ANALYSIS OF GENDER RESPONSIVENESS OF CLIMATE CHANGE RESPONSE STRATEGIES IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC) REGION

Nyahunda Louis, Makhubele Jabulani Calvin, Mabvurira Vincent & Matlakala Frans Koketso

ABSTRACT

This paper sought to explore the gender responsiveness of climate change response strategies in the Southern African Development Community region. There is undisputable acknowledgement that all SADC countries are vulnerable to climate change impacts despite their low contribution to carbon gas emissions that cause climate change. Women are more encumbered by climate change effects than men due to poverty, low literacy levels, lack of adaptive capacity, ascribed gender roles and cultural discrimination patterns that promote patriarchal dominance. Arguably, the gendered differential vulnerability between women and men to climate change impacts is absent in most climate policy frameworks in SADC. The objective of the study was to establish the responsiveness of climate change policies to gender dimensions in the SADC region. The study followed a literature review as research methodology. Secondary data sources were purposively reviewed through the selection of relevant sources by the researchers which led to the identification of other sources guided by common themes and keywords. Data was analysed through the discourse analysis. The study established that most climate change response strategies in SADC demonstrated apt consideration of the roles of women in climate change mitigation and adaptation. It was concluded that women are recognised as vulnerable populations and their contribution in devising sustainable climate change solutions is overlooked at policy levels. The study recommended that climate change interventions can only be effective when they mainstream gender and acknowledge the contribution of women as agents of social change and most SADC countries are still lagging behind.

Keywords: Gender responsiveness, climate change, climate change response strategies, SADC, Ecofeminism theory

INTRODUCTION

According to Lesolle (2012), the Southern African Development Community (SADC) region is highly vulnerable to climate change impacts due to livelihoods which are climate sensitive, catalysed by low adaptive capacities. The region recognizes the critical contribution of climate change variability in stalling its developmental efforts and poverty eradication. As a result, the SADC continues to be actively involved in dialogues for international climate policy frameworks of the United Nations Framework Convention on Climate Change (UNFCCC). SADC countries are signatories to international obligations and conventions such as the Kyoto Protocol, Paris Agreement and UNFCCC which mandate the development of national climate change response

strategies premised on promotion of low carbon based productions, climate change mitigation and adaptation and community resilience.

These conventions provide a strong emphasis on the importance of gender mainstreaming in climate change interventions by its member parties (Bodansky, 2016). Rajamani (2016) argues that most SADC countries have ratified the dictates of the above conventions and instruments into their national developmental agendas and plans. Regardless of the frantic efforts being made by most SADC countries in devising climate change interventions to cushion their people from its heft impacts, most women in rural areas of Sub Saharan Africa continue to be burden laddered by climate change impacts than men attributable to patriarchal dominance, low adaptive capacity, exclusion from climate change decision making processes, ascribed gender roles, low levels of education and reliance on climate sensitive natural resource base (Gaard, 2015; Babungura, 2013; Baten & Khan, 2010). Little consideration has been given towards the gendered differential impacts of climate change between men and women in most climate policy regimes (Gaye et al., 2009). SADC countries subscribe to the Agenda 2030 for Sustainable Development unveiled in September 2015 in New York where Sustainable Developmental Goals (SDGs) were adopted at the UN Sustainable Development Summit (Mann, Garcia-Martin, Raymond, Shaw, & Plieninger, 2018). Gender equality has a dedicated goal (SDG 5) and has been incorporated as key towards achieving the other goals hence it is mainstreamed throughout. The goal focuses on achieving gender equality and empowerment of all women and girls (Nilsson, Griggs & Visbeck, 2016). Gender responsiveness Refers to programme or project objectives, aimed at correcting gender imbalances by promoting non-discriminatory activities and equal benefit between men and women (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2015).

According to Barnard (2012), there are several adaptation measures that are on-going in the SADC region through the guidelines buttressed in the SADC Climate Change Adaptation Framework and various international obligations. Climate change response strategies are governments' commitment to adapt and mitigate the effects of climate change through several programmes that foster social ecological resilience of all climate vulnerable sectors, country's disaster response capabilities and reduction of greenhouse emissions (Savaresi, 2016). The response strategies are informed by policies which were formulated out of the acknowledgement that climate change is ravaging developing countries the most regardless of their low contribution to greenhouse gas emissions which cause climate change.

This further precipitated the need to develop strategic and sustainable intervention mechanisms to address the impacts of climate change harmonized in climate change policies and response strategies (Mavimbela & Masuku, 2010). This article provides a synoptic analysis of climate change response strategies interwoven to their gender responsiveness. The knowledge proceeding from this study is premised on raising awareness to stakeholders involved in climate change interventions and policy development on the importance of gender mainstreaming in the climate change discourse. The article navigates on the ecofeminism theory, literature on instruments guiding the development of gender sensitive climate change interventions, methodology and findings of the study. Lastly, the article provides conclusions and recommendations which proceeded out of the study.

REVIEW OF LITERATURE

United Nations Framework Convention on Climate Change (UNFCCC)

The United Nations Framework Convention on Climate Change was adopted in 1994 and so far, all Southern African countries have ratified the convention into their national adaptation and mitigation initiatives to climate change (UNFCCC,2014). According to Gagnon-Lebrun and Agrawala (2006), among other key commitments to be undertaken by parties to the UNFCCC were to craft, implement and regularly publish and update regional and national measures fostered to mitigate climate change effects complemented by facilitation of sustainable climate change adaptation. As for Pervin, Sultana, Phirum, Camara, Nzau, Phonnasane and Anderson (2013), the UNFCCC sets out guidelines for the development of National Adaptation Programmes (NAPs), National Adaptation Programme of Action (NAPAs) and Nationally Appropriate Mitigation Actions (NAMAs) by all member states in addressing the impact of climate change. According to the UNFCCC (2015), climate change adaptation and mitigation efforts will not be sustainably effective without consideration of gender.

This is because women/girls and men/boys are differentially affected by climate change and have different needs, capacities and opportunities to adapt to its effects. The UNFCCC strongly affirmed that if issues that limit effective mainstreaming of gender in the NAPs are not addressed, such policies shall aggravate or create new gender inequalities. The researchers contend that the UNFCCC lays a phenomenal and practical departure point essential in curbing climate change impacts through mitigation and adaptation. The important aspect in tandem to the objectives of this study is the consideration of gender in climate change policies. This shall serve as a baseline of assessment and evaluation of national climate change response strategies of SADC countries because the yardstick of development of such policies is ostensibly provided by the UNFCCC which all SADC countries adopted and ratified in their national developmental initiatives.

The Kyotol Protocol

According to Yamin (1998), the Kyoto Protocol was adopted at the third Conference of the Parties of the UNFCCC (CoP3) in Kyoto, Japan, on 11 December 1997. Importantly, the Protocol shares the objective and institutions of the UNFCCC. The Protocol is an offshoot of the (UNFCCC) which was adopted by nearly all nations in 1992. The Protocol was finalized in 1997 and came into force in 2005 where almost every country has ratified the treaty except the United States of America (Pandey ,2002). The Kyoto Protocol within the confines of the UNFCCC, is premised to assisting countries in mitigating and adapting to the hefty climate change effects through facilitation of formulation of mechanisms and techniques that can foster resilience to climate change (UNFCCC, 2015). Pandey (2002) argues that what is missing in the Protocol is the acknowledgement of the uneven impacts of climate change on women and how the Protocol can be implemented for the benefit of marginalized women in developing countries. The author further highlighted that the implementation of the Protocol would dovetail effectiveness had it been inclusion of gender dimension is recognized. The researchers argue that the omission of the gender dimension on climate change mitigation and adaptation by the Protocol which sought to operate within the

confines of the UNFCCC and premised to improve on its underpinnings poses a risk of creating inconsistences in terms of policy development by its member parties especially in terms of mainstreaming gender in the cocktail of climate change mitigation and adaptation policies.

The Paris Agreement

According to Rajamani (2016), the Paris Agreement was adopted by member parties to the UNFCCC in France in December 2015 with the supreme aim of fostering collective effort to thwart climate change and intensification of investments and actions pertinent for sustainable low carbon emissions. The Paris agreement is a legally binding document which shall come into force in 2020 and it was ratified by 55-member Parties who account for 55% of global greenhouse gas emissions (Bodansky, 2016). Parties to the agreement committed to establishing a common global goal on climate change adaptation, enhancement of sustainable adaptive capacities, fostering and strengthening resilience and vulnerability reduction with the overall target to contributing to sustainable development (Rajamani, 2016). The Paris Agreement in its preamble stressed the need for consideration of gender equality and women empowerment in actions aimed to address climate change (Aguilar, Granat & Owren, 2015). According to the UN Women (2016), it is laudable to note that the Paris Agreement on Article 7 and 9 recognized the need for adaptation efforts which are gender sensitive and gender responsive. Article 7.5 of the Agreement recognize that adaptation efforts should be gender sensitive, responsive, inclusive and transparent considering vulnerable groups, communities and ecosystems whose participation should be promoted on available sciences and their traditional knowledge systems.

THEORETICAL FRAMEWORK

Ecofeminism theory

Ecofeminism is a feminist stance towards environmental issues. Ecofeminism links ecology with feminism (Mies & Shiva, 1993). Ecofeminism links ecological issues and feminism driven by social and political motives as a movement (Gaard, 2015). Ecofeminism trace the domination of women by men evolving from the same platform used by men to dominate women on environmental issues. Additionally, ecofeminists see the interconnectedness between the oppression of women and nature. It is further argued that ecofeminists deal with issues of gender, race, class and nature (Tuana, 2016). Gaard (2015) contends that from a feminist perspective, women are the world's most producers of food than men but the reality of the world's hungriest is shocking as women and children are affected by hunger. The theory argues that inequalities, poverty, discrimination and gendered social roles faced by women exacerbate their vulnerability to climate change.

Ecofeminists argue that climate change policies favour men at the expense of women resulting in the perpetuation of insubordination of women by men (Macgregor, 2010). According to Gaard (2015), the ecofeminism perspective is very crucial to examining the solutions proffered to climate change through the analysis of environmental sciences. The author brought forward the perspectives of cultural and liberal feminists who argue that women have been systematically

excluded from climate change related decision-making processes in as much as they are gravely and unequally affected by climate change and variability. Sturgeon (2016) argues that the nucleus of ecofeminism theory is envisioned on elimination of male dominance over women in contemporary societies where gender equality, inclusivity and environmental conservation and preservation is achieved equally by men and women.

As for Roy and Borowiak (2003), the theory maintains a strong relationship between patriarchal dominance of nature and oppression of women. Women play a crucial role than men in food production and security, primary caregiving, management of the ecosystem, environmental management and sustainability but they are the ones who are heavily affected by climate change (Gaard, 2015). The ecofeminism theory underscores that women form the world's poorest population hence they are more prone to the effects posed by environmental vulnerabilities including climate change. This is because they depend on natural resources for livelihood and environmental services which are volatile due to climate change (Roy & Borowiak, 2003). The researchers elected the ecofeminism theory as phenomenal lenses to dissect on why climate change response strategies should be gender sensitive given the magnitude of challenges faced by women in the climate change discourse.

RESEARCH METHODOLOGY

As literature review was the main methodology in this study, the sampling technique involved purposive sampling where relevant data sources were purposively selected based on common themes. The review of available secondary data allowed the researchers to purposively select four SADC countries for this study. The four countries namely; South Africa, Zimbabwe, Namibia and Zambia were selected based on the availability of data relating to climate change response strategies. The researchers analysed data collected from the internet, journal articles and databases using the discourse analysis which Thorne (2000) describe as an analysis of data gathered from written texts or tape recordings. Bondarouk and Ruel (2004) underscore that discourse analysis is premised on the exploration of the relationship between discourse and reality including interpretation of hidden meanings. The focal point of this study was to establish how climate policies conform to the reality of climate justice and equality and shared participation between men and women.

RESEARCH FINDINGS AND DISCUSSIONS

The review of articles from various databases lasted for four weeks and most reviewed were necessary. Data shall be presented on a sequential format that is country by country hinged to discussions on gender responsiveness of the identified strategies.

Climate response strategy of South Africa

Archer, Almansi, DiGregorio, Roberts, Sharma and Syam (2014) propound that South Africa is affirming its commitment to adapt and mitigate the effects of climate change through several

programs and policies developed at local, provincial and national levels. According to Masters and Duff (2011), South Africa's National Climate Change Response Policy outlines the country's mitigation and adaptation commitments aimed at achieving transition to climate resilient strategies and low carbon developmental initiatives. Pelling (2016) denotes that the South African government recognizes the negative contribution of climate change in the realization of its sustainable developmental initiatives. Responsively, the government developed its National Adaptation Programmes of Action (NAPAS), Nationally Appropriate Mitigation Actions, (NAMAS) and National Adaptation Strategies (National Adaptation Strategy) as per the dictates of the Kyoto Protocol and UNFCCC.

The South African National Climate Change Response Strategy enshrines recognition of special needs in its preamble and at this juncture rural women are identified as susceptible to the adverse impacts of climate change because of primary care giving roles they shoulder (DEA, 2011). According to Boserup, Tan and Toulmin (2013), the South African National Climate Change Response Strategy is passive in acknowledging the differential gendered impacts of climate change in its framework thereby omitting strategic measures to be executed in addressing the causes of women's vulnerability to climate change impacts through policy interventions. The researchers argue that the recognition of women as susceptible to climate change impacts without acknowledging the crucial role they play in climate change adaptation and mitigation in climate change policies is a travesty to climate justice.

By omitting the important aspect of gender dimensions in climate change, the policy lacks a holistic approach in its formulation and envisioned strategies. The contributions being made by women in the climate change adaptation and mitigation processes should not be overlooked in policy frameworks because they are coming up with indigenous solutions leading to resilience in communities (Denton, 2002). Boserup et al. (2013) further argue that the mentioning of women as vulnerable to the adverse climate change impacts in policies expose women to more challenges, situating them to work without resources or broad-based empowerment. This gives credence to Sovacool and Linner (2016) who assert that policies were causes of women's vulnerability to climate change are not addressed and were their potentials as agents of social change are not appreciated, such policies shall aggravate or create new gender inequalities. According to Carbone and Rivers (2017), there is remarkable progress in South Africa when it comes to climate change policies though gender dimensions seem not to be a priority yet. South African climate change policies and strategies need to explicitly mainstream gender so that women and men's roles are clarified during the implementation of such policies/strategies.

Climate change response strategy of Zimbabwe

According to Hannaford, Bigg, Jones, Phimister and Staub, (2014), Zimbabwe has already made some significant strides in showing its commitment towards curbing the impacts of climate change. The country developed its National Climate Change Response Strategy in 2014. Zimbabwe' National Climate Change Strategy was developed to provide guidelines to national response actions in addressing climate change impacts. The Strategy provides guidelines on coordination and mainstreaming of climate change factors into the country's developmental trajectory to be implemented at local, district, provincial and national levels (Dodman & Mtilin, 2015). According to Zhakata, Jakarasi and Moyo (2017), Zimbabwe adopted its National Climate Change Policy in

Vol. 16. No.9 (1-12), ISSN: 1823-884x

2016 to be supported by the National Climate Change Response Strategy. The Zimbabwe National Climate Change Policy expressed Zimbabwe's willingness to join hands with the international community in finding solutions to curb climate change impacts in tandem with national responsibilities enshrined in the Kyoto Protocol and the UNFCCC.

As for Mutunga, Zulu and De Souza (2016), the National Climate Policy of Zimbabwe is supported by the NAP, NAMA, NAPA, the Low Carbon Development Strategy and National Environmental Policy and Strategic Document. According to Zhakata et al. (2014), Zimbabwe's National Climate Change Response Strategy is very clear on recognition of the gender dimensions and climate change. The Strategy referred to the data released by Zimbabwe Statistics which revealed that rural women constitute the highest percentage of the country's poor compared to men. Adhikari and Taylor (2012) denote that the Zimbabwe National Climate Change Response Strategy acknowledges that climate change affects men and women differently due to gender differences in property rights, limited access to information for women, and socio-cultural gender roles which limit the active involvement of women in climate change decision making processes. The strategy further notes that climate change is aggravating existing gender inequalities because of unequal control, access, and ownership of natural resources between women and men where women often face exclusion from participating in decision making processes for policies that govern the utilization of natural resources which they depend on for livelihood (Chigumira, 2019).

The researchers hold the view that the recognition of women as vulnerable to climate change than men was a good starting point for the strategy and the proposed strategies to mainstreaming gender in climate change policy interventions thereof. The strategy is passive on how the proposed strategies should be implemented in terms of financing, climate awareness information and capacity building for women. Additionally, the strategy mentions women as only vulnerable to climate change impacts but failed to acknowledge the important they play as agents of social change whose experience in environmental management and resource utilization can foster sustainable climate change adaptation and mitigation.

Climate change response strategy of Namibia

According to UNDP (2012), Namibia is the first country in SADC to develop and adopt a climate change policy in 2011. Namibia's National Climate Change Strategy and Action Plan (NCCSAP) for period 2013-2020 got the cabinet's nod in 2014. In 2011, Namibia ratified its National Disaster Risk Management to deal with eventualities emanating from climate change such as floods and drought. As noted by Kaundjua, Angula and Angombe (2012), Namibia is susceptible to climate change impacts because half of the population relies on natural resources for livelihood and incomes. Responsively, the NCCSAP provides a thematic approach to all clusters prone to climate change such as sustainable resource base, food security and, human health and wellbeing, fisheries and marine resources, infrastructure, water resources, sustainable energy and low carbon development. The policy further provides procedures for the development of the country's mitigation and adaptation activities through the development of NAMAs, NAPAs and NAPs as enshrined in the UNFCCC guidelines.

Kaundjua et al. (2012) mentioned that the NCCSAP recognizes the role played by rural women in food production and collection, cropping, livestock farming, water and fuel collection. Women's livelihoods which are linked to natural resources are threatened by climate change and

variability. To that end, Namibia's National Climate Change Policy encapsulates the government's commitment to addressing gender issues by ensuring that they are empowered to actively participate in adaptation and mitigation activities (Skinner, 2011). Cobbinah, Erdiaw-Kwasie and Amoateng (2015) contend that Namibia's Climate Change Strategy and Action Plan for 2030 is committed to mainstream gender in all climate policy planning, development and implementation. Mapfumo, Jalloh and Hachigonta (2014) critiqued the NCCSAP be asserting that the policy is not inherently clear on meaningful participation of women on climate change projects, programmes, policy development and implementation at all spatial levels.

However, Wilhem (2013) lauded the policy by affirming that the policy is spot on because it recognizes the importance of the use of local knowledge for adaptation which women possess. They further allude that Namibia has an excellent legislative and policy consortium for environmental protection and sustainable resource management. The researchers hold the view that the recognition of the role of women climate change activities by the NCCSAP is an essential component for the realization of sustainable developmental goals for Namibia where gender equality is promoted in the country's efforts of tackling climate change. This further affirms the country's pragmatic stance in meeting the commitments enshrined in the international obligations which it is a signatory to such as CEDAW, UNFCCC, Beijing Platform for Action and Maputo Protocol.

Climate change response strategy of Zambia

Zambia's National Climate Change Response Strategy was developed in 2011. The strategy enables Zambia to strategically position itself in responding to the hefty climate change impacts and contribute to the attainment of the supreme objectives of the UNFCCC. Zambia's National Climate Change Response Strategy was developed to put robust adaptation and mitigation measures in place to minimize risks dovetailed by climate change by maximizing opportunities. The strategy was poised to enhance a concerted understanding of climate change and its impacts at local and national levels (Mitchell, Van Aalst, Silva Villanueva, 2011). Zambia developed its National Policy on Climate Change (NPCC) in 2016. The NPCC was formulated to provide a legal framework that will buttress the effective implementation of existing and future climate adaptation and mitigation initiatives in a coordinated manner. According to Lindsey, Barnes, Nyirenda, Pumfrett, Tambling, Taylor and Rolfes (2013), Zambia has relevant climate policies and strategies which include; National Adaptation Plan of Action (NAPA), Intended Nationally Determined Contribution (INDC), Nationally Appropriate Mitigation Actions (NAMA) in line with the overall guidelines of the UNFCCC and other conventions.

On the important aspect of gender responsiveness and sensitivity, the policy is committed to promote gender dimensions through implementation of gender sensitive and responsive measures when tackling climate change. Zambia's response strategy enshrines the country's vision to engender climate change programmes and activities to achieve gender equality and equity in the execution of climate change activities. Additionally, the policy aims to improve the participation of women, youth, the elderly, people living with disabilities and children in climate change programmes. The researchers argue that, regardless of the important stance of considering the importance of engendering climate change programmes and activities for Zambia, the policy is passive on strategic measures to be taken in leveraging the plights of women who suffer from a

long history of vulnerability, exclusion, inequality and marginalization from climate change decision making processes (Gaye et al., 2009; Babungura, 2013). Additionally, the policy is not clear on the roles to be played by women who are regarded as agents of social change with vast environmental management, indigenous knowledge and resource management skills essential for sustainable climate change adaptation and mitigation (Denton, 2002; Gaye et al., 2009).

CONCLUSION

This article established that most SADC countries have moved significant strides in infusing climate change into their developmental trajectories through the development of climate change strategies and other relevant climate policies. The recognition of women as mere victims to climate change impacts in most climate change policies does not suffice without acknowledgment of causes their vulnerability to climate change perpetrated by gender inequalities, poverty, systematic marginalisation from climate change decision making processes, patriarchal dominance, low adaptive capacity and high illiteracy levels. Most climate change response strategies fail to demonstrate efforts to address inequalities emanating from climate change. This is further aggravated failure to envisage the roles/ contribution of women in the realisation of the objectives outlined in most climate change response strategies.

RECOMMENDATIONS

This study recommended that climate change response strategies should address the historical imbalances between men and women and sought to close the structural and systematic gaps of their vulnerability to climate change. The recognition of women as victims to climate change impacts should be complemented by acknowledgement of the roles they can play in the realisation of the objectives of various climate change response strategies. Furthermore, climate change response strategies should be infused to the development of other subsequent policies that eliminate the cultural patterns that promote the discrimination of women from decision making processes including climate change. On the same note, it is very significant to holistically align climate change response strategies to the guidelines that gave birth to the development of these strategies such as the UNFCCC, the Kyotol Protocol and the Paris Agreement especially on gender dynamics of climate change.

REFERENCES

Adhikari, B., & Taylor, K. (2012). Vulnerability and adaptation to climate change: A review of local actions and national policy response. Climate and Development, 4(1), 54-65.

Aguilar, L., Granat, M., & Owren, C. (2015). Roots for the future: The landscape and way forward on gender and climate change. Global gender and climate alliance and international union for conservation of nature. Washington, DC: IUCN & GGCA.

Vol. 16. No.9 (1-12), ISSN: 1823-884x

- Archer, D., Almansi, F., DiGregorio, M., Roberts, D., Sharma, D., & Syam, D. (2014). Moving towards inclusive urban adaptation: approaches to integrating community-based adaptation to climate change at city and national scale. Climate and Development, 6(4), 345-356.
- Babangura, A. (2013). Gender and climate change: South Africa case study. HBS, South Africa.
- Baten, M. A., & Khan, N. A. (2010). Gender issue in climate change discourse: theory versus reality. Unnayan Onneshan, Dhaka.
- Bodansky, D. (2016). The legal character of the Paris Agreement. Review of European, Comparative & International Environmental Law, 25(2), 142-150.
- Bondarouk, T., & Ruel, H. (2004). Discourse analysis: making complex methodology simple. ECIS 2004 Proceedings, 1.
- Boserup, E., Tan, S. F., & Toulmin, C. (2013). Woman's role in economic development. Routledge. Carbone, J. C., & Rivers, N. (2017). The impacts of unilateral climate policy on competitiveness: evidence from computable general equilibrium models. Review of Environmental Economics and Policy, 11(1), 24-42.
- Chigumira, E. (2019). Building Livelihoods: Young People and Agricultural Commercialisation in Africa: Zimbabwe Country Study.
- Cobbinah, P. B., Erdiaw-Kwasie, M. O., & Amoateng, P. (2015). Africa's urbanisation: Implications for sustainable development. *Cities*, 47, 62-72.
- Denton, F. (2002). Climate change vulnerability, impacts, and adaptation: Why does gender matter? Gender & Development, 10(2), 10-20.
- Dodman, D., & Mitlin, D. (2015). The national and local politics of climate change adaptation in Zimbabwe. Climate and Development, 7(3), 223-234.
- Gaard, G. (2015, March). Ecofeminism and climate change. In Women's Studies International Forum (Vol. 49, pp. 20-33). Pergamon.
- Gagnon-Lebrun, F., & Agrawala, S. (2006). Progress on Adaptation to Climate Change in Developed Countries. Organisation for Economic Co-operation and Development. http://www.oecd.org/env/cc/37178873.pdf
- Gaye, I., Dioné, J., Laye, O., Tutu, K., & Akol, C. (2009). Gender and climate change: Women matter. United Nations (UN). Economic commission for Africa (ECA).
- Hannaford, M. J., Bigg, G. R., Jones, J. M., Phimister, I., & Staub, M. (2014). Climate variability and societal dynamics in pre-colonial southern African history (AD 900-1840): A synthesis and critique. Environment and History, 20(3), 411-445.
- Kaundjua, M. B., Angula, M., & Angombe, S. T. (2012). Community perceptions of climate change and vanability impacts in Oshana and Ohangwena Regions.
- Lesolle, D. (2012). SADC policy paper on climate change: assessing the policy options for SADC member states. SADC Secretariat, Policy, Planning, Resource Mobilisation Directorate.
- Lindsey, P. A., Barnes, J., Nyirenda, V., Pumfrett, B., Tambling, C. J., Taylor, W. A., & Rolfes, M. T. S. (2013). The Zambian wildlife ranching industry: scale, associated benefits, and limitations affecting its development. *PloS one*, 8(12), e81761.
- Mann, C., Garcia-Martin, M., Raymond, C. M., Shaw, B. J., & Plieninger, T. (2018). The potential for integrated landscape management to fulfil Europe's commitments to the Sustainable Development Goals. *Landscape and urban planning*, 177, 75-82.

Vol. 16. No.9 (1-12), ISSN: 1823-884x

- Mapfumo, P., Jalloh, A., & Hachigonta, S. (2014). Review of research and policies for climate change adaptation in the agriculture sector in Southern Africa. Future Agricultures Working Paper, 100, 59.
- Masters, L., & Duff, L. (Eds.). (2011). Overcoming barriers to climate change adaptation implementation in Southern Africa. African Books Collective.
- Mayimbela, P., Masuku, M. B., & Belete, A. (2010). Contribution of savings and credit cooperatives to food crop production in Swaziland: A case study of smallholder farmers. African Journal of Agricultural Research, 5(21), 2868-2874.
- Mies, M., & Shiva, V. (1993). Ecofeminism. Zed Books.
- Mitchell, T., Van Aalst, M., & Silva Villanueva, P. (2010). Assessing progress on integrating disaster risk reduction and climate change adaptation in development processes.
- Mutunga, C., Zulu, E. M., & De Souza, R. M. (2012). Population Dynamics, Climate Change and Sustainable Development in Africa.
- Nilsson, M., Griggs, D., & Visbeck, M. (2016). Policy: map the interactions between Sustainable Development Goals. *Nature News*, 534(7607), 320.
- Pandey, N. (2002). Gender economics of the Kyoto Protocol. Conservation Ecology, 6(1).
- Pelling, M. (2010). Adaptation to climate change: from resilience to transformation. Routledge.
- Pervin, M., Sultana, S., Phirum, A., Camara, I. F., Nzau, V. M., Phonnasane, V., ... & Anderson, S. (2013). Framework for mainstreaming climate resilience into development planning. International Institute for Environment and Development..
- Rajamani, L. (2016). Ambition and differentiation in the 2015 Paris Agreement: Interpretative possibilities and underlying politics. International & Comparative Law Quarterly, 65(2), 493-514.
- Roy, T., & Borowiak, C. (2003). Against ecofeminism: agrarian populism and the splintered subject in rural India. Alternatives, 28(1), 57-89.
- Savaresi, A. (2016). The Paris Agreement: a new beginning?. Journal of Energy & Natural *Resources Law*, 34(1), 16-26.
- Sovacool, B., & Linnér, B. O. (2016). The political economy of climate change adaptation. Springer.
- Sturgeon, N. (2016). Ecofeminist natures: Race, gender, feminist theory and political action. Routledge.
- Thorne, S. (2000). Data analysis in qualitative research. Evidence-based nursing, 3(3), 68-70.
- Tuana, N. (2016). Climate Change Through the Lens of Feminist Philosophy. In Meta-Philosophical Reflection on Feminist Philosophies of Science (pp. 35-53). Springer, Cham.
- UN Women. 2012. Decent work and women's economic empowerment: good policy and practice. UN Women: New York., NY.
- UNFCCC. (2015). Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013, Decision 2/CP19, Warsaw, Poland. Retrieved from http://unfccc.int/resources/docs/. Accessed on 10 October 2018
- United Nations Development Programme (UNDP). (2011). Resource Guide on Gender and Climate Change
- United Nations Educational, Scientific and Cultural Organization [UNESCO]. (2015). UNESCO Science Report Towards 2030. Paris.



Vol. 16. No.9 (1-12), ISSN: 1823-884x

Wilhelm, M. (2013). Impact of climate change in Namibia: A case study of Omusati region (Doctoral dissertation).

Yamin, F. (1998). The Kyoto Protocol: Origins, assessment and future challenges. *Rev. Eur. Comp. & Int'l Envtl. L.*, 7, 113.

Zhakata, W., Jakarasi, V. N., & Moyo, E. N. (2017). Zimbabwe's Actions towards climate resilience and low carbon development. *INTERNATIONAL JOURNAL ON GREEN GROWTH AND DEVELOPMENT*, 101.

ABOUT THE AUTHORS

LOUIS NYAHUNDA

Department of Social Work University of Limpopo. nyahundalouis@gmail.com

JABULANI CALVIN MAKHUBELE

Department of Social Work University of Limpopo. Jabulani.Makhubele@ul.ac.za

VINCENT MABVURIRA

Department of Social Work University of Limpopo. vinmabvurira@gmail.com

FRANS KOKETSO MATLAKALA

Department of Social Work University of Limpopo. fransmatlakala@gmail.com