



"An Assessment of Just Transition and Climate Change among Trade Union Members in Tanzania Mainland"







Preface

On behalf of the Trade Union Congress of Tanzania (TUCTA), I would like to express our deepest gratitude for your invaluable support in conducting our recent assessment study on just transition and climate change.

Your contribution, whether it was financial assistance, technical expertise, or sharing of resources, was instrumental in enabling TUCTA to gather crucial data and perspectives from Tanzanian trade union members. This information will be vital in informing our strategies and advocacy efforts as we navigate the challenges and opportunities presented by climate change.

The success of this study would not have been possible without your unwavering commitment to empowering trade unions in the fight against climate change and ensuring a just transition for workers. We are particularly grateful for your moral, financial and technical support. TUCTA looks forward to continuing our collaboration with EATUC in promoting a sustainable future that prioritizes the well-being of workers across East Africa.

Thank you once again for your exceptional support.

Hery Mkunda Secretary General -TUCTA





Executive Summary

This report explores the perspectives of Tanzanian trade union members on just transition and climate change. The survey, conducted with 106 respondents from mainland Tanzania, sheds light on their understanding of these issues, concerns, and desired approaches.

Key Findings:

- Awareness: While awareness of climate change is high among respondents, knowledge of the concept of "just transition" is less widespread.
- **Concerns:** Members expressed concerns about potential job losses and economic hardship due to climate action.
- **Priorities:** Ensuring job security, access to green skills training, and a strong social safety net emerged as key priorities for a just transition.
- **Support for action:** Despite concerns, a majority of respondents expressed support for climate action if it is accompanied by measures to protect workers' rights and livelihoods.

This research provides valuable insights for policymakers, trade unions, and civil society organisations working towards a just transition while combating the effects of climate change in Tanzania. A smoother and more equitable transition to a sustainable future can be achieved by addressing workers' concerns and prioritising their needs.





Abbreviations

TUCTA	Trade Union Congress of Tanzania
CWT	Chama cha Walimu Tanzania - Teachers Trade Union
TALGWU	Tanzania Local Government Workers Union
TUGHE	Tanzania Union of Government and Health Workers
TUICO	Tanzania Union of Industries and Commercial Workers
TAMICO	Tanzania Mining and Construction Workers Organization
DOWUTA	Dock Workers Union of Tanzania
COTWU(T)	Communication and Transport Workers Union of Tanzania
TPAWU	Tanzania Plantation Agriculture Workers Union
TASU	Tanzania Seafarers Union
TEWUTA	Telecommunication Workers Union of Tanzania
TRAWU	Tanzania Railway Workers Union
RAAWU	Research and Allied Workers Union
CHODAWU	Conservation Hospitality and Domestic Workers Union
EATUC	East African Trade Union Confederation
JT	Just Transition
CC	Climate Change
TVET	Technical Vocation Education Training
PMO LYED	Prime Ministers Office Labour Youth Employment and Persons with
	Dis Abilities
HR	Human Resources
OSH	Occupation Safety and Health





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Context

Climate Change and Just Transition in Tanzania

Tanzania, like many developing nations, faces a complex challenge: tackling climate change while ensuring a smooth and equitable transition for its people.

The threats of climate change include:

- **Increased droughts and floods:** These disrupt agricultural production, leading to food insecurity and economic hardship.
- Rising sea levels: This threatens coastal communities and infrastructure.
- Extreme weather events: More frequent and intense storms can cause damage to property and loss of life.
- **Impact on health:** Changes in weather patterns can increase the spread of diseases like malaria and dengue fever.

Despite different mitigation efforts to combat climate change by different stakeholders, there are still concerns about having a just transition for workers amidst current climate change interventions.

The Just Transition Concerns include:

- Job losses: Transitioning away from carbon-intensive industries like fossil fuels could lead to job losses in these sectors.
- Lack of skills: Workers may need new skills to participate in the green economy.
- **Unequal burden:** The transition could disproportionately impact workers communities.

However, TUCTA is concerned about how different transitions affect the future of Tanzanian workers in the world of work. This is by advocating for workers' rights during the transition and ensuring social protection.

This research report will answer five key questions on the situation of climate change and just transition to workers in Tanzania. The questions have been highlighted below:

- a. What is the level of knowledge of trade union members on just transition and climate change?
- b. What are the trade union interventions on Just Transition & Climate Change?
- c. What are the impacts of the transition to a low-carbon economy on workers?
- d. What are the impacts of the transition to a low-carbon economy on communities?
- e. What are the aspects of equity and justice in the transition to a low-carbon economy?





Methodology

The study employed purposive sampling where At least 100 trade union members from across TUCTA affiliates were targeted to be sampled.

Data was collected both physically and through online surveys. The questions were translated into Kiswahili. The whole process of data collection took 41 days. Analysis has been done using a variety of tools STATA, SPSS, Word cloud.

Survey Results and Analysis

This section has explained finding in two dimensions, descriptive analysis and cross section analysis. Descriptive analysis has explained finding is a simple tally expressing the extent of responses that agreed or disagreed to a specific prompt of the question. Cross sectional modeling has proceeded further to try to determine the causal relationship between the generated variables.

Descriptive Analysis

A total of 103 (97%) respondents were willing to respond to the survey while 3 (3%) of the respondents declined to participate in the survey as shown in the figure below. The survey was automated to proceed with the 97% of the respondents who accepted to participate in the survey.





In terms of gender, 74% of the respondents were male while 26% of the respondents were female. CWT and TRAWU had the highest number of male respondents with each having a total of 14 respondents while TPAWU and TUGHE had the highest number of female respondents with 4 respondents each. TRAWU had no female respondents.





In terms of gender gap which was calculated as a difference between the number of female and male respondents (number of female respondents in each affiliate). TRAWU had the highest gender gap of 14 and CWT had the highest gender gap of 10. TAMICO, TPAWU and TEWUTA had a positive gender gap.



Figure 2: Respondents by Gender.



Figure 3: Breakdown of Responses by Affiliates Gender





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Figure 4: Gender Gap

The participants had an average age of 38 years with the highest being between 60 to 65 and the lowest being between 18 and 20 as demonstrated in the figure below.



Figure 5: Distribution of Age of the participants.

In terms of geographical distribution, Dar Es Salaam had the highest number of 48 respondents followed by Dodoma, Kigoma and Morogoro with 6 respondents each as shown in the map and the table below. There are regions which had no responses for example Mara and Kagera.





Responses by Region



Map: Innocent John • Source: TUCTA Survey • Created with Datawrapper

Figure 6: Geographical Distribution of Respondents.





Table 1: Table of distribution of the respondents.

Region	Number of Responses
Dar Es Salaam	48
Dodoma	6
Kigoma	6
Morogoro	6
Arusha	4
Lindi	4
Tanga	4
Mbeya	3
Geita	2
Iringa	2
Kilimanjaro	2
Mtwara	2
Pwani	2
Singida	2
Njombe	2
Mwanza	1
Manyara	1
Katavi	1
Ruvuma	1
Shinyanga	1
Simiyu	1
Songwe	1
Tabora	1

95% of the respondents were trade union members who are affiliated with TUCTA while 5% were not trade union members affiliated with TUCTA. The 5% who were not trade union members were automatically excluded from the survey so as not to contaminate the sample. CWT had the highest number of respondents just as shown in the figure below.





5. Je, wewe ni mwanachama wa Vyama vya Wafanyakazi vilivyokatika mwamvuli wa TUCTA?



Figure 7: Status of trade union membership



Figure 8: Breakdown of respondents by affiliates.

44% of the participants responded that there are no climate change programs within their respective affiliates. 32% confirmed that there are climate change programs organized by their affiliates while 24% were not sure about the availability of climate change programs within their affiliates.





7. Je kuna programu yoyote inayohusu maswala ya tabia ya nchi/ mabadiliko ya mazingira (climate change) kwenye chama chako?

98 Responses		
		24%
Ndio	31	32%
🗕 Hapana	43	
 Sijui 	24	
		44%

Figure 9: Are there programs on climate change organized by Trade Union affiliates?

The survey then proceeded to introspect the institutions that organized previous climate change programs. A total of 30 institutions were identified by the respondents for having organized climate change training and programs. The institutions have been listed below.

Table 2: Institutions that have organized climate change engagements.

No	Which institution organized the climate change training?
1	IUF
2	PSI/FES
3	N/A
4	PSI
5	RAAWU
6	Wizara ya Kilimo
7	Semina ya viongozi na waajiri , iliandaliwa na RAAWU HQ
8	International Transport workers federation (ITF)
9	EATUC
10	PSI, FES
11	DTDA, EATUC na Chuo cha Mazingira DSM
12	TUCTA
13	ACC-PROJECT, LDFS na DARCA





14	TUCTA
15	TUGHE
16	Public Service International (PSI)
17	CHODAWU
18	TUICO
19	ТМА
20	RAAWU
21	FES na IUF
22	IUF
22	TUICO
23	Yakuzuia umwajikaji mafuta baharini na pwani yote tanzania
24	Sikumbuki siku nyingi
25	DMI
26	Dar es salaam maritime institute
27	The Jane Goodall institute.
28	IndustriAll Global Union na FES Tanzania
29	Sikumbuki shirika lisilo la kiserikari ilikuwa Njombe 2015
30	UNITED NATIONS
31	RAAWU





68 % of the respondents have never participated in any climate change program/training before while 32% participated in previous climate change programs.

8. Je ulishawahi kushiriki kwenye mafunzo au warsha yoyote ya mabadiliko ya tabia nchi (climate change)?



Figure 10: Participation in Climate Change Programs.

69% responded that there are no interventions by their trade unions to combat climate change while the 31% remaining confirmed that there are interventions by their trade unions to combat climate change. This means most of TUCTA's affiliates does not have programs on climate change, there is urgent need for unions to mobilize resources for training and awareness raising.

10. Je kuna shughuli zozote zinazofanywa na chama chako cha wafanyakazi kupunguza athari za mabadiliko ya tabia nchi?



Figure 11: Trade Union Interventions to Combat Climate Change.

In terms of the kind of interventions by unions on climate change. Most of the participants identified interventions like planting trees and training programs on climate issues as seen in the figure below.





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Figure 12: Initiatives done by Trade Unions to combat climate change.

54% confirmed that their sectors were adversely affected by climate change whole 20% declined that there were negative effects of climate change in their sectors. 25% do not know if their sectors are affected by climate change.

12. Je kuna athari zozote za mabadiliko ya tabia nchi katika chama chako cha wafanyakazi / sekta ya kazi uliyopo?



Figure 13: Status of effects of climate change in respective sectors.





Participants identified floods and loss of jobs as a major effect of climate change on their sectors.



Figure 14: Effects of climate change in the respective sectors.





49% of the respondents have never heard of the word just transition while 28% of the respondents have heard of the word just transition. 23% are not sure on whether they have heard of the word just transition.

14. Je ulishawahi kusikia neno "just transition" au mabadiliko ya haki?



Figure 15: Knowledge of Just Transition

37% identified that there no efforts to reskill workers amidst technological changes while 31% confirmed that there were efforts to reskill workers amidst technological changes. 32% were not sure of their responses.

16. Je kumekuwa na jitihada zozote za kukuza ujuzi au kupunguza athari za kupoteza kazi kutokana na mabadiliko ya teknolojia za uzalishaji?



Figure 16: Presence of efforts to combat reskill workers amidst technological change.





48% identified that there are no skills development programs or social protection benefits set in place to support workers affected by technological changes in workplaces. 37% were not sure if there are such programs in place. 15% responded that there are TVET and social programs in place to support workers affected by this transition.

18. Je kuna programu zozote za kukuza ujuzi au kutoa fidia kwa wafanyakazi walioathirika na mabadiliko ya teknolojia za uzalishaji mahala pa kazi?



Figure 17: Skills development programs and social protection for workers affected by transitions at workplaces.

43% of the respondents believe that employers do not consider the effect of technological changes at workplaces on the surrounding communities. 20% responded yes and 37% were not sure.

20. Je waajiri huzingatia athari za mabadiliko ya kiteknolojia za uzalishaji kwa jamii zinazozunguka maeneo ya kazi?



Figure 18: Do Employers consider the effects of production technological changes on surrounding communities?





41% were not sure if there were measures set in place to support communities affected by technological changes at workplaces. 39% denied if there were measures set in place to support communities affected by technological changes at workplaces. 20% affirmed that there were measures set to support such communities.

21. Je kuna hatua zilizowebwa kusaidia jamii zinazoathiriwa na mabadiliko ya teknolojia za uzalishaji mahala pa ka. ^{More Details}



Figure 19: Measures in place to support communities affected by transitions.

46% denied that there were no consultations/dialogues with employers before adopting a particular technology at the workplace. 28% responded yes and 27% were not sure.

22. Je kumekuwa na ushirikishwaji wa wafanyakazi katika michakato ya maamuzi ya mabadiliko ya teknolojia za More Details venye maeneo ya kazi?



Figure 20: Inclusion and consultation of workers in the adoption of technology.





33% of the respondents replied that there is no equity and justice for marginalized workers faced by transitions. 34% responded yes and 34% were not sure.

23. Je mabadiliko va mifumo ya uzalishaji unazingatia haki na usawa kwa wafanyakazi wote wakiwemo wa ^{More Details} wafanyakazi wenye ulemavu?



Figure 21: Promotion of equity and justice in transitions to marginalized workers.

Cross-Sectional Analysis and Modeling

Data collected from the survey was cross-sectional data¹ which is denoted by letter i. Therefore, a cross-sectional data model was developed from the variables of interest. The objective of the model is to determine the causal effects of climate change in sectors as a factor of different variables.

Most of the variables in the study were dummy variablesⁱ except for the variable age which took different values. Therefore, to quantify them, they were assigned a specific set of

Examples of cross-sectional data:

- A survey of consumer preferences for different brands of cereal
- A study of the political views of voters in a particular election
- A snapshot of the unemployment rate in different countries
- A census that collects data on the demographics of a population

¹ Cross-sectional data is a type of data that is collected from a large group of individuals or units at a single point in time. It's like taking a snapshot of a population at a specific moment.

Imagine you want to understand the relationship between income and education level. You could survey 1,000 people and collect data on their income and their highest level of education (e.g., high school diploma, bachelor's degree, etc.). This data set would be considered cross-sectional because it captures information about each person at one point in time.

Cross-sectional data is often used in social sciences, economics, and marketing research. It can be a valuable tool for understanding the characteristics of a population and identifying relationships between variables. However, it is important to note that cross-sectional data cannot be used to study how variables change over time. For that, you would need to use longitudinal data.





numbers that range between 0 and 2. For example the response yes = 2, I don't know = 1 and no = 0. This was done mainly for estimation purposes.

Sectoral effects of climate change model

(Sectoral effects of climate change) i = f (Age, Trade union membership, programs on JT and CC, training on CC & JT, skills development programs, social protection schemes, social dialogue with workers, inclusion of special groups of workers, knowledge on JT, support mechanisms for affected workers, employers' consideration to effects of the type of technology) i + (e)i

Assumption of the model:

1. Sectoral effects of climate change are a function of the explanatory variables² listed above.

² Explanatory variables, also known as independent variables or predictors, are the factors you use to explain or predict changes in another variable in a research study or statistical model. They are the building blocks for understanding how things work!

Key points about explanatory variables:

- **Causal Influence (Expected):** Explanatory variables are believed to have a causal influence on the outcome variable (also known as the dependent variable or response variable). This means that changes in the explanatory variable are expected to cause changes in the outcome variable.
- **Manipulation or Observation:** In experiments, researchers often manipulate the explanatory variable to see its effect on the outcome. For instance, they might test different fertilizer types (explanatory variable) to see how they affect plant growth (outcome variable). In observational studies, researchers simply observe the natural variations in both variables.
- **Examples:** Explanatory variables can be anything you can measure or categorize that might influence the outcome. Here are some common examples:
 - **Social Sciences:** Age, income level, education level, personality traits
 - Medicine: Dosage of a drug, type of treatment, presence of a risk factor
 - Marketing: Price of a product, advertising campaign, brand image
- **Multiple Explanatory Variables:** Often, you'll use several explanatory variables in a model to account for the complex factors affecting the outcome.

Here's how explanatory variables differ from response variables:

Feature	Explanatory Variable	Response Variable
Role	Explains or predicts the outcome	The outcome being explained or predicted
Manipulation (Experiments)	Manipulated by the researcher	Measured or observed
Example	Price of a house	Selling price of the house

Understanding explanatory variables is crucial for:

- **Identifying cause-and-effect relationships:** By studying how changes in the explanatory variable affect the outcome variable, you can gain insights into causal relationships.
- **Building predictive models:** Explanatory variables are the foundation for creating models that can predict future outcomes based on current conditions.





- 2. There is a linear relationship between the dependent variable and independent variables.
- 3. The disturbance term or error term considers all variables that may affect the dependent variable but were not included in the model.

A simple linear regression was run using statistical software; the results are depicted in the table below.

reg EffectsofCCinyoursectortra Age TradeUnionMembership ProgonJTandCCintradeunion TrainingonJTandCC TradeUnionAc
 tivitiesonJTand KnowledgeonJT Skillsdevelopmentprogramstos Socialprotectionschemestosup Employersconsiderationto
 thee Supportmechanismsforsurroundi Inclusionofworkerssocialdi Inclusionofvulnerablegroupso
 note: TradeUnionMembership omitted because of collinearity

Source	SS	df	MS	Number of obs	=	98	
Model Residual	12.3198115 49.5679436	11 86	1.11998286 .576371438	Prob > F R-squared	=	0.0445	
Total	61.8877551	97	.638018094	Adj R-squared Root MSE	=	0.0966 .75919	

EffectsofCCinyoursectortra	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Age	.0083749	.0079411	1.05	0.295	0074116	.0241613
TradeUnionMembership	0	(omitted)				
ProgonJTandCCintradeunion	.1624854	.1114293	1.46	0.148	0590287	.3839995
TrainingonJTandCC	.3400198	.2104838	1.62	0.110	0784081	.7584477
TradeUnionActivitiesonJTand	191706	.246549	-0.78	0.439	6818293	.2984172
KnowledgeonJT	0316226	.1067079	-0.30	0.768	2437509	.1805056
Skillsdevelopmentprogramstos	.1877567	.1143147	1.64	0.104	0394933	.4150067
Socialprotectionschemestosup	0939387	.1160412	-0.81	0.420	3246209	.1367436
Employersconsiderationtothee	0811472	.1287801	-0.63	0.530	3371537	.1748592
Supportmechanismsforsurroundi	0030897	.1379042	-0.02	0.982	2772341	.2710547
Inclusionofworkerssocialdi	.2235749	.1279342	1.75	0.084	03075	.4778998
Inclusionofvulnerablegroupso	2259202	.1171457	-1.93	0.057	4587981	.0069578
_cons	.8368866	.3447214	2.43	0.017	.151603	1.52217

Figure 22: Regression

(Effects of CC in your sector)i = (0.001 Age)i + (0.162 programs on JT and CC)i + (0.34 training on JT and CC)i - (0.19 trade union activities on JT and CC)i - (0.03 knowledge on JT and CC)I + (0.19 skills development programs)i - (0.094 social protection schemes)i - (0.08 employers consideration to the effects of the technology used)i - (0.003 support mechanism for communities/workers)i + (0.22 inclusion of workers in social dialogue)i - (0.226 inclusion of vulnerable groups)i + 0.84.

[•] **Making informed decisions:** By understanding the factors that influence an outcome, you can make better decisions in various fields, from marketing strategies to medical treatments.





From the figure above the regression results recorded a total of 98 observations with R squared³ of 0.1991 implying that the explanatory variable explains 91% the dependent variable.

The p values of the coefficient are above 0.05 indicating that the coefficients of the variable are not significant. This implies that the explanatory variable cannot concisely explain causal effects to the dependent variable.

Such a scenario may be caused by the fact that cross sectional data might not be used to well explain causal effects of climate change as a factor of the explanatory variable. Therefore, it implies that there is a need of using panel data which implies more resources and technical expertise to conduct such studies.

- **Proportion of Variance Explained:** Imagine the variation in your dependent variable is like a pie. R-squared tells you what portion of that pie slice is explained by the independent variables in your model.
- Values Between 0 and 1: R-squared values range from 0 to 1.
 - A value of **0** indicates the model explains **none** of the variation in the dependent variable. Your independent variables are not helpful in predicting the outcome.
 - A value of **1** indicates a **perfect fit**. The model explains **all** of the variation in the dependent variable. This is rare in real-world applications.
 - Values between 0 and 1 represent the **proportion** of variation explained, with higher values indicating a better fit.
- **Goodness-of-Fit Measure:** R-squared is a measure of **goodness-of-fit**. It tells you how well the regression line approximates the actual data points. A higher R-squared suggests a closer fit between the model and the data.

Important things to keep in mind about R-squared:

- Not a Perfect Measure: While R-squared is a valuable tool, it shouldn't be the only measure used to evaluate a model.
 - You can have a high R-squared with a misleading model if there's a lurking variable (an important factor not included in the model) that's influencing the results.
 - It's essential to consider other factors like the number of independent variables, sample size, and residual analysis to get a complete picture of the model's performance.
- Interpretation Depends on Context: The interpretation of a good R-squared value depends on the field of study.
 - In some fields, an R-squared of 0.8 might be considered excellent, while in others, it might be just average.

 $^{^{3}}$ R-squared, denoted by R² or r², is a statistical measure used in regression analysis to assess how well a model fits the data. It essentially tells you how much of the variation in the dependent variable (the variable you're trying to predict) can be explained by the independent variable(s) (the factors you're using to make the prediction) in your model.

R-squared:





```
. cor EffectsofCCinyoursectortra Skillsdevelopmentprogramstos
(obs=98)

Effect~a Skills~s

EffectsofC~a 1.0000

Skillsdeve~s 0.2043 1.0000

. cor EffectsofCCinyoursectortra KnowledgeonJT
(obs=98)

Effect~a Knowle~T

EffectsofC~a 1.0000

Knowledgeo~T 0.1222 1.0000
```

Figure 23: Correlation between effects of CC in the sectors and skills development programs

There is a weak positive correlation of 0.12 between skills development and the sectoral effects of climate change. This implies increasing skills development programs will have a positive effect on addressing climate change.

. cor EffectsofCCinyoursectortra TrainingonJTandCC (obs=98) Effect~a Traini~C EffectsofC~a 1.0000 Trainingon~C 0.2640 1.0000

Figure 24: Correlation between training and sectoral effects on climate change in sectors

There is a weak positive correlation of 0.26 between training and the sectoral effects of climate change. This implies increasing training programs will have a positive effect on addressing climate change.

. cor EffectsofCCinyoursectortra Inclusionofworkerssocialdi (obs=98) Effect~a Inclus~i EffectsofC~a 1.0000 Inclusiono~i 0.1696 1.0000

Figure 25: Corelation between effects of climate change with inclusion of workers in social dialogue.

There is a weak positive correlation of 0.17 between inclusion of workers in social dialogue and the sectoral effects of climate change. This implies increasing engaging workers through social dialogue will have a positive effect on addressing climate change.





Key Recommendations

From above research findings we have noted that the awareness and engagement of unions in climate change/just transition is still low, majority of members have inadequate knowledge about climate change and how green economy is all about, in order to improve the current situation and ensure involvement of unions in climate change/just transition processes the following recommendations should be implemented,

No	Type of	Recommendation
	Recommendation	
1	Research Findings	 More Surveys at sectoral level are needed to inform decision makers the required interventions on climate change and just transition with its effects on employment.
	recommendations	 There is a need of policy coherence between employment and climate change issues in Tanzania. Currently the climate change portifolio falls within the Vice President Office Environment while labour falls within the Prime Minister's Office Labour Youth Education Disability. There is a need to have a climate change desk at the PMO LYED, trade unions, employers. There should be a legal and regulatory framework for just transition. The current labour law (Employment and Labour Relations Act of 2004) should recognize issues on just transition. Social safety nets: Social protection schemes need to support workers who lose their jobs due to the transitions at workplaces. Inclusion of TUCTA in National Climate Change Committee is critical, this will enhance workers participation in decision making processes, the currently committee composition has only government institutions and represetatives.
3	Trade union interventions	 Awareness campaigns: TUCTA in collaboration with its affiliates need to mobilize resources to raise awareness to workers in both formal and informal economy on climate change/just transition to





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	ensure effectively worker's involvement in climate
	change and transition process.
	- Formulation of strategies on how TUCTA and its
	Affiliates will engage on climate change/ just
	transition at sectoral, national, regional level and
	global level.
	- TUCTA in collaboration with its affiliates must
	promote the inclusion of specific clauses in CBAs
	which protecting workers and specific measures
	implemented at workplace regarding climate
	change.
	- Establishing working relations with education
	institutions this will promote the development of
	training programs and training curriculums for
	workers
	- TUCTA and its Affiliates should organize more
	members from formal and informal economy
	including digital platform workers and sectors
	nromoting green economy. The shift towards a
	green economy will create new jobs in renewable
	operative operative officiency and sustainable
	arrighture as means to sustainable amployment
	Establishment of Climate Change desks and
	- Establishment of climate change desks and
	TUCTA's Affiliates who will be responsible for
	rocias anniates who will be responsible for
	coordination climate change programs at sectoral
	- Skill development programs: Irade Unions in
	collaboration with employers need to plan together
	on how to equip workers with relevant skills needed
	for green jobs.
	- Internal policies on climate change are needed in
	trade unions. In as much as there are workplace
	policies for example OSH policies, HR policies trade
	unions need to walk the talk. There should be a
	specific strategy in CC and JT with trade unions.
	- Lobbying for the inclusion of trade unions in
	national committees and other working groups on
	climate change. Also, TUCTA and its Affiliates to
	ensure they participate in national discussions,
	forums and other platforms





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		 Lobbying for decision makers (MPs) in order to push trade union agendas regarding climate change/just transition TUCTA and its Affiliates should build alliances with other likeminded organization working on climate change/ just transition at national level, regional level and global level (identifying key actors/ champions on climate change/ just transition) Linking with Cooperation Partners with interest with climate change/ just transition agenda to support trade union work
4	Social dialogue	 Social dialogue institutions such as Labour Economic Social Council (LESCO) should initiate dialogues on just transition. Regional and International trade union cooperation: TUCTA needs international support in terms of finance and expertise to advocate for a just transition. TUCTA, Employers Oganization and Government to work in tripartite on skills development including curriculum development for TVET, Colleges and University in order to equip students with new technology

Figure 26: Summary of Recommendations

Appendices

Survey Questions

- PART A: Demographic Questions.
 - 1. Gender? (MALE/FEMALE)
 - 2. Age? (.....)
 - 3. Region? (.....)
 - 4. Trade Union Member? (YES/NO)
 - 5. If YES in the question above to which Trade Union, are you affiliated to? (CWT, TALGWU, TUGHE, TUICO, TAMICO, COTWU(T), RAAWU, DOWUTA, TRAWU, TPAWU, TASU, TEWUTA, CHODAWU)

PART B: Trade Union Interventions on Climate Change

- 6. Is there any program on climate change in your union?
 - a) Yes
 - b) No





- c) I don't know
- 7. Have you ever participated in any training/workshop on climate change?
 - a) Yes
 - b) No
- 8. If YES in the question above, when was the program organized and who organized the program? (Open Question)

.....

- 9. Are there any initiatives done by your union to address climate change?
 - a) Yes
 - b) No
 - c) I don't know
- 10. If Yes in the question above. What are those initiatives done by your union to address climate change?

.....

- 11. Are there climate change impacts experienced in your union/sectors? (YES/NO/I DON'T KNOW)
- 12. If YES in the qn above, briefly describe the impacts of climate change in your union/sector. (open question)

PART C: Worker's knowledge on Just Transition.

- 13. Have you ever heard of the term "Just Transition"? (YES/NO/NOT SURE)
- 14. If YES in the question above, can you please briefly explain on the term "just transition"? (OPEN QUESTION)

.....

PART D: Impact on workers.

15. Have there been workplace initiatives to address potential job losses and skills gaps that could result from transition to a low carbon economy? (YES/NO/NOT SURE)

16. If YES in the above question, can you highlight the initiatives? (OPEN QUESTION)

.....

- 17. Are there retraining programs and social safety nets in place to support workers during the transition to low a carbon future and green economies? (YES/NO/NOT SURE)
- 18. If YES in the above question, can you highlight the programs in place? (OPEN QUESTION)

.....





PART E: Community Impacts.

- 19. Do employers consider the potential negative impacts on communities that rely on carbon intensive industries during green transition? (YES/NO/NOT SURE)
- 20. Are there measures set in place to support these communities during the transition? (YES/NO/NOT SURE)

PART F: Stakeholder Engagement.

21. Are workers being involved before adopting a particular low-carbon technology that will be used in production? (YES/NO/NOT SURE)

PART G: Equity and justice.

22. Do transitions of production practices promote equity and justice for all workers including marginalized groups which may be disproportionately impacted by the transition? (YES/NO/NOT SURE)





Here's a breakdown of key points about dummy variables:

Purpose:

• You can't directly include categories like "gender" or "education level" in a regression equation. Dummy variables help translate these categories into numerical values suitable for analysis.

Function:

- **Represent Group Membership:** Each dummy variable typically represents a single category. The value of 1 indicates belonging to that category, while 0 indicates not belonging.
 - For example, you might have a dummy variable for "high school diploma" (1 = diploma, 0 = no diploma) or "gender" (1 = male, 0 = female).

Applications:

- Regression Analysis: Dummy variables are commonly used in regression analysis to:
 - **Test for Differences Between Groups:** You can use them to see if there's a statistically significant difference in the dependent variable (what you're trying to predict) between different categories represented by the dummy variables.
 - Control for Confounding Factors: If a categorical variable might influence the relationship between your independent and dependent variables, including a dummy variable allows you to account for its effect.

Examples:

ⁱ A dummy variable, also known as an indicator variable or binary variable, is a special type of variable used in statistics and econometrics. It takes on only two values, typically 0 and 1, to represent different categories or groups within your data.

[•] Encode Categorical Data: Dummy variables allow you to incorporate qualitative information (data describing categories) into quantitative models (models that use numbers).





- Effect of Education on Income: You could use a dummy variable for "college degree" (1 = degree, 0 = no degree) to see if having a college degree is associated with higher income.
- Impact of Location on Sales: A dummy variable for "city" (1 = specific city, 0 = not that city) could help analyze if sales differ significantly between that city and other locations.

Additional Points:

- **Multiple Categories:** If you have a categorical variable with more than two levels (e.g., education level with high school, bachelor's, and master's degrees), you'd typically create multiple dummy variables (one for each level except for a reference category).
- Interpretation: The coefficient of a dummy variable in a regression model tells you how much the dependent variable changes (on average) when moving from the reference category to the category represented by the dummy variable (assuming all other factors are constant).