Labour mobility and climate change: a scenario analysis

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Abstract: This paper examines the on-going challenges of climatic variations across the globe as it affects the movement of labor. Using exploratory methods it was discovered, from existing works, that labour migrants have been influenced by climatic conditions, either of the home location of the migrants or the destination. It was also discovered that the role of climatic variation is a moderating factor in this free flow of labour skills and that it is also a major factor of the process of Globalization. With the aid of a Scenario Network Map (**SNM**) the study projected the future of labour mobility, given the increasing occurrence and severity of climatic upheavals across the world. Two paths of action were identified and the resultant alternatives were highlighted. The scenario map concludes with possible alternative outcomes for actions taken today.

Keywords: Scenario Network Mapping, Labour Migrants, Climate Refugees, labour mobility

1 Introduction

The Industrial Revolution brought mankind a lot of benefits in terms of the ability to conquer his limitations, natural and temporal. Man became proficient in running faster than wild beasts that were created naturally to run. He also became an efficient floater or swimmer than most marine domiciled creatures. His greatest victory over the elements however came in the form of his ability to defy gravity and fly as the birds of the sky albeit unnaturally but considerably much faster and for longer period.

All these victories and conquests over man's limitations however came at a cost that man himself have come to appreciate. And this cost is reflected in man's relationship with his environment. To run, swim and fly as good as the naturally endowed beings, man has to extract, manipulate and regurgitate components of his environment. In extracting, he causes displacement of land masses, deforest jungles and create man-made canyons. In the process of manipulating, he produces wastes that are devoid of their natural elements of control through decomposition and in the process of utilizing the manipulated resources he regurgitates pollutants that have lost any natural linkage to their source in nature. All these anomalies of his creation formed the foundation for the depreciation of the same environment from which they were extracted and in the long term, a

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substantial part of the cause of climatic disorders.

2 What is climate change?

Climate change as used by writers and the media today symbolizes a growing mega trend that affects everything in existence. It is the gradual process of reforming and redesigning the entire global ecosystem, whereby the interaction of man and all other living organisms with the natural physical environment will be reappraised not in line with the will of man but as nature demands. Prior to industrialization, climactic factors such as volcanic eruptions, tidal upsurges and fluctuations in the levels of solar radiation attributed for the bulk of climate conflict between man and nature. However, with the use of fossil fuel by man and the growing accumulation of inorganic waste as well as the popular 'green house gas', newer and relatively more devastating climactic factors have emerged. The resultant effects of man's activities will include a 50% drop in the yields of rain-fed agriculture by 2020 (IPCC, 2007). This will further be aggravated by the increase in the proportion of land suffering constant and extreme drought from 1 – 2% to 10% by 2050, by which time sub-Saharan Africa will have far less rainfall than obtainable today. Sea level is also expected to rise to between 17 and 29 cm from the current 8 to 11 cm by 2050, leading to an increase in the number of people battling with flooding by about 10 to 25 million annually (Nicholls and Lowe, 2004). In any case, the number of people that may be affected by climatic upheavals by 2050 could be as high as 200 million people (Myers, 2005). Many would be compelled to migrate.

2.1 Human migration for sustenance and survival

Migration for the purpose of sustenance and survival is as old as mankind. The *Neanderthal*, an extinct, robust human-like being of mid Paleolithic age some 500,000 years BC, was reported to be a major migrant in search of food and shelter. Prior to this period, its ancestor, the *Australopithecus Africanus*, who lived some 2 million years BC was adjudged the first migrant in search of fair weather and food (Bowdler, 2011). Migration for the purpose of avoiding unfavorable weather and climatic condition was never the preserve of humanity. Sparrows, egrets and other seasonal migratory birds are weather travelers as well as several species of land based animals, such as Gnus and Zebras, in the wide expanse of African savannah and grassland. All of these migratory species however, migrate only to return when the weather improves or there is a resurgence of favorable flora growth. The exception to this rule of return migration is the tendency for modern man to migrate without recourse to returning in most cases. In modern times what drives human migration is more complex than the search for bare necessities of life such as food and shelter. Though, these factors could constitute primary motives for such migration, essential secondary determinants imposed by modern politico-economic systems may be more important in this regard.

2.2 Climate change and global labor mobility

Since the beginning of recorded history, mankind has exhibited the tendency to migrate from inhospitable environment to more conducive one. People move from

one location to the other for various reasons which may necessarily include seeking greener pastures; following migratory trends of games and fauna upon which they depend, gathering fruits and settling near an adequate source of water supply. Man's migration could also be for such strategic reasons as gaining military advantage. In some cases, migration may be seasonal; following the change of the seasons or it could be for a longer duration following climatic variation. Migration in recent times tends to be more complex, in that it is driven by combinations of socio-politico-economic factors. But the issue of the influence of the changing climate in determining migratory paths and patterns is becoming more important by the day. It is portends to have the greatest impact on the movement of people across the globe; with millions of people being displaced annually by shoreline erosion, coastal flooding and agricultural disruption (Priya & Sven, 2008).

Permanent relocation of populations is envisaged with the increasing environmental degradation, which eventually culminates in climate change (ICC, 2010). Environmental degradation is driven by the activities of man through the emission of green-house gas (GHG) and the wanton exploitation of natural resource without recourse to the effect that this would have on the environment. Green-House gas emissions have grown since pre-industrial times, with an increase of 70% between 1970 and 2004 and most of the observed increase in global average temperatures since the mid-20th century is very likely due to the increase in anthropogenic GHG concentrations (IPCC, 2007). Furthermore, extensive degradation, by the mid-1990s, led to the displacement of up to 25 million people who were forced from their homes and off their land by a range of serious environmental pressures such as pollution, land degradation, droughts and natural disasters thus creating what was then known as "environmental refugees" (Muritala et al, 2011). The number of this displaced populace was expected to double to 50 million by 2010 (UNU-EHS, 2005) and increase fourfold to 200 million by 2050 (Myers, 2005). In some cases, the migration or displacement of people is permanent.

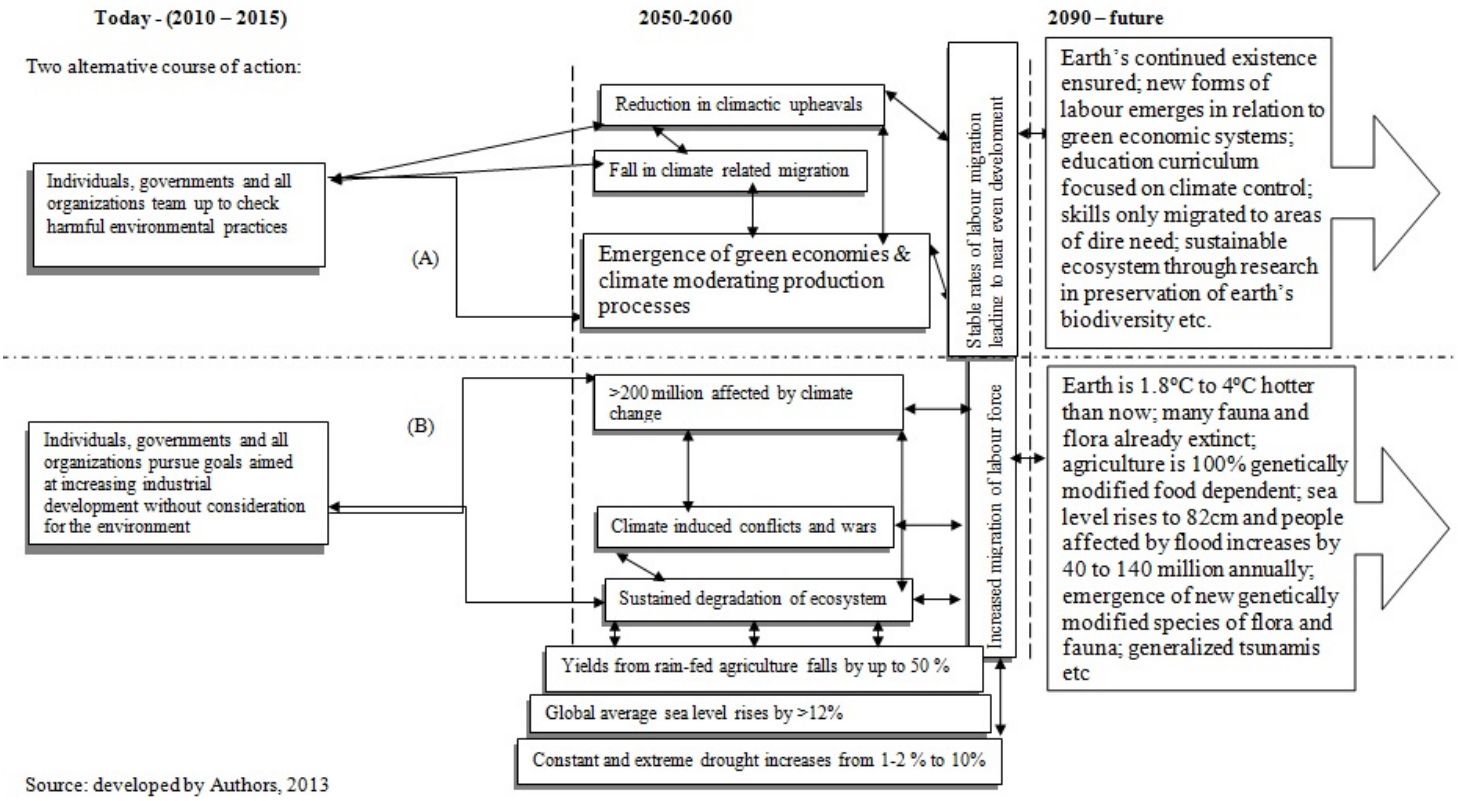
Temporary migration, on the other hand, is either voluntarily taking or otherwise. In times of climate stress, such migration can help improve a family's income, through remittances from paid work elsewhere and reduce the draw on local resources (Priya & Sven, 2008). However, immigration, whether permanent or temporary, is curtailed by adverse environmental or climatic conditions of the target destination. For instance the 2004 tsunami affected the influx of immigrants to the countries involved negatively when many countries warned their citizens to avoid the affected countries. Even so, the attractiveness of remittance capture by many developing countries has continued to make the risk of migrating to a country with adverse climatic condition tenable. Coupled with restricted economic opportunities which may be as a result of political instability, racial and ethnic discrimination, corruption and internecine warfare at home (Olaoye, Dabiri & Binuyo, 2011) , the assurance of higher incomes, higher standard of living, balanced political outlook, availability of basic necessary infrastructure such as adequate housing, good road network, efficient transportation system, electricity and health care became irresistibly attractive (Meyer,2001; Astor et al, 2005) to many climate migrants.

3 The way forward: scenario network map

The Scenario Network Map (SNM) for this study begins by looking at the current global environmental practices which have negative impacts on the environment and the climate .The timelines, moving from left to right, indicates those activities and factors that may impact labor mobility and migration positively and/or negatively. The postings are based on the findings and postulations of reputable research organizations and agencies, such as the UN Inter-governmental Panel on Climate Change (IPCC), as well as empirical write-ups by notable researchers on climate change and migration.

The network indicated a starting point between 2010 and 2015; a mid-point spanning ten years between 2050 and 2060 and a futuristic extension beyond 2090. All the points represent periods of forecast of global climate condition following the chosen course of action. A proactive course of action today will result in the emergence of new climate relevant skills and ultimately the preservation of the world's ecosystem. Alternatively, the current practice of nonchalance and sustained despoliation of the ecosystem will only lead to severe climate stress and variation and ultimately the destruction of the natural life system on earth.

Figure 1: Scenario Network Map of the future of world climate outlook



Source: developed by Authors, 2013

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