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The background features a stylized green mountain range with white peaks. Above the mountains, several triangles in yellow, green, and blue are scattered across the white space.

NYDA
Knowledge Brief

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DIAGNOSTIC ANALYSIS OF THE IMPACT OF CLIMATE CHANGE

2023/2024 FISCAL YEAR - 2nd Quarter

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1. INTRODUCTION

Weather patterns invoke unpredictable challenges in the realm of all facets of life. The social welfare of citizens is immensely and dramatically affected, and this includes the devastation of infrastructure which ultimately affects the functionality of the economy. Ordinarily, once the function of the economy is destructed, obviously the Gross Domestic Product (GDP) is grossly affected. The provision of goods and services is severely affected which automatically destabilises the smooth running of economic activities. In this regard, Rubin, Bower, Herbert, Santos, and Wong-Parodi (2023:1) put it bluntly that more than 3,3 billion people live in areas that are highly vulnerable to climate change. Similarly, South Africa is vulnerable to climate change like most developing countries, see [here](#). In this case, it is a foregone and uncontested conclusion that the phenomenon of climate change affects mostly the subalterns.

This exercise, thus, critically seeks to diagnose and analyse the impact caused by climate change. The following themes shall therefore guide the diagnostic analysis of the discussion: - firstly, it is a conceptualisation of climate change; secondly, nature and the form of climate change; and lastly, the mechanism to ameliorate the impact of climate change. The conclusion is the foremost last section of this discussion analysis.



2. CONCEPTUALISATION OF CLIMATE CHANGE

In the world of academia, research, and policy environment, it is often crucial to explain and clarify each concept in use so that the communicated messages and ideas are not misconstrued or misinterpreted. Likewise in this study, the concept of “climate change” deserves serious attention and clarification to move toward one direction that comprises coherent thoughts and understanding. At this juncture, therefore, Zwane (2019:3) conceptually and cogently accounts that climate change is the weather patterns that are observed over time, for instance, these weather patterns can be measured at least after one or two decades. These weather occurrences do not affect one region, but the entire globe get severely affected. It is for this reason that in recent years, international summits have been convened to directly solve/address the challenges of climate change that the globe is currently experiencing. Summits that come to mind are the ones that took place in Rio de Janeiro, Brazil, and Copenhagen Denmark. In as much as climate change affects the entire world environment, but it has been crystal clear that the most victims of the climate change are developing countries, hence (Ndlovu, Prinsloo & Le Roux 2020:2-3) argue that the African continent is the most vulnerable to climate hazards. Climate change is the outcome of numerous phenomena and one that has caught the world’s attention is the burning of fossils, the energy extracted from coal and underground sources of energy. In this century, there has been an ongoing debate and discussion for countries to move away from using fossil fuels and start looking at other new forms of energy generation, hence in South Africa, the hype of renewable energy or energy just transition is on steroids.

2.1 Nature and the form of climate change

Climate change appears in various forms in nature. One of the main visible forms of climate change is heavy rains viz. rainfalls, thunderstorms, etcetera. Naturally, heavy rains are expected during summer seasons but when the change in climate hits, the unpredictable weather changes fall into play. This, according to Zwane (2019:3) always has negative effects on people’s livelihoods. The picture below illustrates the infrastructural damages as a result of the change in weather patterns.



This picture shows damages from floods, in South Africa, which occurred in April 2022 – in KwaZulu-Natal Province.

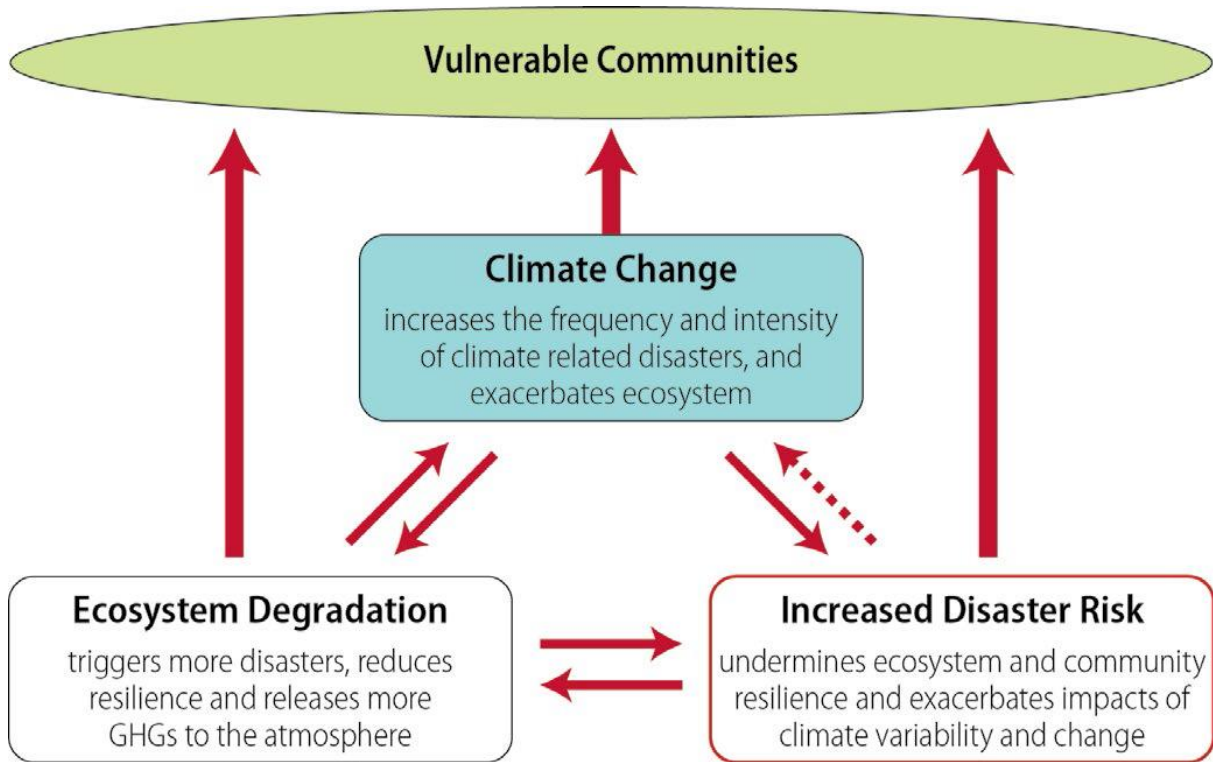
According to Levey (2022), at least 435 people died and damages to property amounted to around R18,779,650,000 billion as the result of these floods in KwaZulu Natal. Over and above the challenges of ceaseless rainfalls, of late, extreme cold weather patterns are also being experienced, which of course is a concern in poor communities. The results of cold weather are also frustrating because people from the working class background and poor are always affected by such weather conditions. It is an uncontested historical reality that when extreme cold weather conditions hit the ground the subalterns often lost their lives as the result of either the exploding of the gas heaters or of carbon dioxide emitted by the burning of the coal. In the past few weeks, South Africa, country-wide had gone through unimaginable cold weather. Kempen (2022:52) argues that weather patterns have been changing drastically during the past few years, hence the inconsistencies in temperatures. This calls for society to reimagine and explore new ways of living and how agricultural activities are supposed to be handled now and in the foreseeable future. Perhaps by observing the primitive ways of agrarian activities, the current incomprehensible situation could be resolved by reapplication of the traditional ways of tilling the land and avoiding chemically induced fertilisers.

3. Amelioration of the impact of climate change

It would be completely impossible to undo climate change since industrialisation is forever advancing its course. Though the mechanisms to mitigate the Industrial Revolution come with unprecedented pressures from those who stand to benefit, however, this would only be the solution in averting the acceleration of the Industrial Revolution of any form to protect the ecosystem. For the records, numerous mechanisms to mitigate climate change are in place in all forms but the challenge is how to go about implementing them in such a way that it does not affect the economic activities.



One of the climate change mitigations is to reduce social inequality. According to Green and Healy (2022:637), a substantial reduction of pollution could be achieved by reducing the income and wealth of the top 1%, the richest group ever in the world, and (Green and Healy 2022) go further to account that this can be successfully implemented at the national level by the community of states. Furthermore, Martinez (2016:315) agrees with Green and Healy (2022:638) that most fossil fuels are in the hands of big corporations. As the result of the economy which is based on neoliberal fundamentalism, it is quite hard for corporations to comply with policies that are non-carbon-centric, due to peer pressure from shareholders, whose sole preoccupation is profit-making at all costs. In this regard, therefore, corporate Chief Executive Officers (CEOs) are always on a mission to overlook the de-carbon-centric policies (Green & Healy 2022:638). In the graph below, it cautions against the dangers of climate change, especially in lower-class communities.



This graph is adapted from Chapter 6 on Biodiversity & Protected Areas, and it illustrates the linkages between climate change impacts, ecosystem degradation, and increased risk of climate-related disasters. It is a modification of the United Nations Environmental Programme (UNEP), 2009 report, about the damages of climate change (Nantel, Pellatt, Keenleyside & Gray 2014:173).



Another alternative to rebuke climate change is by technological means. It is however noted that currently, the cost of technology might be the setback for the government being unable to begin with its application. Martinez (2016:319) suggests that money spent on military activities, at least, 30% of it could perhaps be deviated to resolve the challenges of climate change. Another mechanism to minimise the impact of climate change is to encourage the use of renewable energies either in households or for economic activities. From the National Youth Development Agency (NYDA) perspective, at all material times, the NYDA should be at the forefront in encouraging youth to explore business opportunities in renewable energy generation. The work done by the Gauteng Provincial Government (GPG) under the stewardship of Premier Panyaza Lesufi is commendable. Lately, the GPG in partnership with the Manufacturing, Engineering, and Related Services Sector Education and Training Authority (merSETA) is undergoing a training programme for the Gauteng youth in response to the energy crisis currently haunting the country and in certainly to respond to youth unemployment as well, see [here](#). We believe that this kind of youth intervention shall go a long way in uplifting young people from the skank of poverty and underdevelopment. Objectively, other provinces may as well replicate similar interventions as of GPG on youth development.



4. CONCLUDING REMARKS AND PROPOSED POLICY INTERVENTIONS

This diagnostic analytical paper has covered quite a few issues on climate change and its impact. Initially, the author sought to understand the meaning of climate change because not everyone would comprehend it from the outset. Briefly, the literature on the study of climate – has been very clear from the outset that climate change is the change of weather patterns over a long time. The collected data has shown that globally, the world is at risk of the unpredictability of weather forecasts.

Furthermore, the study has also sought to find the responsive mechanism of the impact of climate change, and the following controlling measures have been understood as the only alternatives to responding to the challenges of climate change. Attending social inequality is one of the fundamental questions to be responded to so that climate change is mitigated. A brief scan of research work that has been done, reveals that there is a correlation between the human development index and the rate of climate change. This means that the bigger the human development index the more the earth would be exposed to Green House Gas (GHG) emissions.



The usage of technology has also been found as one of the other means to cap carbon dioxide emissions, and notably, money allocated for military adventurism could always be reallocated to amplify technological advancement. In this case, 30% of the total budget allocated to military activities could be reallocated to the advancement of technology to address the climate change issue. Lastly, renewable, or mixed energies are also one of the mechanisms to address the question of pollution. Renewable energy debates are at an advanced stage in South Africa, besides that such are entangled with various interest groups, which might jeopardise the interest of the country at large.

4.1 Policy interventions

- *Science Research Institutions, such as the Council for Scientific and Industrial Research (CSIR) and inter alia must work with the government to speed up the implementation of mixed renewable energy generation to mitigate the challenges of climate change.*
- *Government and youth development agencies must work on strategies to workshop young people on skills aligned with the generation of mixed energies. The GPG has already set the tone by mobilising youth to undergo skills training on the installation of solar systems in businesses and households.*
- *Fast-track the implementation of employment equity, and this would automatically address the challenge of social inequality in South Africa. This is informed by desktop research findings that social inequality perpetuates climate change. Thus, once the social inequality issue is attended to, then the challenges of climate change shall be minimised.*



5. LIST OF THE REFERENCES

Green, F. & Healy, N. 2022. How inequality fuels climate change: The climate case for a Green New Deal (GND). *One Earth Perspective*, 5 (1): 635-649.

Gauteng Provincial Government. 2023. *Skills and training for solar technicians*. Johannesburg: Gauteng Provincial Government.

Levey, S. 2022. Climate change made heavy rain behind South African floods twice as likely. *Imperial College London*, 13 May 2022 [Online] Available from: <https://www.imperial.ac.uk/news/236457/climate-change-made-heavy-rain-behind/> (Accessed on 14 September 2023).

Martinez, R. 2016. *Creating freedom: Power, control, and the fight for our future*. Great Britain: Canongate Books Ltd.

Nantel, P., Pellatt, M.G., Keenleyside, K. & Gray, P.A. 2014. Biodiversity and Protected Areas. In F.J. Warren & D.S. Lemmen (eds). *Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation*. Government of Canada, Ottawa, pp. 159-190.

Ndlovu, E., Prinsloo & Le Roux, T. 2020. Impact of climate change and variability on the traditional farming system: Farmers' perceptions from south-west, semi-arid Zimbabwe. *Jàmbá - Journal of Disaster Risk Studies*, 12 (1): 1-19.

Kempen, A. 2022. Community safety tips: preparing for disasters. Community-based safety & security: Servamus.

Rubin, N.B., Bower, E.R., Herbert., Santos, B.S. & Wong-Parodi, G. 2023. Centering equity and sustainability in climate adaptation funding. *Environmental Research Climate*, 2 (033001):1-5.

Zwane, E.M. 2019. Impact of climate change on primary agriculture, water sources, and food security in Western Cape, South Africa. *Jàmbá - Journal of Disaster Risk Studies*, 11 (1): 1-7.