



Designing Better Response Measure Policies

Green Jobs Assessment Model

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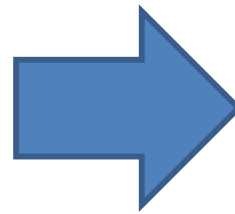
Outline

1. What is the objective in using a model in the context of Response Measures?
2. Country examples?
3. How can Just Transition policies be guided by results from the model?



The objective is to assess how climate policies impacts on...

...jobs, poverty, GDP, inequality & SDGs...



...to design better climate and Just Transition policies minimizing negative & maximising positive effects!



Policy questions the model should answer:

What is the impact of Climate and Response Measures policies on...



- Country and sector specific
- Based on data, statistics, Input Output
- Transparent

Social and Labour Market

- Direct & indirect jobs
- Un- under- informal empl.
-> model should allow!
- Skills, Gender, Youth

Economy

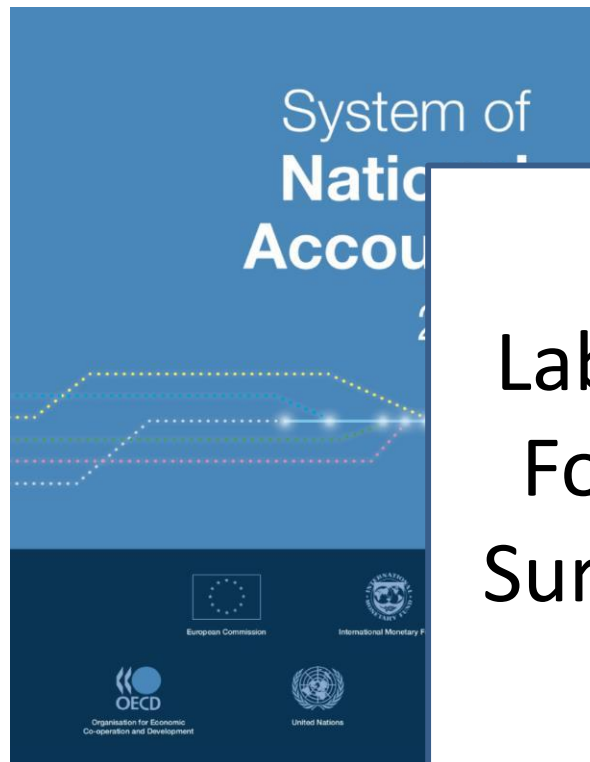
- GDP by sector
- Poverty, inequality
feedback on demand ->
Reality
- Tax revenues, profits,
wages

Environment

- CO2 emission by sector
- Forest, waste, energy,
water



Multiple data sources on social, economic and environment should be combined in a consistent framework



Labour Force Surveys

Household Budget Survey

Environment Assessment Emissions IPCC



Macro econometric structural simulation model

exogenous

endogenous

Global economic development

Population

GDP t-1 / GDP t-2

Table 2.3: Supply and Use Tables framework

UN Handbook on Supply, Use and Input-Output Tables with Extensions and Applications (2018)

		Products				Industries				Final uses			Total
		Agriculture, forestry, etc.	Ores and minerals; etc.	...	Services	Agriculture, forestry, etc.	Mining and quarrying	...	Services	Final consumption	Gross capital formation	Exports	
Products	Agriculture, forestry, etc.	Output by product by industry				Intermediate consumption by product and by industry				Final uses by product and by category			Total use by product
	Ores and minerals; etc.												
	...												
	Services												
Industries	Agriculture, forestry, etc.	Output by product by industry				Intermediate consumption by product and by industry				Final uses by product and by category			Total output by industry
	Mining and quarrying												
	...												
	Services												
Value added		Value added by component and by industry				Value added by component and by industry			Value added				
Imports		Total imports by product				Total imports by product			Total Imports				
Total		Total supply by product				Total output by industry				Total final uses by category			

Empty cells by definition

Employment by industry

Emissions by industry

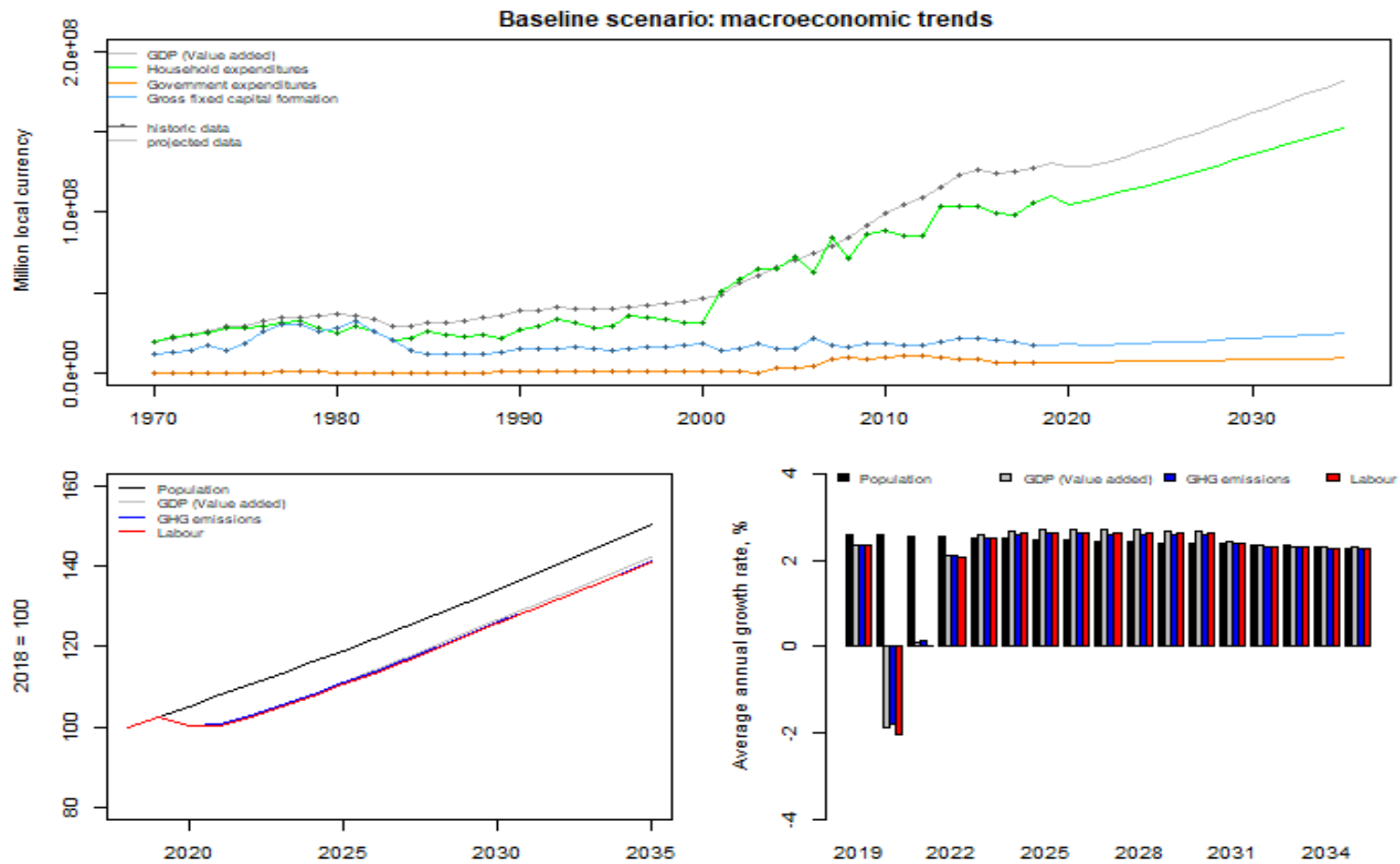
GDP per capita t-1, t-2,

GDP per capita & inequality

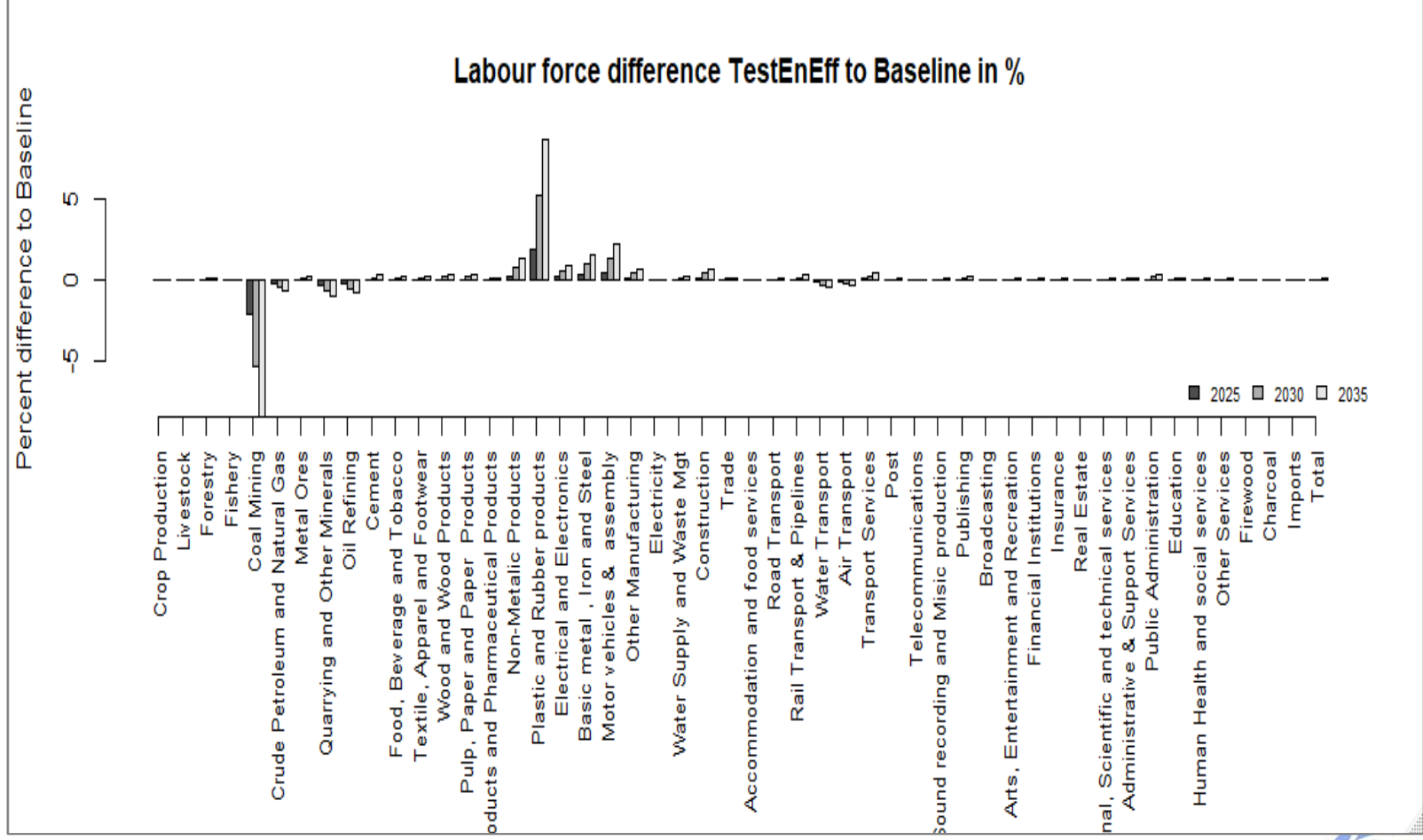
- GJAM captures
- Direct effects
 - Indirect effects
 - Induced effects



Screenshot in R - Baseline Green Jobs Assessment Model



Employment by sector

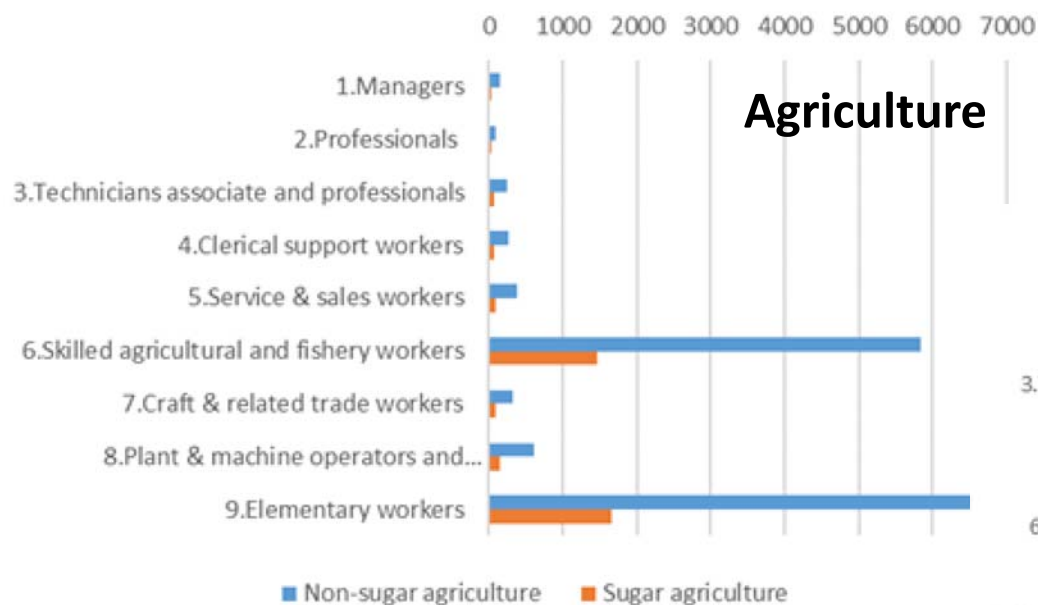


Mauritius NDC Job Assessment

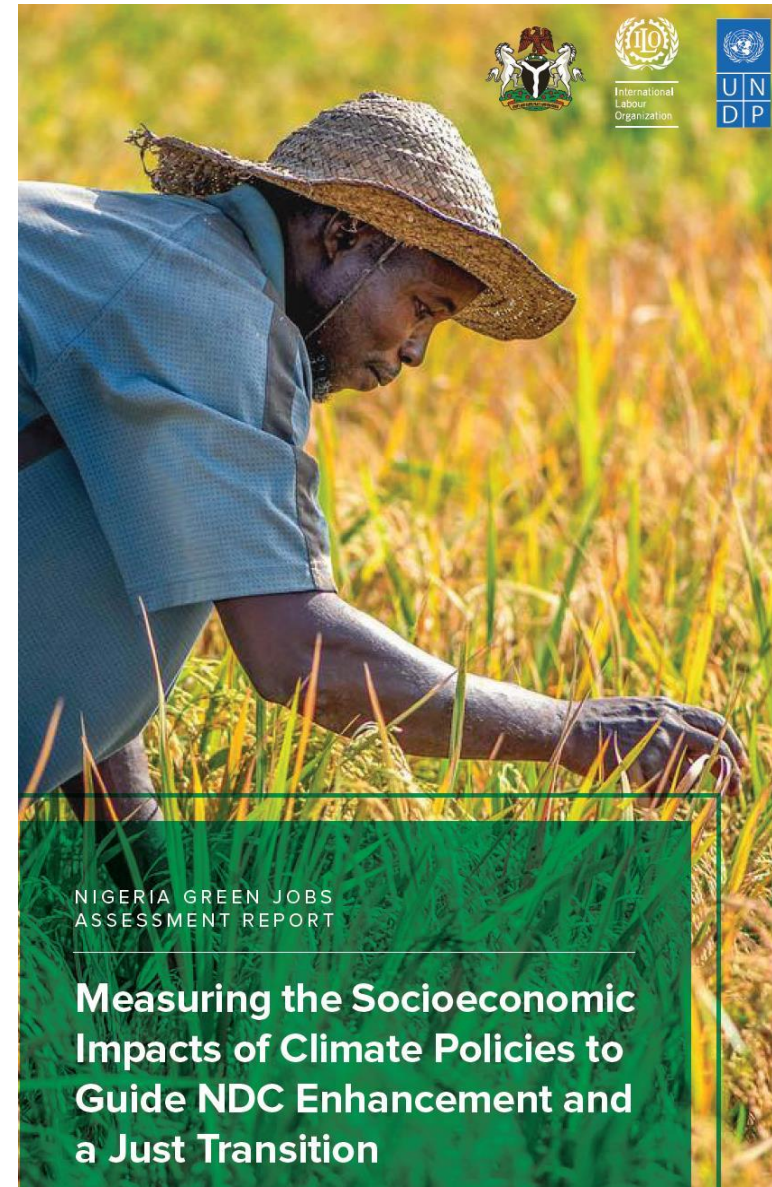


Mauritius

Skills requirements for NDC achievement

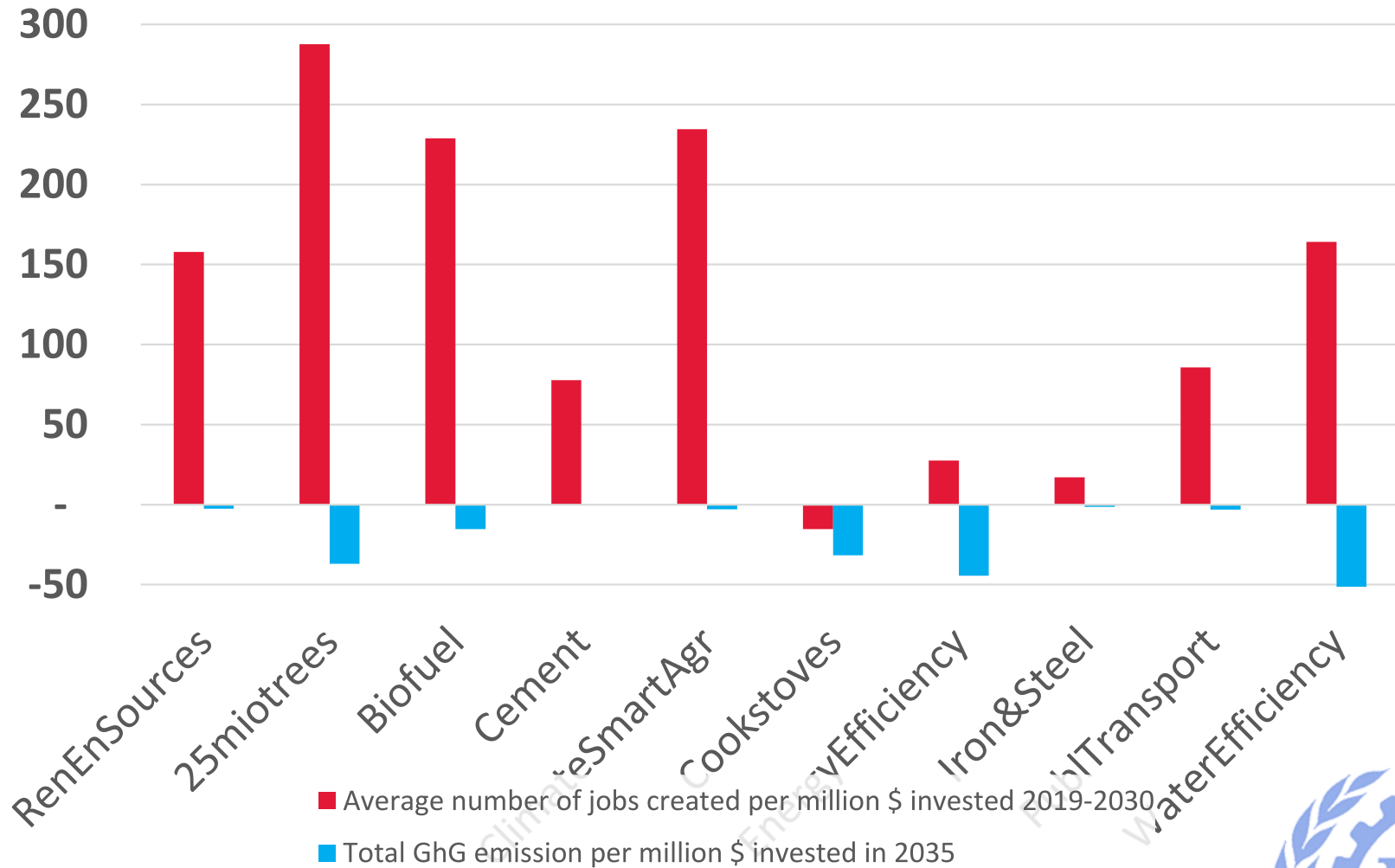


Assessment of Nigeria's Nationally Determined Contributions



Nigeria

Depending on Sector & Technology, a Dollar invested has different job & CO2 impacts



Policy outcome:

- ❑ Social and Employment gains are not automatic!

Climate policies have positive job outcomes if accompanied by Just Transition Policies

– Notably investment into Skills, Enterprise Development & Social Protection:

- Skills training for 12 million jobs in renewables and supply industries: **\$96 m/year**

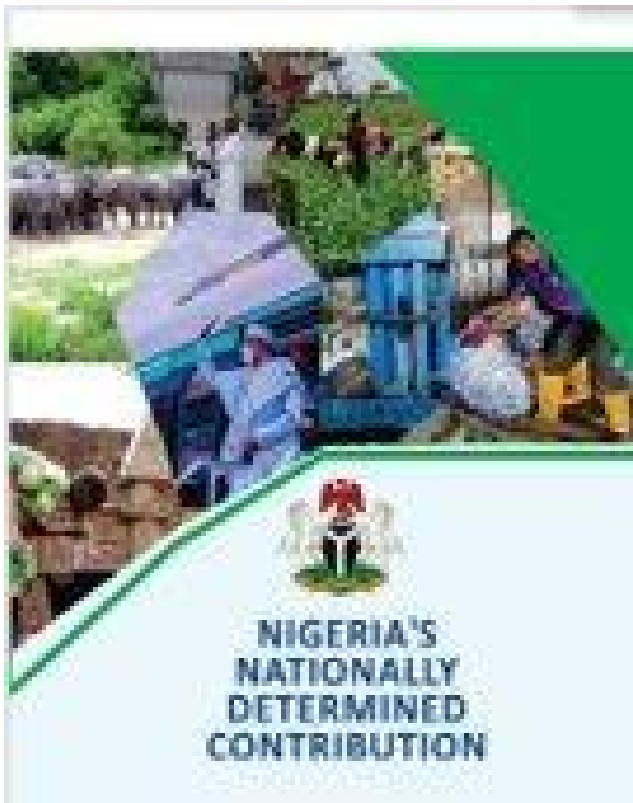
➤ (\$/year 96 million (\$26/pupil/secondary education; Underestimate as private and student finance)

- Conditional cash transfer to stop firewood & charcoal collection of 530,000 workers and alternative business: **\$900 m/y**

➤ (\$/year 900 million (\$1.9/day/hh size 5, ½ income; Clean energy support to fire/charcoal cooking households (50 million hh)

- Financing by fiscal neutral progressive climate tax \$10 ton carbon for richest 10% : **\$1.06 bn/y**

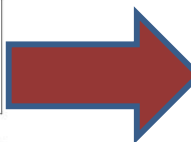
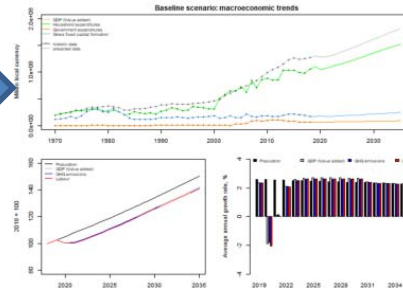
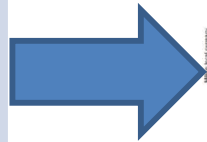
➤ (10.6 million adults (10%) earn 42% of national income and account for majority of Mt480 GHG)



Exercise

Which RM policies do you want to analyse?

2030, 10 m elec. vehicles



Which impact indicator do you wish to analyse?

Jobs

micro-entreprises

Skills



Thank you



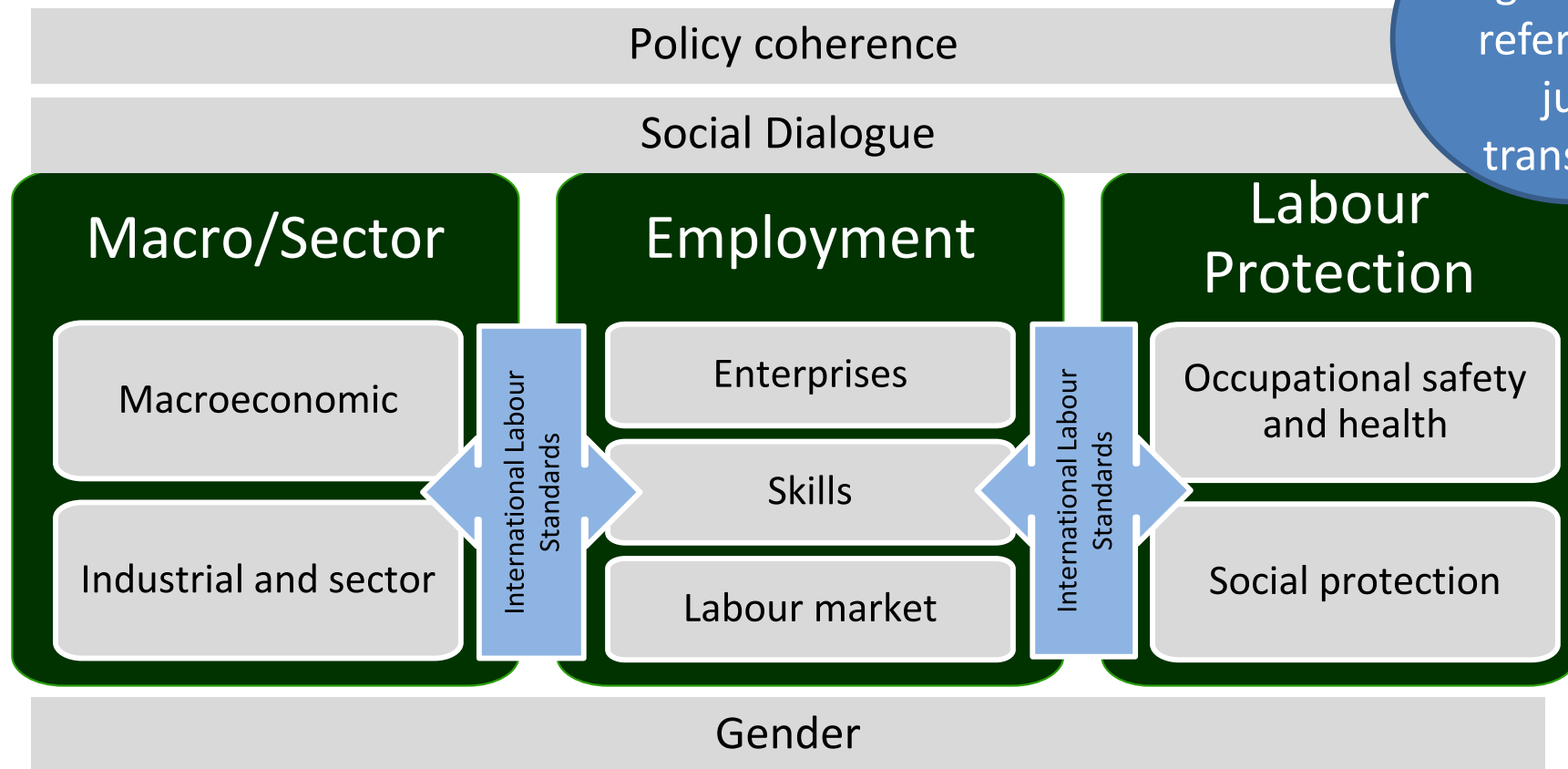
Just Transition Policies



ILO Guidelines for Just Transition

ILC 2023

Paris Agreement refers to a just transition



Turn risks of transition into GDP growth, Job creation and reduced Inequality



Social dialogue

South Africa 8.5 bn \$ Just Transition Partnership

- Based on Government, business and labour engage in JT Council

Germany

- falsely called Coal Commission for phaseout!
- Commission on Growth, Structural Change and Employment creation

France (Grenelle), Spain (Kyoto), etc.



Social Protection



- ▶ **Nature based solutions NREGA (India)**
 - US\$ 8 bill (only ~ 0.4% GDP)
 - Benefit 59 million hh
 - Adaptation, irrigation, reforestation



- ▶ **Coal phaseout (Germany)**
 - Building on existing social protection mechanisms, providing predictability and regularity
 - Combination of unemployment protection and support for labour market integration to provide reskilling



- ▶ **Strategy to Combat Energy Poverty (Spain)**
 - Combining protection of vulnerable households and energy-efficient housing
 - Reinforced by IMV/guaranteed minimum income scheme



Germany Electric Vehicles Apprenticeship Program 'Faculty 73'

- the car industry employs 830,000
- 1.3 million indirectly.
- Digital & electric switchover vary from 180,000 to 288,000

Bangladesh Gramen Shakti 'Solar System'

- 1.8 million systems installed
- 150,000 Jobs created

Skills training



Policy recommendations

1. Design Just Transition policies **ex-ante** to accompany climate policies
2. **Biggest bang for the buck**: E.g Africa focus on agriculture and forestry, biomass and renewable energy
3. Develop **skills training system**
4. Extend **social protection**
5. Fiscal neutral **progressive climate tax**

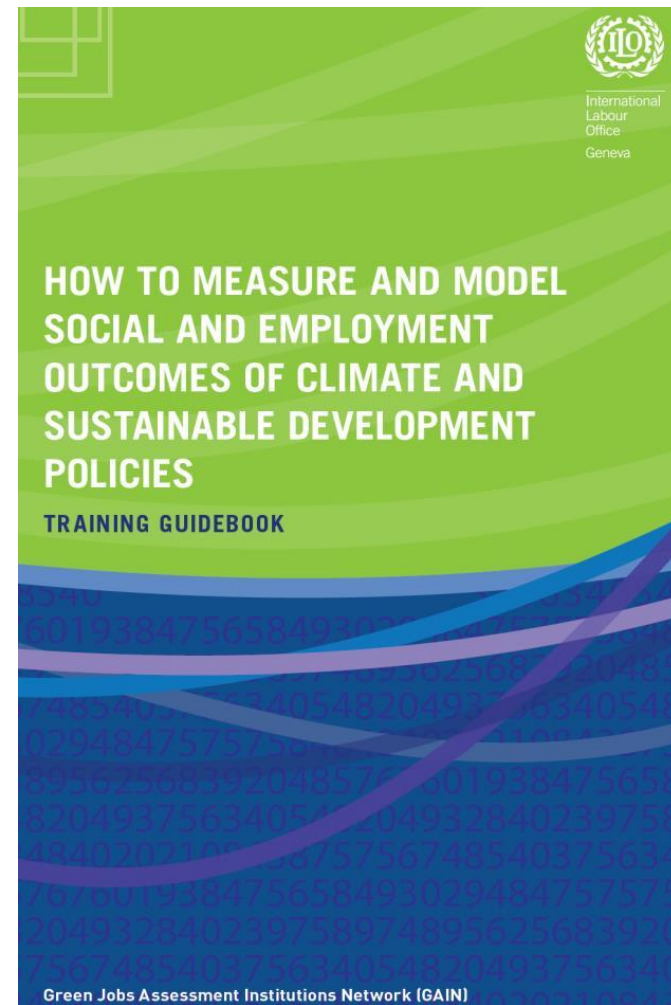


Research Network GAIN and ILO country support



National capacity building is key – ILO Assistance through the Green Jobs Assessment Institutions Network GAIN

- ✓ Open source methodology Training Guide published
- ✓ GAIN Network of 30+ Research Institutions
- ✓ Capacity building of Government & national institutions
- ✓ GAIN Training Hubs in Pretoria and Abidjan
- ✓ To build national models for better climate policy



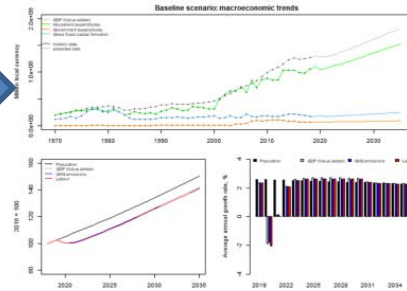
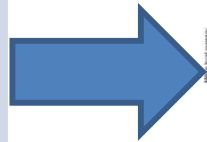
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