

Indonesia Social Protection Technical Seminar (ISPTS)

# SKILLS FOR ENERGY TRANSITION: TOOLKIT APPROACH

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# JOB LOSS STEMMING FROM DECARBONIZATION WILL BE A GRADUAL BUT LONG TERM ONE

## The coal sector in Indonesia:



Generates significant employment – 240,000 workers in 2018



Concentrated in **Sumatera** and **Kalimantan**



Plays an outsized economic role in coal intensive districts and job losses include those indirectly dependent on the sector

As coal jobs disappear, it will be important to retrain and deploy workers in neutral jobs and green jobs



**Neutral jobs** are those that neither significantly contribute to nor detract from the progress towards a more sustainable energy system



**Green jobs** are defined as jobs that contribute substantially to preserving or restoring environmental quality

Transitioning to greener occupations can be challenging due to **skill** and **geographical mismatches**

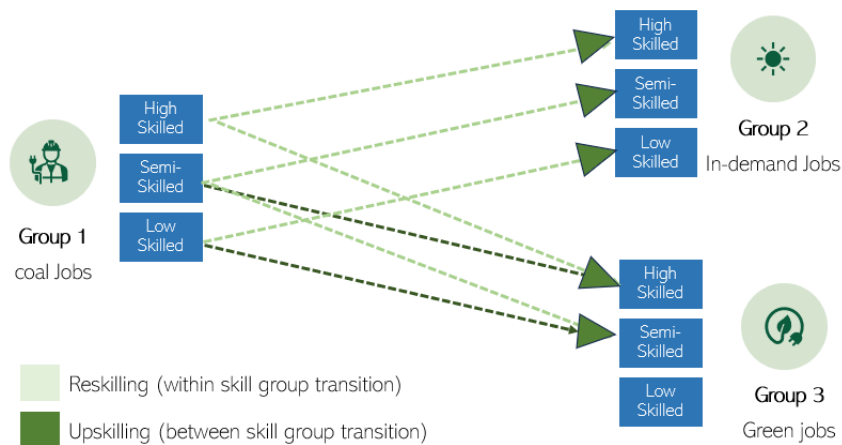


Workers don't have skills the neutral and green jobs need



Jobs are created in different areas from where jobs are lost

# WHY AN OCCUPATIONAL SKILL-BASED TOOL-BASED APPROACH CAN BE USEFUL?



Collecting data on occupational skill and tasks allows workers to choose the best fit pathways to re-employment



Occupations that are a good fit for transitioning into (in terms of skills and profiles and wages)



Skills they will need to invest in

This approach can be used to support transition in any sector where jobs are at risk of disappearing due to globalization and digitalization

# USE CASE: WHICH OCCUPATIONS ARE A GOOD FIT FOR TRANSITIONING INTO?

## HOW:

1. Estimate skill distance between occupations
2. Identify top 5 or 10 occupations with the least skill distance

## EXAMPLE:

**Starting occupation:** Mining managers

**Choices based on skill distance:**

Occupation title	Skill distance
Civil engineering technicians	0.073
Mechanical engineering technicians	0.098

## Examples of similar tools: O\*NET career changers

### Education & Research Institutions 1,100+ accounts



Show more examples

### Assessment & Career Information 650+ accounts



Show more examples

### Federal/State Government & Workforce Systems 250+ accounts



Show more examples

### Commercial Products & Private Companies 1,100+ accounts



Show more examples

# SKILLS FOR ENERGY TRANSITION SURVEY : RESEARCH STRATEGY

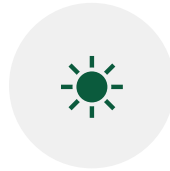
**Objective:** To identify skill needs for green jobs and upskilling/reskilling needs for those currently employed in coal industries whose jobs are likely to disappear.



## Group 1

### Coal Industry Occupations

Occupations in pollution intensive industries that are likely to disappear with the ongoing green transition



## Group 2

### In-demand Occupations

Occupations with high growth of employment or where skills shortages are limiting their growth



## Group 3

### Green occupations

Occupations that include specific tasks to lessen consumers' and/or firms' environmental impact

Sampled coal industry occupations and occupations from different industries based on similarity in work activities, work styles, and skills

# SAMPLE : LOCATION AND CHARACTERISTICS

**Locations:** Kalimantan Selatan, Kalimantan Tengah, Kalimantan Timur, Sumatera Selatan and Jambi

**Notes:** The occupations in this survey account for 5.02% of total employment or 6.7% of total non-agriculture employment in Indonesia in 2017 (Sakernas 2017)\*. **Only 3 of the 21 green occupations were in the renewable energy sector.**



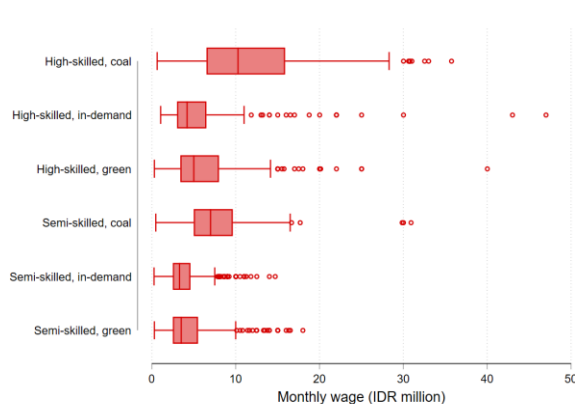
**74 occupations** were sampled.  
**36 – 43 workers** surveyed for each occupation

More than 75% of respondents were working in **medium and large enterprises.**

Majority of sample are **“employees”** working in private sector firms or government agencies

# COAL JOBS ARE LOCALLY BETTER JOBS IN COAL INTENSIVE AREAS, MAKING THEM HARD TO TRANSITION OUT OF...

Coal jobs earn higher monthly wages than in-demand and green jobs, across **skill levels**



On average, coal jobs earn 67% and 52% higher than in-demand and green jobs, respectively

Coal workers in semi-skilled and low skilled jobs are more educated than their non-coal counterparts.

Coal jobs require more:

- Prior experience
- On the Job training

Coal jobs are more likely to require:

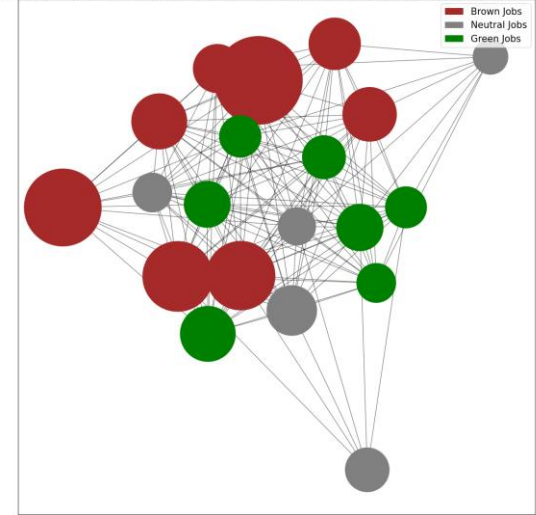
- **non-routine analytical skills** such as analytical thinking, problem-solving, and decision-making
- **non-routine interpersonal skills** like cooperation, coordination and providing guidance
- **routine cognitive tasks** like following procedures, using basic comprehension and reasoning

# CONSIDERING TRANSITION OPTIONS FOR COAL JOBS WORKERS..

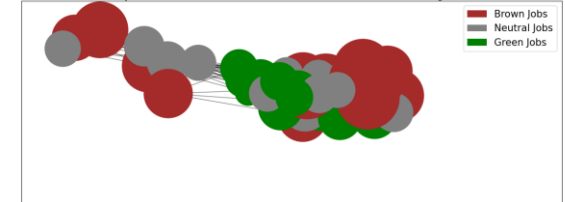
- ❑ It is difficult to transition to jobs of a greater skill level but easier to transition within skill levels.
- ❑ For high-skilled coal job workers (which can be highly specialized), it is easier to transition into high-skilled green jobs compared to in-demand jobs.
- ❑ For semi-skilled coal job workers – it is easy to transition to semi-skilled in-demand or green jobs
- ❑ For low skilled coal job workers, very few in-demand occupations require similar skill profile.

Wages are a strong deterrent to transition into local non-coal jobs!

High-Skilled Occupation Network Based on Skill Similarity and Median Wages



Semi-Skilled Occupation Network Based on Skill Similarity and Median Wages





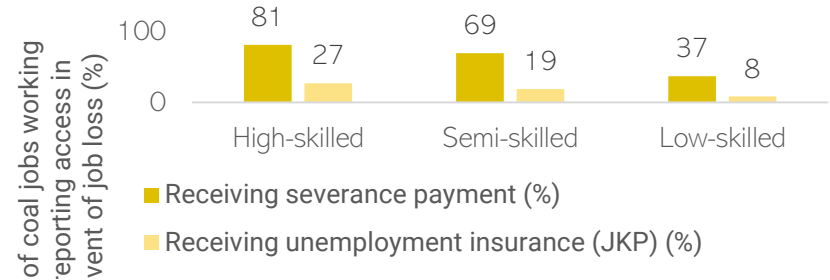
# WHAT KIND OF SUPPORT DO COAL WORKERS WANT?

Majority of workers are **not open to jobs with lower salary**, but **low skilled workers** are the likeliest to accept a job with lower pay.

High skilled and semi-skilled workers are more likely to be **willing to migrate for new jobs**

**High-skilled** coal job workers are more likely to receive **severance payments** and have access to **unemployment insurance (UI)**

Access to financial support in the event of job-loss among coal workers



Preference for a **comprehensive support**: financial, job search assistance, relocation and skilling support

# GETTING READY TO SUPPORT ENERGY TRANSITION



## JKP - UNEMPLOYMENT INSURANCE

- Linked to social security contribution (BPJS)
- Cash support to laid off workers
- Access to skill training programs
- Career counselling
- Skill profiling



## KARTU PRAKERJA - ACCESS TO SKILLING

- Cash support to access training
- Curated micro-skilling programs
- Certifications
- Job recommendations
- Skill program recommendations



## PUBLIC EMPLOYMENT SERVICES – ONLINE

- Online system SIAPKerja providing job matching and skill training marketplace
- Labor market information
- Job matching on Karirhub



## PUBLIC EMPLOYMENT SERVICES – OFFLINE

- Offline services provided spread across 34 provincial offices, 416 district offices and 98 city offices.
- Work mediums support job seekers



## SKILL TRAINING (GOVERNED BY MOM)

- Competency based skill training
- 6,058 training centers including industry, private and community owned

# PREPARING TO SUPPORT PRODUCTIVE ENERGY TRANSITION

Goal: Result-oriented, quality, tailored, comprehensive, end-to-end support for impacted groups including informal workers, women, old-age workers and other vulnerable groups nation-wide that can be easily scaled

## I. Ability to provide tailored and comprehensive services

While programs that provide tailored comprehensive end-to-end support exist, they are:

- restricted to a subset of workers (usually higher skilled with access to internet)
- provided online → exclusion due to digital divide

- ✓ Complementary offline provision of comprehensive services nationwide
- ✓ Tailoring of both offline and online services to lower-skilled worker needs, women & older workers
- ✓ Service standardization

## II Ability to provide results-oriented quality services

- Few programs track outcomes such as employment
- Mechanisms for coordination with private sector demands exist
- Varying intensity of M&E practices and feedback loops
- Challenges in hiring and retaining instructors, quality of instructor training and ability to find instructors for emerging sectors

- ✓ Explore performance-based program implementation
- ✓ Standardize and strengthen industry links
- ✓ M&E to improve service delivery
- ✓ Revamp instructor hiring, invest in training and quality assurance, collaborate with industry on training of instructors for emerging sectors
- ✓ Use standardization/tools to enhance quality of service

## III. Ability to scale up

- Financing is flexible but systematic contingency funds difficult to trigger
- Provider hiring contractually possible but pool might be limited

- ✓ Enhanced program coordination to trigger contingency funds
- ✓ Explore linkages w/ private sector to increase pool of instructors and other professionals needed for service provision



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