

Socioeconomic Impacts of Climate Change and Seasonal Migration in the Lake Region

...Closing the gap of emerging challenges to achieving Universal Health coverage and Demographic Dividend in Africa...

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Abstract

The study set-out to accomplish the SDG goal 11 and 13 objective of sustainable resilient cities and Climate change while attempting to underscore the socioeconomic implications of seasonal migration trend and policy gap on diversity, disaster response and emergency preparedness in lake-chad region. The study used secondary sources: The findings were that, refusal to adopt and mainstream a regional strategic framework and policy guideline on sustainable environmental migration resettlement plan and inclusion is the reason for huge demographic challenges and poor human capital development. Based on these findings, recommendations were that, Policy makers, Researchers and Technical Partners adopt a long term uniform sustainable environmental migration resettlement plan, Disaster mitigation, inclusion, resilience assessment and legal framework to facilitate cooperation and intercultural dialogue towards leveraging human capital, sustainable economic growth as well as harnessing demographic dividend in Africa.

Introduction

Climate change and seasonal migration is an essential component of Africa's demographic and population dynamics. Although, almost rarely reflect in public policy framework due to increasing complexity in migration pattern and institutional challenges especially in developing countries. Significantly, there is an existing correlation between passing tipping points in climate change and unpleasant consequences in climate system tending to a new stable state that may cause major global crisis such as sudden onset of environmental degradation, draught, excessive warming, diseases outbreak, irregular migration and force displacement of people who are directly dependent on the environment for livelihood. However, climate change and seasonal migration is increasingly prominent phenomenon for the understanding of global dynamics and its impact on human health. More so, migrant population is heterogeneous and has a broad range of health, sociocultural and economic needs. For instance recent IPC report suggests some extreme events will become more intense as global temperature warm. This article tend to move forward understanding of seasonal migration trends, economic implication, innovations and challenges to accessing universal health coverage and demographic dividend in the era of integrated SDGs in Africa.

Impact of Climate Change and Seasonal migration trends on livelihood in Sahel African Region:

Africa is one of the continent of mass displacement and migration due to seasonal fluctuations prominently driven by climate related occurrence ranging from flood, excessive warming, drought, earthquake and landslides etc. resulting in shortage of farm land. Hence, viable means of livelihood, shelter, portable drinking water, irrigation, healthcare and education resources and facility becomes the ultimate determinant of PUSH and PULL factor for seasonal migration in the Sahel African Region.

According to IOM report 2018 on environmental changes impact on human livelihood and mobility shows that precipitation in the Sahel are slowly increasing

and becoming variable leading to the frequent occurrence of drought and floods. At the same time, rapid population growth has led to the intensification of cropping, deforestation and overgrazing contributing to land degradation. However, despite an increase in the scale of agriculture in the region, food insecurity still affects millions. For instance as of June 2016, 4.6 million people were severely food insecure in the lake Chad Basin, with number expected to increase cumulatively. Millions of people in West and central Africa depend on Lake Chad, however the Lake Chad volume has decreased by 90 percent in area in the last 40 years due to increased drought and related human activities such as irrigation withdrawal. Therefore the complex and Inter-connected environmental changes are contributing factor to cyclical rural- urban mobility within countries and across the borders in the region

Table below shows causes of PUSH and PULL factor in the Sahel African Region

PUSH	PULL	DEVELOPMENT INDICATOR	IMPACT
Poor environment and low Agricultural productivity	Better Environment and improve productivity	Agriculture and Economic	Poverty, Hunger, food insecurity
Excessive warming	Better climate and safety	Socio-economic	Poverty and insecurity
Natural disaster and loss of shelter	Resettlement	Socio-economic and socio-cultural	Poverty, domestic violence
Unemployment	Job prospect	Economic	Poverty and social inequality
Poor human resource	Capacity development	Education	Poor manpower
Violence and insecurity	Social protection	Gender and Human right	Human right abuse and social injustice
Poor healthcare	Quality and accessible healthcare	Health	High mortality

Conserving Heritage and Building resilient Cities in the Lake Chad Region:

The imperative of growing urbanization of our planet with the aim of making cities and human settlement inclusive, safe, resilient and sustainable, represent a crucial approach to recovering the character and identity of our environment. Well designed and managed public spaces can also encourage healthy lifestyles, foster public safety, measure economic value and contribute to ensuring environmental sustainability of cities by promoting biodiversity, natural resource, safe-guard cultural landscapes and revitalized urban green areas.

Revitalization of the Lake Chad Basin for Sustainable Economic Growth

The Socio-economic and environmental challenges arising from the shrinkage of the lake chad is relatively causing threat to livelihood, induced insecurity and regional cooperation in sub-Saharan Africa. The Lake Chad basin which is shared by Algeria, Cameroon, the central Africa Republic, Chad, Libya, Niger, Nigeria and Sudan is a large entity representing about 8% of the total size of the African Continent with a population estimated at 40 million inhabitants according to statistics of 2010. It is an epitome of productivity, food security and wealth to the people of the region and beyond. It is also an essential water resource for fishermen, livestock farmers and source of water supply for drinking and other economic activities of the riparian countries, most of them among the poorest in the world. Despite poverty and security challenges the lake also offers a unique social and cultural environment contributing to the rich diversity of the region. However, the shrinkage of the Lake Chad basin is a source of insecurity, instability and loss of livelihoods arising from drought, variability in size due to both human pressure and adverse effect of climate change. Its size has reduced from 25,000km² in the 1960s to a total surface area of 5000km² in 2013 following an exceptional Improvement of the rainfall pattern. This task mobilized resource material from the integrated water resource management (IWRM, UNESCO), Inter-Basin water Transfer (IBWT) Financial water infrastructure in Africa and Lake Chad Basin Committee Charter underlining the link between environment, degradation, loss of economic opportunity, livelihood and security issues.

A review of the hydrology of the Lake Chad shows the wet and dry years before 1973

See table below:

Season	Estimated Years	Outcome/average Inflow
Wet (years)	Before 1973	30 -40km ³ per annum
Dry	Before 1973	20-21km ³ per annum
Lowest (Dry years)	1984	16km ³ per annum
Current(Dry year estimate)	2011	2km ³ per annum

The Figure below show different dimensions of drought and surface level of Lake Chad with relative effect on mankind



The key scientific and technical approach to revitalizing the Lake Chad

- ✓ The Scientific and Technical Approach to Saving the Lake Chad to Revitalize the Basin's Eco-system for Sustainable Irrigation System and Agricultural Productivity:

The Lake Chad basin has a huge and untapped socio-economic potential ranging from Agricultural lands, Fishery and pastoral potential, ground water, mining resources, hydrocarbons and tourism. This review underscores the need for global awareness on the socio-economic and environmental challenges arising from the shrinkage of the lake chad including threat to livelihoods, inducing insecurity with a view to developing a comprehensive program for action to save the lake from extinction thereby enhancing sustainable Security, water resource, irrigation system, livelihood, agriculture and food security towards sustainable development goals in the region. Approach must focus on the water resource development and management strategies in a crisis environment for sustainable development in the Lake Chad Basin as a paradigm of shift to guide new intervention approaches to achieve a more significant result sequentially structured as follows:

- Adoption and implementation of the Lake Chad Basin committee (LCBC) consensus on technical solutions towards safe-guarding and restoring Lake Chad by way of regulating the environment (eco-system) and sustainably improving the living conditions of the populations of the basin.
- Adoption of Ubangi to Lake Chad inter-basin water transfer and international diplomacy using solar river option.
- Adoption of Trans-Africa and Asia pipe-line (TAAP) and steadily recharging the Lake Chad for sustainable irrigation to improve Agricultural productivity.

- Adoption of environmental, social and cultural frame-work for the implementation of large water infrastructure.
- Adoption of Trans-boundary water diplomacy culture of peace and Lake Chad with international site status as biosphere reserve or world heritage site.

Closing policy gap on Climate change in lake-chad region

Therefore to accomplish the objectives of 'SDG 11 and 13' which aim to achieving resilient cities, human settlements, reducing disaster risks, mitigating the effect of climate change and promoting environmental sustainability in urban cities. The region must:

- Develop a post disaster assessment, emergency preparedness and mitigation plan and policy framework on climate change to rescue the ecosystem and conservation of important heritage such as museum, historic legacies, lives and spaces for intercultural dialogue as well as promoting human right education and knowledge sharing.
- More so, Policy makers should be equipped in all tiers of governance with basic information and tools relative to enhancing a uniform implementation of the national blue-print policy guideline and model for resilience of cities to climate change and natural hazard.
- Similarly, failure in urban planning models over the past decades call for cultural-sensitive sustainable urban development model in line with human rights principles and international best practices to inspire new planning and governance models that reduces urban sprawl and larger ecological

foot print of cities and with a view to build more compact, inclusive and resilient cities.

- The region must adopt and mainstream a regional strategic framework and policy guideline on Climate change and sustainable environmental migration resettlement plan to solve the huge demographic challenges and poor human capital development.
- Policy makers, Researchers and Technical Partners should adopt a long term uniform sustainable environmental migration resettlement plan to facilitate policy reformation, cooperation, inclusion and intercultural dialogue towards sustainable economic growth as crucial indicators to harnessing demographic dividend in the Lake Chad Region.

Conclusion: The paper strongly advocate the need for regional economic policy that explore key developmental issues with aim of tackling socio economic implication of climate change and seasonal migration as well as mainstreaming innovative health and social policy framework in accordance with global compact for migration towards harnessing demographic dividend in Africa.

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