

We use O*NET classification together with PIAAC (Programme for the international assessment of adult competences) data.

- Standardized questionnaires with relevant information
- Information on cognitive skills

Three group of countries:

- Latin America: Chile, Ecuador and Mexico
- High-income OECD: Belgium, Denmark, France, Italy, Japan, The Netherlands, South Korea, Spain and the UK
- Middle-income OECD: Israel, Lithuania, Poland, Slovakia and Slovenia

While O*NET is at 8-digit SOC codes, PIAAC is at 4 digit SOC codes.

- Problem→ What to do with occupations which have some green and some non-green occupations
- Decision→ We only consider green those 4-digit occupations where all the 8-digits occupations are considered green, and non-green those where all the 8-digit are non-green

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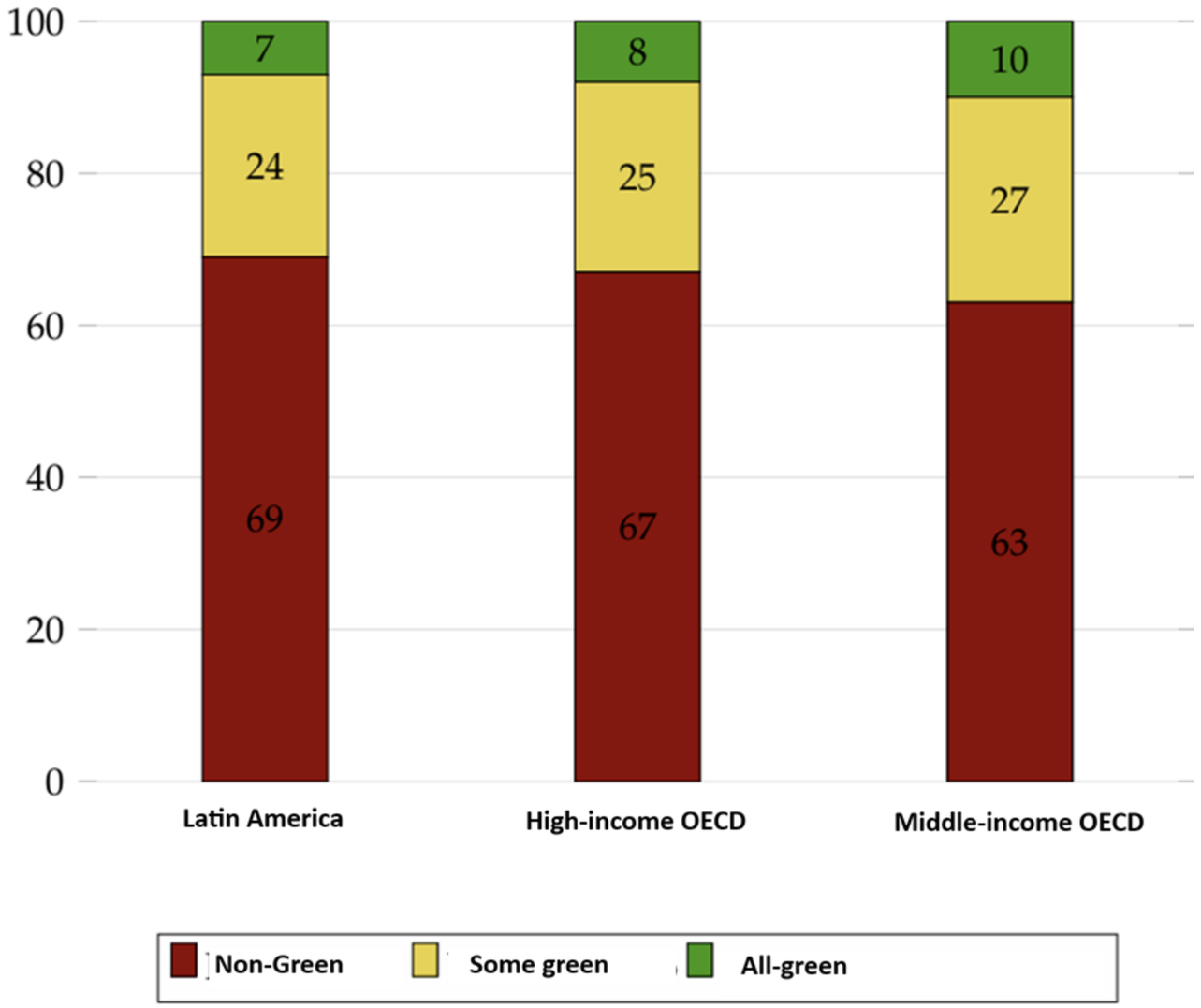

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Descriptive Statistics

- Unconditionally, green jobs have higher income, have a larger proportion of males and they have a higher abstract task intensity

TABLE 1 Regional Labor Force Characteristics by Occupational Greenness

	LATAM		OECD Middle Income		OECD High Income	
	Not Green	Green	Not Green	Green	Not Green	Green
Income	1.70	1.91	2.11	2.21	2.67	2.81
Male	0.51	0.73	0.36	0.80	0.41	0.80
Higher Education	0.24	0.20	0.39	0.27	0.40	0.34
Age (mean)	36.01	37.13	39.01	39.99	40.43	40.63
Large Firm	0.55	0.78	0.74	0.73	0.70	0.79
Private Sector	0.78	0.92	0.61	0.82	0.72	0.89
Formal Employment	0.64	0.79	0.89	0.93	0.91	0.94
Full-Time Employment	0.70	0.87	0.82	0.92	0.68	0.89
Abstract Task Intensity	-0.08	0.26	-0.11	-0.06	-0.09	0.10
Routine Task Intensity	0.10	0.08	0.06	0.11	0.12	0.13

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Are green jobs better paid?

- After controlling for different dimensions, the gap slightly decreases in Latin America and OECD middle income, but it vanishes in OECD high income

TABLE 2 Natural logarithm of hourly wage by region and education level

	LATAM				OECD Middle Income				OECD High Income			
Greenness	0.22***	0.22***	0.24***	0.22***	0.11***	0.10***	0.09***	0.08***	0.13***	0.06***	0.03**	0.02
	(0.06)	(0.05)	(0.05)	(0.05)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.01)
Medium Edu		0.26***	0.20***	0.10**		0.11***	0.08**	0.01		0.14***	0.10***	0.03***
		(0.04)	(0.04)	(0.04)		(0.04)	(0.04)	(0.04)		(0.01)	(0.01)	(0.01)
High Edu		0.84***	0.72***	0.53***		0.61***	0.52***	0.35***		0.44***	0.35***	0.20***
		(0.06)	(0.06)	(0.06)		(0.04)	(0.04)	(0.04)		(0.01)	(0.01)	(0.02)
Male		0.07*	0.06*	0.04		0.14***	0.12***	0.12***		0.23***	0.16***	0.14***
		(0.04)	(0.04)	(0.03)		(0.02)	(0.02)	(0.02)		(0.01)	(0.01)	(0.01)
N	4376	4376	4376	4376	9550	9550	9550	9550	18436	18436	18436	18436
Demographic Cont.	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Employment Cont.	No	No	Yes	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Skills Cont.	No	No	No	Yes	No	No	No	Yes	No	No	No	Yes

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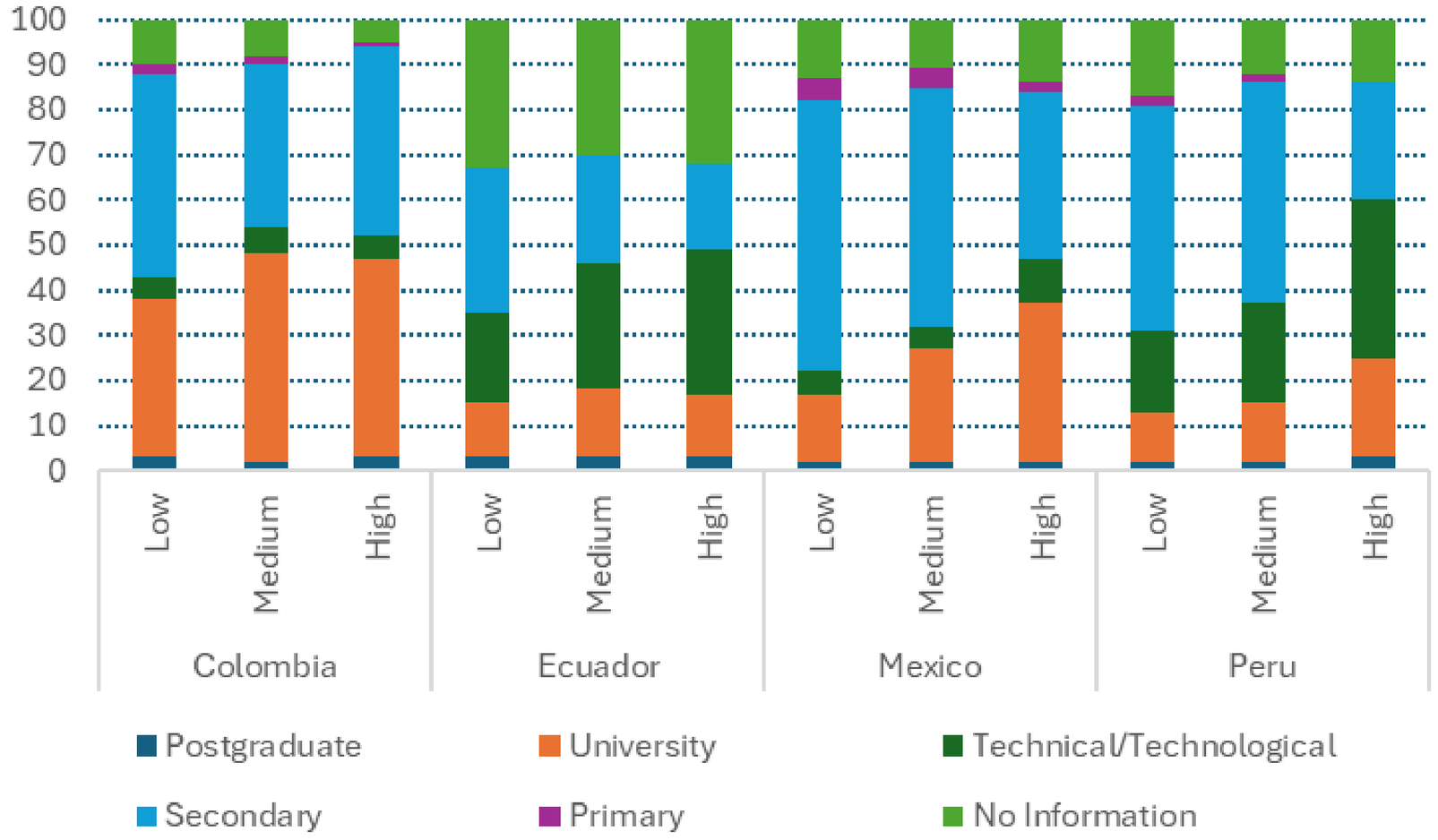
What about the demand of green jobs?

Through the analysis of vacancies, jobs with high green potential demand more educated people



Labor policies for job reallocation

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Investment in training and skills development

Policy coherence, coordinated with environmental and climate policies

Participation of key actors: governments, employers and workforces. Also important to include educational and training institutions

Ability to anticipate the demand for skills, with mechanisms that provide information on the supply and demand of skills in green jobs. For example, France´s National observatory of green economy jobs and occupations or the Costa Rica's national learning institute

New technical and vocational training system to close the skill gap and improve potential of individual skills, focusing on the demands for skills of new occupations

Development of soft skills to adapt to changes in the work environment

Note: In addition to these policies social protection mechanisms are going to be needed

Conclusions

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The energy transition will impact the labor markets

Certain activities will increase their demand of workers

Nowadays, those activities have a larger participation of males, pay higher salaries and demand more abstract tasks

Labor supply will have to adjust to the new demand

Active labor market policies are needed to be able to:

- Satisfy the new demand for skills
- Help workers to transition to new occupations
- To reduce the potential impact on inequality that may be generated by the new labor market conditions

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