



Applying Climate Economy Models to Support Economic Diversification and Job-Rich Resilient Growth – A case study from Nigeria

1. Submitting organization:

GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH

2. Short description of the study:

Economic diversification is essential for enhancing climate resilience and reducing economic vulnerability. Many countries in the five regions of the UN rely heavily on the export and production of a narrow range of products. To achieve a just transition and sustainable economic diversification, it is crucial to build on sound socioeconomic assessments for proposed policies. These assessments should integrate future climate risks to the economy and propose job-rich and resilient economic activities.

This study focuses on utilizing a proven analytical approach developed by GIZ and its partners. The approach allows for the systematic integration of expected national development, economic growth and employment scenarios as well as relevant national climate hazards. The focus is on climatic changes that pose the most significant risk from the perspective of the national economy. This complements existing climate impact studies by translating climate-induced changes into potential effects on the economic system and the people who depend on it for their sustainable livelihood and economic welfare.

Understanding climate effects at the macro-economic level can assist in analysing climate change effects on the demand and supply of goods and services, effects on producers and consumers, and overall effects on the entire economy. This analysis will help to identify new and resilient economic activities while prioritizing socioeconomic factors such as job creation.

The proposed study builds on GIZ's activities in Georgia, Kazakhstan, and Vietnam, where country-specific Climate-Economy models have been developed using national data and expertise. These models provide key information for policymakers. First, the modelling results show how different climate hazards impact the economy and sector specific employment patterns up to the year 2050. Second, they illustrate the economy-wide effects of investments in various adaptation and mitigation measures. This approach is currently being scaled up within GIZ in various partner countries, and in the context of this study, we are proposing to focus on our activities on economic diversification in Nigeria. In Nigeria, GIZ is supporting the enhancement of a Computable General Equilibrium (CGE) model with a climate damage database. This initiative focuses on economic diversification to reduce the country's dependency on a narrow range of products. The CGE model will help in understanding the macroeconomic impacts of climate change and the benefits of various adaptation and mitigation strategies. By integrating climate damage data, the model will provide a comprehensive view of how climate hazards can affect Nigeria's economy up to 2050. This will enable policymakers to make informed decisions that promote both climate resilience and economic growth. The project in Nigeria also aims to identify new and resilient economic activities and identifying investment initiatives, especially in the blue economy, agriculture and infrastructure sectors while prioritizing socioeconomic factors such as job creation.



By collaborating with the UNFCCC Katowice Committee, we aim to develop a detailed case study that showcases the effectiveness of our analytical approach and assesses the impacts of our initiatives in Nigeria and other partner countries. This collaboration will provide valuable insights and best practices that can be applied to other regions facing similar challenges.

3. *Geographical Region:*

Africa - Nigeria

4. *Area of climate policy:*

Fiscal policy; Economic and Climate Policies;

5. *Short description of the policy(ies):*

This study will develop evidence-based policy recommendations to diversify the Nigerian economy based on sectoral expert input and modelling outputs. This policy will include a decrease in oil production with gas as a transitional fuel and potentially an increase in Services, Entertainment and Technology sectors encouraged by government incentives. These incentives can include tax credits, input subsidies or other instruments, to encourage the increase of investments in more climate resilient and low carbon sectors. The modelling exercise will produce assessments of various relevant policies and it will particularly assess the job creation potential to support a job-rich diversification of the economy. The study on Nigeria would serve as a best practice example for other countries that rely on the production and export of a narrow range of products.

6. *Work programme Area to be covered by the Study:*

Economic diversification and transformation;

7. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the impacts to be studied:*

Social; Economic;

8. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the type of assessment (Qualitative/Quantitative/Both):*

Both

9. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the methodology or tool used for impact assessment:*

The study will utilize the enhancement of an existing Computable General Equilibrium (CGE) model at the Federal Ministry of Budget and Economic Planning of Nigeria to strengthen the integration of social, economic, and environmental concerns into the Nigerian Macroeconomic Policy. It also intends to introduce more detailed sectoral analysis and conduct simulations to identify new and low-carbon economic sectors. Interviews with



relevant sectoral experts and policymakers will be conducted to support the validity of the modelling inputs and outputs.

10. Status of proposed case study:

Case study is in progress or partially completed and will be continued in collaboration with the KCI

11. If the case study is completed and published, link to the case study:

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12. Elaboration on how the submitter would contribute to the development of the case study:

GIZ will support the facilitation in the country, and it will support in quality assurance through HQ.

GIZ will provide up to 10.000 EUR for hiring an external consultant to draft the study and to conduct interviews and do desk research.