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UNIVERSITY OF PRETORIA
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THE REALISATION OF THE RIGHT TO CLIMATE EDUCATION IN SOUTH SUDAN

By

Justin Monyping Ater Malok

u22953290

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At the

Centre for Human Rights, Faculty of Law, University of Pretoria.

Supervised by:

Dr Elvis Fokala

Centre for Human Rights, Faculty of Law, University of Pretoria

Co-supervised by:

Dr Oluwatoyin Adejonwo-Osho

Faculty of Law, University of Lagos

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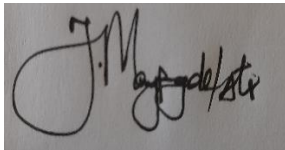
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DEDICATION

I dedicate this work to my parents and all those who were supportive throughout the journey.

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ABBREVIATIONS

ACE	Action for Climate Empowerment Agenda
ACHPRs	African Charter on Human and Peoples' Rights
ACRWC	African Charter on the Rights and Welfare of the Child
AU-GRAP	African Union Green Recovery Action Plan
BPCJ	Bali Principles on Climate Justice
CBD	Convention on Biological Diversity
CCRA	Climate Change Response Act
CEDAW	Convention on the Elimination of All forms of Discrimination against Women
CESCR	Convention on Economic, Social and Cultural Rights
COP	Conference of Parties
CRC	Convention on the Rights of the Child
CSOs	Civil Society Organisations
DWP	Doha Work Programme
EAC-Treaty	East Africa Community Treaty
EHCR	European Commission for Human Rights
ESD	Education for Sustainable Development
GAP	Global Action Programme
GCI	First Geneva Convention
GCII	Second Geneva Convention
GCIII	Third Geneva Convention
GCIV	Fourth Geneva Convention
GCI-IV	The four Geneva Conventions
GHG	Greenhouse Gas
HRC	Human Rights Council

ICCPR	International Covenant on Civil and Political Rights
IGOs	Intergovernmental Organisations
INC	Initial National Communication
INDC	Intended Nationally Determined Contribution
KP	Kyoto Protocol
LMDEAR	Lima Ministerial Declaration on Education and Awareness Raising
Maputo Protocol	African Charter on Human and Peoples' Rights Protocol on the Rights of Women in Africa
NAPA	National Adaptation Programme of Action
NDC	Nationally Determined Contribution
NFP	National Focal Point
NGOs	Non-governmental Organisations
NNS	New National Strategy
OAU-RC	Organisation of African Unity Refugee Convention
OHCHR	Office of the Commission for Human Rights
PA	Paris Agreement
SNDC	Second National Determined Contribution
SP	State Party
SPs	State Parties
The Committee	The Committee on the Economic, Social and Cultural Rights
The Kampala Convention	The African Union Convention for the Protection and Assistance of Internally Displaced Persons
The Universal Declaration	The Universal Declaration of Human Rights 1948
UN	United Nation
UNFCCC	United Nations Framework Convention on Climate Change
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
UNICEF	United Nations for Children Education Fund

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CHAPTER ONE

1. INTRODUCTION

1.1 Background

Historically, South Sudan has experienced climate change in different forms and at different times before and after independence. As discussed further, in this dissertation, these varied forms of climate change include but are not limited to precipitation change, flooding, or drought.¹ Climate change impacts negatively the socio-economic conditions of the people and particularly the children of South Sudan.

As noted above, South Sudan's history with climate-related happenings and their continuous recurrence is something that has not surprised the world nor South Sudanese themselves.² For instance, floods occurrence have been noted 'in 1962–1965, 1978–1979, 1988, 1994, 1996, 1998, 1999, 2006, 2007, 2013, 2014, 2015,³ 2021 and 2022.⁴ The research identifies 1988, 2013, 2014, and 2015 as the years flood hit the country hardest.⁵ In 1988 for example, flood impacted human lives and properties tremendously for the first time.⁶ Following the 1988 flood in the hierarchy of devastation is the 2013 flood which is recorded to have affected 150,000 persons, 'destroying their crops, property, and infrastructure' in 7 of 10 states of South Sudan.⁷ Furthermore, in 2014, the flood resulted in the death of an unknown number of people and displaced 40,000 persons.⁸ The 2015 flood 'displaced between 2000 to 3000 households'.⁹

¹ The World Bank 'Overview' (*World Bank*) <<https://www.worldbank.org/en/country/southsudan/overview> (accessed 31 July 2022).

² The World Bank Group 'World Bank Climate Change Knowledge Portal' <<https://climateknowledgeportal.worldbank.org/> (accessed 17 August 2022).

³ Government of South Sudan 'South Sudan INC.pdf' <<https://unfccc.int/sites/default/files/resource/South%20Sudan%20INC.pdf> (accessed 23 May 2022).

⁴ Reliefweb 'South Sudan: Floods 2021-2022 | ReliefWeb' <<https://reliefweb.int/disaster/fl-2021-000108-ssd> (accessed 18 September 2022).

⁵ Government of South Sudan INC (n3)38.

⁶ As above.

⁷ As above.

⁸ As above.

⁹ As above.

However, the 2021 flood is considered the most unimaginable one ever since the 1960s, sweeping across 9 of 10 states of South Sudan.¹⁰

Rainfalls have been frequent in the 'last 20 years'¹¹ shrinking the dry seasons and are 'expected' to be more frequent with greater 'intensity'.¹² Heavy rainfalls lead to flooding.¹³ Flooding in South Sudan normally happens during rainy seasons between July and September. However, it is important to note that flooding does not occur yearly but when it does, it is between the months mentioned above. Flood durations usually come after drought periods.¹⁴ Drought normally occurs during dry seasons. This is because, at these times, the country experiences high temperatures. Studies indicate that 'South Sudan annual mean temperatures' have increased by '0.4°C every decade' in the last 30 years.¹⁵ Studies project South Sudan's average temperatures to increase 'between 1°C and 1.5°C by 2060 causing a 'drier and warmer climate'.¹⁶

Broadly, the effects of climate change have completely pushed South Sudanese communities¹⁷ to the edge of despair. The 2021 report of the United Nations for Children's Education Fund (UNICEF) on climate change and flooding indicates that flooding affects 750,000 to more than 1 million people every year in South Sudan.¹⁸ This tempered with their normal lives and deprived them of many basic needs. For instance, in 2021, floods displaced a large number of people in the '31 out of 78' affected counties spread across the Republic of South Sudan and killing an

¹⁰ World Bank (n2)1.

¹¹ CH de C Seyuba Adrew E Yaw Tchie, Elisabeth L Resvold, Anne Funnemark, Florian Krampe, Kheira Tarif, Kyungmee Kim, Katongo 'Climate, Peace and Security Fact Sheet: South Sudan | NUPI' <<https://www.nupi.no/en/news/climate-peace-and-security-fact-sheet-south-sudan> (accessed 17 August 2022).

¹² The World Bank Group 'World Bank Climate Change Knowledge Portal' <<https://climateknowledgeportal.worldbank.org/> (accessed 17 August 2022).

¹³ As above, 4.

¹⁴ M van B Zaken 'Flooding in South Sudan: "Simply building dikes is not the solution" - News item - Government.nl' (22 March 2022) <<https://www.government.nl/latest/news/2022/03/22/flooding-in-south-sudan-simply-building-dikes-is-not-the-solution> (accessed 17 August 2022).

¹⁵ Seyuba (n 11).

¹⁶ As above, 2.

¹⁷ T Economics 'South Sudan - Rural Population - 2022 Data 2023 Forecast 1960-2021 Historical' <<https://tradingeconomics.com/south-sudan/rural-population-percent-of-total-population-wb-data.html> (accessed 19 August 2022). The Communities referred herein are the rural communities that make up of 74.49% of the South Sudan population.

¹⁸ Unicef 'Climate change and flooding' <<https://www.unicef.org/southsudan/what-we-do/climate-change-and-flooding>, 1. (accessed 17 August 2022).

'estimated number of 40 people'.¹⁹ The report further provides that in 2021, 100 schools in Unity State²⁰ were inaccessible because of flooding, resulting in more than 60,000 students not attending school.²¹ Additionally, there have been reported cases of diseases, such as malaria infections that come with flooding or their spreading is easily 'facilitated' by it.²² The World Bank Group has identified South Sudan as a country with rich agricultural land but states the country faces 'natural hazards including flooding and drought', which 'negatively affects' agriculture.²³ Further evidence provides that: '95 percent, or more than 11 million' South Sudanese, 'depend on climate-sensitive sectors, such as agriculture for their livelihoods'.²⁴ The drying up of seasonal streams has greatly affected fishing communities and in the same vein, drought has been identified as a driver of conflict between pastoralist communities among themselves and with farming communities 'over grazing areas'.²⁵

These issues led to the European Commission for Human Rights (ECHR) to allocate funding of 2 million Euros to lessen for example climate displacements or deaths with the Commissioner for Crisis Management Janez **Lenarčič** stating that:

Severe flooding in several areas of South Sudan has exacerbated an already fragile humanitarian situation. Thousands of people live in famine-like conditions, and undernutrition is at critical levels. The emergency funding will be used to respond to the immediate needs of those affected. The floods in South Sudan are a timely reminder for urgent action on climate change, in view also of

¹⁹ E Commission 'South Sudan' (*European Commission - European Commission*)

<https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5783 (accessed 20 August 2022).

²⁰ The Republic of South Sudan is made up of 10 states with Juba located in Central Equatoria as the Capital City. Unity state is obviously among the ten states. The state is one of the poorest and the hardest hit by climate change.

²¹ Unicef (n 20).

²² Reliefweb 'South Sudan recommits to enhancing efforts to improve climate change-induced health threats including flooding - South Sudan | ReliefWeb' <<https://reliefweb.int/report/south-sudan/south-sudan-recommits-enhancing-efforts-improve-climate-change-induced-health> (accessed 17 August 2022).

²³ 'World Bank Climate Change Knowledge Portal' <<https://climateknowledgeportal.worldbank.org/> (accessed 17 May 2022).

²⁴ J-L Stalon and B Choudhary 'Confronting climate change in South Sudan' (*UNDP in Africa*) <https://www.africa.undp.org/content/rba/en/home/blog/2017/6/30/confronting_climate_change_in_south_sudan.html?utm_source=EN&utm_medium=GSR&utm_content=US_UNDP_PaidSearch_Brand_English&utm_campaign=CENTRAL&c_src=CENTRAL&c_src2=GSR&gclid=CjwKCAjw7leUBhBbEiwADhiEMXJ7owUuIBKAP42727NAb4FoABwruHE4ahJTQj0XsptL5NZldqsgYRoCQJwQAvD_BwE (accessed 17 May 2022).

²⁵ As above.

*the COP26 conference: The effects of climate change are real, and they are here – and vulnerable populations suffer the repercussions.*²⁶

The situation also led to the United Nations (UN) calling on the international community to assist South Sudan in addressing the consequences of climate change stating continuous cessation of 'life', and complete annihilation of 'livestock, farmlands, and homes' as issues requiring urgent redress.²⁷

South Sudan is disproportionately affected by the consequences of climate change in the region and in the entire world regardless of the fact that the country contributes less to climate change.²⁸ The country ranks fifth in the World according to the 2017 climate change vulnerability index.²⁹ Future projections are even worst.³⁰

At the Conference of Parties (COP) 22 on climate education, the UN reiterated what is stipulated in article 6 of the United Nations Framework Convention on Climate Change (UNFCCC) that climate education is an important instrument necessary for providing climate solutions.³¹ This is because education enables 'People' to alter their unscientific logics, 'and behaviours' and this renders them useful in 'making' climate 'informed decisions'.³² In addition, the UN argued that education 'empowers and motivates the young to take action. In South Sudan's context, teaching vulnerable populations about the causes of climate change and its impacts will enable them to stop cutting down trees unnecessarily, as this is the area, in which the country contributes to climate change hence mitigating the phenomenon. In addition, knowledge of climate change can

²⁶ E Comission 'South Sudan: EU provides €2 million in emergency humanitarian funding for victims of floods' <https://civil-protection-humanitarian-aid.ec.europa.eu/news-stories/news/south-sudan-eu-provides-eu2-million-emergency-humanitarian-funding-victims-floods-2021-11-03_en (accessed 19 August 2022).

²⁷ As above.

²⁸ Tiitmamer N 'A Climate Crisis in Africa: The Case of South Sudan' (*The Cairo Review of Global Affairs*, 17 November 2021) <<https://www.thecairoreview.com/essays/a-climate-crisis-in-africa-the-case-of-south-sudan/> (accessed 20 August 2022).

²⁹ Stalon and Choudhary (n 24).

³⁰ C Tacon 'Republic of South Sudan's National Adaptation Programme of Actions (NAPA) to climate change' 104.

³¹ United Nations 'Education is key to addressing climate change' (*United Nations*) <<https://www.un.org/en/climatechange/climate-solutions/education-key-addressing-climate-change> (accessed 23 May 2022).

³² As above.

also help them in adapting. For example, the growing of climate-resilient crops can salvage their agricultural sector.

In 2021, as a way of amending the consequences of climate change, UNICEF called on governments, businesses, and relevant actors to ensure that children are effectively engaged with climate education materials and that they are further equipped with 'green skills' necessary for climate survival.³³

The people most affected by the impacts of the 'climate crisis' are the 'children and young people, yet they are the least responsible'.³⁴ It is stated that all actors have a duty to protect 'young people and future generations'.³⁵ The UNICEF call also included the need to involve children in decisions related to climate change. However, this is not the case for only children. The majority of South Sudanese are not informed about climate change and its conditions. Therefore, they make decisions, which are not shaped by climate knowledge.

The National Adaptation Programme of Action (NAPA) broadly includes the need to educate people about climate change but points out the issue of finances and capacity building as factors they foresee to hinder their efforts. The government has actually stated that they find it difficult for vulnerable communities to adapt to climate change and its effects for various reasons among them is a 'low level of literacy'.³⁶

South Sudan got independence in 2011 and 2 years after independence, it plunged into civil war until the date of writing this research. Although the Revitalised Peace Agreement has not achieved its core purpose of bringing all conflicting parties to a peaceful solution, it has significantly reduced the intensity of conflict in South Sudan. However, regardless of this relative peace, the country is still unable to prioritise many other issues including efforts to tackle climate change. The country's lack of attempts to prioritise climate change laws and policies can clearly be seen in its initial

³³ Unicef 'Children in South Sudan are at "extremely high risk" of the impacts of the climate crisis - UNICEF' <<https://www.unicef.org/southsudan/press-releases/children-south-sudan-are-extremely-high-risk-impacts-climate-crisis-unicef> (accessed 17 May 2022).

³⁴ As above.

³⁵ As above.

³⁶ As above.

national communication (INC)³⁷ to UNFCCC and second nationally determined contribution (SNDC).³⁸

1.2 Problem statement

South Sudan is one of the countries that mostly suffer from the consequences of climate change. The phenomenon affects various rights including the right to education. By way of example and as indicated above, many schools have been lost to flooding and heavy rainfalls. The country is a state party (SP) to various treaties including the UNFCCC, which stipulates measures of ensuring the eradication or reduction of climatic conditions. One of these ways is through climate education enshrined under article 6 of the UNFCCC. This requires that state parties (SPs) adopt and put into practice educational and public awareness programmes on climate change and effects'. As a consequence, citizens of each SP would be well prepared to mitigate and adapt to climate change. Conversely, the government in its NAPA admits that the country has not domesticated any law to give effect to UNFCCC and has not developed climate change policies and strategies.³⁹ As a result, the majority of South Sudanese are currently unaware of climate change and its related shocks even when they suffer from its consequences. This lack of climate knowledge has left them unguided on how to mitigate or adapt to this phenomenon.

1.3 Research question

This research aims to answer one question: To what extent can the right to climate education be realised in South Sudan? The sub-questions below will play a crucial role in answering the above question.

- a. What are the impacts of climate change in South Sudan?
- b. What are the obligations set out in international, regional, and national frameworks in ensuring climate education?
- c. What are the best practices from other countries concerning climate education?; and
- d. What measures should South Sudan adopt in ensuring climate change education?

³⁷ Government of South Sudan INC (n3)12,237 & 240.

³⁸ 'South Sudan's Second Nationally Determined Contribution | UNDP in South Sudan' (UNDP) <https://www.ss.undp.org/content/south_sudan/en/home/library/Human_Development_Inclusive_Growth/south-sudan-second-nationally-determined-contribution-undp-climate-promise.html (accessed 23 May 2022).

³⁹ Zaken (n14).

1.4 Significance of the research

The research aims to contribute to the literature on climate education with a particular interest in the South Sudanese context. This research is a useful tool in directing the government of South Sudan to adopt climate education policies and legislation. It attempts to guide the government of South Sudan to implement the climate education measures under article 6 of UNFCCC by revising and adopting a curriculum that will include provisions on climate change in basic and secondary schools and at the tertiary level for future decision-makers to understand climate change and shape their decisions in the years to come. The research also seeks to empower community leaders and Civil Society Organisations (CSOs) to engage in campaigns and pieces of training on climate change and its effects. Further, this research is equally relevant to the students at all levels who are the future decision makers of South Sudan's government and to the rural communities who are in desperate need of climate knowledge to help them adapt to climate change and its effects.

1.5 Methodology of the research

The study employs doctrinal and comparative research in analysing and answering the question. The research focuses on the analysis of treaties for instance the UNFCCC, the Paris agreement (PA), the Kyoto Protocol (KP), the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (CESCR) and other treaties. It also relies on climate education jurisprudence and policies that have been employed to advance arguments in this area elsewhere. It further examines and exposes the lack or gaps in South Sudan's national frameworks and institutional guidelines related to the topic. In addition, books, journal articles, and internet sources relevant to the research will be consulted.

1.6 Literature review

There is no available literature specifically on the right to climate education in South Sudan. However, there is scant literature on the right to education generally and the role education can play in addressing various issues. Kuek and others note that the reasons why there is scant literature on the right to education in South Sudan are many.⁴⁰ First, they identified South Sudan as the newest country on the continent and hence most of its literature has not made it to 'professional publications'.⁴¹ Second, studies conducted before the country got independence are

⁴⁰ JC Kuek and others 'Hunger for an Education: A Research Essay on the Case of South Sudan and the Voices of Its People' (2014) 1 *FIRE: Forum for International Research in Education*, 24.

⁴¹ As above.

attributed to Sudan and finally they noted that Sudanese scholars were disinterested in focusing on the 'educational needs' of the Southern Sudanese who are Christians, unlike the Northern Sudanese who are Muslims.⁴²

Kuek and others while arguing for massive education as the means of addressing the health crisis in South Sudan observed that the Country's avoidance of collapse is 'dependent upon the education of its citizens'.⁴³

The Gordon Brown report on education in South Sudan points out the challenges hindering children from accessing education, especially the girl child.⁴⁴ Chief among the challenges are issues related to the ill 'financed education' sector and 'untrained teachers'.⁴⁵ The report stated unequivocally that ensuring the young attend schools and 'getting quality education would help them build a better future for themselves and their country'.⁴⁶ The latter is relevant as there can be no 'better future for the country' with climate change and its effects.

The World Bank in its 2012 report on education in South Sudan called for South Sudanese to massively focus on education for them to be the 'bedrock' of their new country.⁴⁷

Furthermore, in 2012, Akec presented the policy of closing down private institutions as tantamount to the denial of the right to education and encouraged the government to adopt the right policies instead.⁴⁸

South Sudan has legal frameworks that have enshrined provisions generally on the right to education, discussed in chapter three. However, these provisions have not been utilised to extend the right to education to include the right to climate education. In 2022, the government received backlash from South Sudanese intellectuals on the policies related to the dredging of the rivers close to the Sudd areas and the digging of the Jonglei Canal. The current Vice Chancellor of the University of Juba, Prof John Akec, led the resistance online and through conferences against

⁴² As above.

⁴³ As above.

⁴⁴ G Brown 'Education in South Sudan: Investing in a better future (2011), 8'.

⁴⁵ As above.

⁴⁶ Brown (n40)12.

⁴⁷ World Bank 'Education in the Republic of South Sudan : Status and Challenges for a New System' (2012) xiii<<https://openknowledge.worldbank.org/handle/10986/13136> (accessed 11 September 2022).

⁴⁸ A John 'Private Higher Education in South Sudan: Lessons from Africa. - Free Online Library' <<https://www.thefreelibrary.com/Private+Higher+Education+in+South+Sudan%3A+Lessons+from+Africa.-a0292074325> (accessed 11 September 2022).

dredging on the ground that it would harm the Sudd marshlands and it would invite more climatic happenings.⁴⁹ As such, the campaign massively educated South Sudanese about the consequences of dredging on climate change and biodiversity. Consequently, South Sudanese forced the government to reconsider and suspend its policy position on the dredging of rivers and digging of Jonglei Canal.⁵⁰ It is therefore argued that adopting legislation and policies on climate education will further empower South Sudanese in making informed decisions related to climate mitigation and adaptation.

As there is no literature in South Sudan on climate education, this research provides the necessary springboard to encourage further climate-related research in the context of South Sudan. Therefore in the absence of scientific research on the experience of South Sudanese to mitigate the impact of climate change, this dissertation, examines available literature from other countries to propose the inclusion of climate change education in South Sudan's national curriculum for primary, secondary, and tertiary education.

Literature within Africa indicates that the 'first' and most effective 'step' in fighting climate change is to educate people about climate change and its impacts.⁵¹ Alenda-Demoutiez argues that climate education is an important 'element to draw strategies, conduct policies and change behaviours'.⁵² However, to pass information to the people, there are means to be adopted. Alenda-Demoutiez states these means to be both 'direct and indirect'. Direct learning usually is through experience while indirect education is by learning through the newsfeed and other available means.

Kenneth also argues for climate education through activism as one of the new ways of addressing the consequences of climate change in Africa.⁵³

⁴⁹ C Ninrew "The green belt will be as grey as soil" (*Eye Radio*, 19 April 2022) <<https://www.eyeradio.org/the-green-belt-will-be-as-grey-as-soil-prof-akec-warns-over-revival-of-jonglei-canal/> (accessed 19 August 2022).

⁵⁰ Sudans Post 'Experts recommend suspension of dredging-related activities as public consultation closes' (*Sudans Post*, 15 July 2022) <<https://www.sudanspost.com/experts-recommend-suspension-of-dredging-related-activities-as-public-consultation-closes/> (accessed 19 August 2022).

⁵¹ J Alenda-Demoutiez 'Climate change literacy in Africa: the main role of experiences' (2021) 0 *International Journal of Environmental Studies* 1.

⁵² As above.

⁵³ KT Nsah 'Searching for new ways to address climate crisis? African literature has a few answers' (*ThePrint*, 14 May 2022) <<https://theprint.in/pageturner/book-scene/searching-for-new-ways-to-address-climate-crisis-african-literature-has-a-few-answers/955684/> (accessed 19 August 2022).

In addition, David Karienyé and Joseph Macharia, argue that for farmers to adapt to climate change, they need to understand ‘adaptive capacities’ to help them in ‘effective adaptation planning’.⁵⁴

For South Sudan to meaningfully address climate change and its effects, it has to adopt climate education policies and identify institutions that would further this aim. To substantiate this, Adejonwo-Osho argues that for there to be a ‘coherent response to climate change’, there have to be ‘regulatory and institutional frameworks’ in place.⁵⁵ Climate education policies as stated above would, of course, be useful in informing people about climate change and its effects hence this would eventually help in directing them on how to mitigate and adapt to the phenomenon and its subsequent effects.

In adopting policies on climate education, it is argued that teachings of climate change should not be consolidated into a single subject but that they become topics in almost every subject. This is because, at institutions like universities, some consolidated subjects are elective and therefore run the risk of being avoided. Scholars like Camilla and others argue that climate education ought to be a ‘Topic’ scattered in various ‘subjects’ and should equally be part of cross-curricular projects’.⁵⁶ This way, they argue youth will be well furnished with climate knowledge and skills, which will enable them to ‘take’ climate action. To correctly take climate action, the above authors argue that youth need to have sufficient climate ‘knowledge’, a knowledge that would allow them to clearly understand the contributing factors to climate, the possible remedies, and how they could utilise their knowledge as a tool to move everyone towards the goal of ending climate apartheid.

However, the government of South Sudan in developing and adopting climate education policies should not only consider the formal education system but also add informal education as a means of educating people about climate change and its effects. Salmi, Kaasinen, and Suomela provide that climate change and its consequences can be addressed using informal education for instance

⁵⁴ N Oguge and others (eds) *African Handbook of Climate Change Adaptation* (2021), 49.

⁵⁵ Gmshadowtraders and O Adejonwo-Osho ‘Law, Environment, Africa : publication of the 5th Symposium, 4th Scientific Conference, 2018 of the Association of Environmental Law Lecturers from African Universities in cooperation with the Climate Policy and Energy Security Programme for Sub-Saharan Africa of the Konrad-Adenauer-Stiftung and UN Environment’ (*Library of Congress, Washington, D.C. 20540 USA*) <<https://www.loc.gov/item/2020718653/> (accessed 19 August 2022).

⁵⁶ C Schreiner, EK Henriksen and PJ Kirkeby Hansen ‘Climate Education: Empowering Today’s Youth to Meet Tomorrow’s Challenges’ (2005) 41 *Studies in Science Education* 3.

engaging media to play a crucial role as it has been evidenced to be a ‘communicator and modifier of attitudes’.⁵⁷ Additionally, Marla and Yasamin argue that:

The integration of both formal and informal education through schools is the one way to ensure that climate change awareness messages reach into every home and community and that learning is sustained into future generations.⁵⁸

It is presented that the development and adoption of a curriculum that includes the teaching of climate change have to be detailed to cover all important aspects of climate mitigation and adaptation, as this was the case in Singapore.⁵⁹ For example, teaching people to avoid actions that add to climate change causes is an important aspect of climate mitigation. Scholars such as Beach and others appreciate these lines of argument on the positive impact of curricula that includes climate change.⁶⁰

Notably, the idea of states developing curricula that include climate change teachings is an international standard set by UNFCCC and seen in practice as above and South Sudan should follow suit to address its climatic problems. Hence, this research is a pacesetter in contributing to the literature on climate education in South Sudan, as there is no literature in this regard.

1.7 Limitations and scope of the study

This study is limited to the examination of climate education as the means of addressing climate change and its consequences in South Sudan. The UNFCCC requires SPs to adopt national frameworks on ‘educational and public awareness campaigns on climate change’, and guarantees that ‘public participation in programmes and information access on the issue’.⁶¹ The study will capture the connection between climate change and human rights. It will also examine climate education legal frameworks applicable in South Sudan. The study will further examine

⁵⁷ H Salmi, A Kaasinen and L Suomela ‘Teacher Professional Development in Outdoor and Open Learning Environments: A Research Based Model’ (2016) 7 *Creative Education* 1392.

⁵⁸ P Marla A and I Yasamin O, ‘concept note: formal and informal education for disaster risk reduction (2008)’.

⁵⁹ L-C Ho and T Seow ‘Teaching Controversial Issues in Geography: Climate Change Education in Singaporean Schools’ (2015) 43 *Theory & Research in Social Education* 314.

⁶⁰ R Beach, J Share and A Webb ‘Teaching Climate Change to Adolescents: Reading, Writing, and Making a Difference’ (*Routledge & CRC Press*) <<https://www.routledge.com/Teaching-Climate-Change-to-Adolescents-Reading-Writing-and-Making-a-Difference/Beach-Share-Webb/p/book/9781138245259> (accessed 23 May 2022).

⁶¹ United Nations (n 31).

formal and informal climate education measures in other jurisdictions in addressing climate change in South Sudan.

1.8 Structure

This study has five thematic chapters. The first is an introductory chapter and captures the problem statement, research questions, research methodology, literature review, the significance of the research, the scope, and limitations of the research, and its general overview. The second chapter uncovers the impacts of climate change on the rights of the people of South Sudan. The third chapter reviews global, regional, and national frameworks applicable to climate education in South Sudan. The fourth chapter locates best practices from other jurisdictions to guide South Sudan in adopting its legal frameworks. The final chapter then concludes and recommends solutions for the realisation of climate education.

CHAPTER TWO

2. THE IMPACTS OF CLIMATE CHANGE ON VARIOUS HUMAN RIGHTS IN SOUTH SUDAN

2.1 Introduction

The Male' Declaration,⁶² is argued to have first provoked the discussions on the relationship between climate change and human rights.⁶³ The Male' Declaration identified the link between climate change and human rights and as a consequence, it requested the UN Commission for Human Rights(OHCHR) to carry out further investigations on the matter.⁶⁴ The Male' Declaration further requested the OHCHR for its findings to greatly 'complement' the negotiations on the UNFCCC at the time.⁶⁵ Knox argues that the Male' Declaration as it intended from the beginning made ' climate negotiators in the UNFCCC COP look to the OHCHR and Human Rights Council(HRC) for guidance on the issue'.⁶⁶

Resolution 7/23 of the HRC

In 2008, HRC adopted resolution 7/23.⁶⁷ This resolution admitted that there is a negative relationship between climate change and human rights. In addition, Resolution 7/23 further directed the UN OHCHR to undertake discussions and investigations on the nexus between climate change and human rights. As a result, the OHCHR undertook and fulfilled the task and

⁶² The Male' Declaration on the Human Dimension of Global Climate change adopted at the Conference of the Alliance of Small Island States on Preparing for Bali and Beyond, at Malé, Republic of Maldives, on 14 November 2007. The Male' Declaration and its analysis can be found at <https://referenceworks.brillonline.com/entries/international-law-and-world-order/*-SIM_032888 (accessed 30 August 2022).

⁶³ M Limon 'Human Rights Obligations and Accountability in the Face of Climate Change Symposium: International Human Rights and Climate Change' (2009) 38 *Georgia Journal of International and Comparative Law* 543.

⁶⁴ This request is found within the Preamble of the Male' Declaration.

⁶⁵ As above.

⁶⁶ JH Knox 'Linking Human Rights and Climate Change at the United Nations Symposium' (2009) 33 *Harvard Environmental Law Review* 477.

⁶⁷ 'Resolution 7/23 - Human Rights and Climate Change' <<https://www.uncclern.org/resources/library/resolution-7-23-human-rights-and-climate-change/> (accessed 30 August 2022).

filed the report in 2009 on the same.⁶⁸ The report findings indicated that climate change ‘affects the enjoyment of rights’ and mentioned the right to life, right to health, right to water, right to food, and right to self-determination as rights ‘directly’ impacted by climate change. The report further stated that States should mitigate and ensure that communities adapt to climate change and its consequences. The report noted that climate change impacts various human rights, but does not ‘violates human rights’.⁶⁹ However, the report was quick to alternatively argue that even if the impact of climate change does not translate into a violation of human rights, redressing climate ‘harm’ stays as an ‘obligation of the SPs both under the international and national law’.⁷⁰ It is stated that the Male’ Declaration, resolution 7/23, the OHCHR report, and resolution 10/4⁷¹ have clearly established and proved beyond doubt the nexus between climate change and human rights. Although arguments on this relationship have been had before, ⁷²the Male’ Declaration, the above two resolutions, and the report have made it much clearer.

Climate change is one of the leading ‘existential threats’ in this contemporary world. It gravely affects the various rights of human beings as noted above. However, the extent of the effects of climate change is disproportionate for developing countries like South Sudan.⁷³ This is because developing countries do not have the capacity on how to mitigate the devastating impacts of climate change.

This chapter aims to establish evidence-based linkages between climate change and human rights. The right-based approach is selective based on an assessment of the most climate-hit areas in South Sudan.

2.2 The impact of climate change on the right to health

The PA references human rights in its preamble and demonstrates how human rights such as the right to health can be negatively impacted by climate change. The UNFCCC under article 1(1)

⁶⁸ UNHC for Refugees ‘Refworld | Report of the Office of the United Nations High Commissioner for Human Rights on the relationship between climate change and human rights’ (*Refworld*) <<https://www.refworld.org/docid/498811532.html>(accessed 30 August 2022).

⁶⁹ As above.

⁷⁰ As above.

⁷¹ Resolution 10/4. Human Rights and Climate. The resolution was adopted by the Human Council on its tenth session without a vote. Accessed at://efaidnbmnnnibpcaajpcglclefindmkaj/https://ap.ohchr.org/documents/E/HRC/resolutions/A_HRC_RES_10_4.pdf (accessed 30 August 2022).

⁷² S Humphreys and M Robinson *Human Rights and Climate Change* (2009).

⁷³ Limon (n 63).

identifies climate change as a phenomenon that greatly affects human health. To address the issue, the same instrument under article 4(1) (f) directs SPs to adopt policies that would ensure minimisation of the effects of climate change on public health. Just like UNFCCC, South Sudan has ratified the Convention on the Rights of the Child (CRC), the Convention on the Elimination of All forms of Discrimination against Women (CEDAW)⁷⁴ , and the African Charter on Human and Peoples' Rights (ACHPRs).⁷⁵ According to article 16 of the ACHPRs, 'everyone' has the right to health.

Additionally, article 24 of the CRC exclusively recognises the right of children to a high standard of health.⁷⁶ The same provision sub-article 2(c) enshrines the obligations of the SPs. It indicates that for the 'full' realisation of the right to health, SPs should adopt 'appropriate measures' to 'combat diseases and malnutrition...taking into consideration the dangers and risks of environmental pollution'. Furthermore, the CEDAW also encloses the concept of granting women access to health facilities without discrimination.⁷⁷ In addition, it requires SPs to provide 'services' to women including the provision of 'adequate nutrition during pregnancy and lactation'.⁷⁸ The ACHPRs also recognises the right to health.⁷⁹ It further put an obligation on the SPs to adopt 'necessary measures' to 'protect the health of their people and ensure that they receive medical attention...'⁸⁰

Article 31 of the Constitution of South Sudan also encapsulates the right to health and equally directs the State to adopt measures that ensure its promotion and realisation.

⁷⁴ UN 'Treaty bodies Treaties'

<https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?CountryID=215&Lang=en(accessed 27 August 2022).

⁷⁵ African Commission 'African Commission on Human and Peoples' Rights Statepartiestotheafricancharter' <<https://www.achpr.org/statepartiestotheafricancharter> (accessed 10 October 2022).

⁷⁶ Convention on the Right of the Child, UNGA Res 44/25(adopted 20 November 1989, entered into force 20 September 1990). The CRC is a treaty that is almost universally recognised.

⁷⁷ Convention on the Elimination of All forms of Discrimination against Women, UNGA Res 34/180 (adopted 18 December 1979, entered into force 3 September 1981), article 12(1).

⁷⁸ As above, article 12(2).

⁷⁹ The African Charter on Human and Peoples' Rights (adopted on 27 June 1981 and entered into force on 21 October 1986), article 16(1).

⁸⁰ As above (n82), article 16(2).

Flooding in particular is an engine for the easy spread of mosquitos leading to malaria cases.⁸¹ Excessive flooding due to heavy rains, for example, leaves pools of water that then become breeding grounds for mosquitoes.⁸² Mosquitoes are carriers and spreaders of the malaria virus hence the reason why the disease is the most dominant and deadliest in South Sudan.⁸³

Additionally, flooding is a contaminator of water resources, and people who get exposed to this water in most cases end up getting diseases like diarrhea.⁸⁴

Many South Sudanese health facilities have been destroyed by the flood. During the flood periods, most health facilities were swept away tempering with the medicines stored in those facilities.

In addition, the health facilities located in the capital city and not destroyed are not accessible. This is because South Sudan does not have reliable roads. The country has only one tarmac road linking the capital of South Sudan to that of Uganda. Most roads are now under construction and none has been completed. Interestingly, there has been an instance where the tarmac in the Bahr el Ghazel road under construction was 'washed away' by rainwater days after it was tarmacked.⁸⁵ This indicates how heavy the rains were that even today continue to cause floods.

The country currently faces a devastating hunger crisis in the region as a result of climate drought. Excessive and prolonged droughts have led to poor agricultural output hence affecting South Sudanese right to health in so many ways, now and into the future. For example, statistics indicate that 7.2 million South Sudanese are currently in food crisis, a 2.4million are said to be at risk of famine, 1.4million children are 'suffering from a cute malnutrition' and sadly, 483,000 are 'malnourished pregnant or lactating women'.⁸⁶ The causes of this are many but climate-related.

⁸¹ WHO 'South Sudan recommit to enhancing efforts to improve climate change-induced health threats including flooding' (*WHO | Regional Office for Africa*) <<https://www.afro.who.int/countries/south-sudan/news/south-sudan-recommits-enhancing-efforts-improve-climate-change-induced-health-threats-including> (accessed 26 August 2022).

⁸² As above.

⁸³ As above.

⁸⁴ C Laguardia 'World Vision experts reflect on impact of climate change on South Sudan's health system and risks faced by millions - South Sudan | ReliefWeb' <<https://reliefweb.int/report/south-sudan/world-vision-experts-reflect-impact-climate-change-south-sudan-s-health-system> (accessed 16 October 2022).

⁸⁵ T Kuol 'Discover Popular Videos | Facebook' <<https://www.facebook.com/watch/> (accessed 10 October 2022).

⁸⁶ Concern World us 'Hunger in South Sudan: Understanding a decade of food crisis' (*Concern Worldwide*) <<https://www.concernusa.org/story/hunger-in-south-sudan/> (accessed 26 August 2022).

The first is linked to conflict. South Sudan is one of the leading oil-producing countries in Africa.⁸⁷ The country is 98% dependent on the oil sector.⁸⁸ However, because of conflict, some of the oil fields were under the control⁸⁹ or were allegedly destroyed by the rebels.⁹⁰ The money received from the remaining oil fields has been invested in buying weapons to defeat the rebels. This has led to other areas being less prioritised hence leading to hunger crises. Second, apart from oil, the country has very fertile soil suitable for agriculture, but climatic conditions like droughts and floods have over time impeded agricultural practices hence contributing to hunger, starvation, and malnutrition.

As noted above, South Sudan has pastoralist communities and as such depend on livestock. It is noted that the recent flooding led to the death of 'close to 800,000 livestock'.⁹¹ This has contributed to malnutrition and other health-related effects thereby affecting their right to health.

2.3 The impact of climate change on the right to housing

This is a right provided in the international and regional frameworks that are binding on South Sudan. In addition, the Constitution of South Sudan codifies the right to housing.⁹² At the international level, article 25 of the Universal Declaration enshrines the right to housing.⁹³ Although the Universal Declaration remains a declaration, it is argued that some of its provisions reflect international customary law.⁹⁴ Obviously, the umbrella term under which the right to housing is said to be is article 25 of the Universal Declaration is 'adequate standard of living'. With this in mind, it is boldly stated that South Sudanese victims of climate change do not live in favourable conditions set out under article 25.

⁸⁷ B Takpiny "“Despite oil wealth, South Sudan reels under poverty”" <<https://www.aa.com.tr/en/middle-east/-despite-oil-wealth-south-sudan-reels-under-poverty-/2632915> (accessed 26 August 2022).

⁸⁸ Anadolu Agency 'South Sudan misused oil revenues: Government official' <<https://www.aa.com.tr/en/energy/oil/south-sudan-misused-oil-revenues-government-official/33066> (accessed 26 August 2022).

⁸⁹ Denis Dumo 'South Sudan rebels say they seized Unity oilfield, govt says in control' *Reuters* (6 June 2015) <<https://www.reuters.com/article/southsudan-unrest-oil-idUKL5N0YR3CQ20150606> (accessed 26 August 2022).

⁹⁰ Sudan Tribune 'South Sudan: Rebels Deny Destroying Oil-Field Facilities' *Sudan Tribune* (25 January 2015) <<https://allafrica.com/stories/201501250297.html> (accessed 26 August 2022).

⁹¹ UN 'Dire impact from floods in South Sudan as new wet season looms' (*UN News*, 29 March 2022) <<https://news.un.org/en/story/2022/03/1114992>(accessed 26 August 2022).

⁹² The Constitution of the Republic of South Sudan 2011 as amended, article 34.

⁹³ Universal Declaration of Human Rights 1948, article 25.

⁹⁴ J Hohmann *The Right to Housing: Law, Concepts, Possibilities* (2013).

The other useful international treaty on the right to housing South Sudan is a SP to CEDAW.⁹⁵ Article 14(2) provides the right, particularly for rural women. Although there has been a backlash from scholars like Hohmann that the provision does not holistically provide the right for all women,⁹⁶ it is still important to note that its wording is very crucial in South Sudan as the women most affected by the consequences of climate change are those in the rural areas.

In addition, South Sudan is a SP to the CRC.⁹⁷ The CRC under article 27(3) requires SPs to adopt measures that would ensure the realisation of the right to housing for children. Furthermore, article 27(1) provides the right to an 'adequate standard of living' necessary for child development. Unlike the Universal Declaration, the CRC does not specifically give the right to housing as part of an adequate standard of living. However, a closer look at article 27(3) which obligates states to adopt measures for the realisation of the right to housing rest the argument and indicates that the right is fully recognised.

Furthermore, the Convention against Torture to which South Sudan is a SP to,⁹⁸ is another helpful tool. The Convention under article 16 requires SPs to prevent such 'acts' that are 'cruel, inhuman, degrading or punishing, but do not amount to torture'. The effects of climate change have forced many people to leave their homes and go to places where there are no floods. In those places, they do not even have basic needs of human needs. Therefore, it is argued that the effects of climate change have caused the affected communities to live in degrading and cruel places as a result of losing their homes.

At the regional level, South Sudan has ratified the ACHPRs.⁹⁹ The right to housing is provided under articles 14, 16, and 18. The right is not however expressly provided in these provisions, but it has been argued that the right to housing can be read into these provisions.¹⁰⁰

At the national level, article 34 of the Constitution of South Sudan makes provision for the right to housing.

Despite the fact that the right is protected under international, regional, and national legal instruments, it is, however, one of the most impacted rights by the consequences of climate

⁹⁵ UN (n 74).

⁹⁶ Hohmann (n 94).

⁹⁷ UN (n 74).

⁹⁸ As above.

⁹⁹ State parties to the ACHPRs (n 83).

¹⁰⁰ Hohmann (n 94).

change. The number of South Sudanese displaced by flooding is arguably in the range of thousands to millions. For instance, in September 2022, the flood affected ‘more than 909000 people’ in the seven states of South Sudan.¹⁰¹ These consequences equally extended and interfered with the enjoyment of peoples’ right to housing. Additionally, the small town of Maban alone is not included in the seven states above. According to Jesuit Refugee 2022’s report, 200,000 people have been impacted with the majority of these people displaced.¹⁰² The report further shows the devastating destruction of ‘housing, roads, and schools’.¹⁰³ In addition, there have also been damages occurring to the essential ‘assets’ necessary for ‘livelihood’ and as a result, has made these places inhabitable.¹⁰⁴ Communities have attempted to resist the temptations of leaving their homes by building dykes using their bare hands.¹⁰⁵ However, this did not materialise, as the recent flood of 2022, which is still being experienced in some parts of the country, has been more devastating than ever.¹⁰⁶

Besides, some communities are being directly forced to evacuate their homes by climate change, while others have been compelled to leave their homes as a result of conflicts. Clearly, some of these conflicts are linked to climate change as indicated above.

The majority of these displaced people go on and live in camps with associated problems. Although the camps provide safety and security, they are not so distinct from the houses the displacees have left behind. This, therefore, shows the extent to which the impacts of climate change affect the people in South Sudan.

¹⁰¹ AfricaNews ‘Over 900,000 people affected by floods in South Sudan’ (*Africanews*, 12 October 2022) <<https://www.africanews.com/2022/10/12/over-900000-people-affected-by-floods-in-south-sudan/> (accessed 13 October 2022).

¹⁰² Jesuit Refugee Service ‘South Sudan: devastating flooding displaced thousands of people’ (*JRS*) <<https://jrs.net/en/news/south-sudan-devastating-flooding-displaced-thousands-of-people/> (accessed 26 August 2022).

¹⁰³ As above.

¹⁰⁴ As above.

¹⁰⁵ As above.

¹⁰⁶ As above.

2.4 The impact of climate change on the right to education in South Sudan

The right to education is encapsulated in the international¹⁰⁷ and regional treaties¹⁰⁸ acceded to by South Sudan. Consequently, the country has incorporated most of these international and regional treaties into its domestic law. However, in situations, where the country has not domesticated international and regional treaties, they are still binding by virtue of article 9 of the Constitution of South Sudan. Article 9 states that ‘all human rights treaties ratified by South Sudan are an integral part of the laws’ of South Sudan. Besides, the right to education has been stipulated in the Constitution of South Sudan.¹⁰⁹

Climate change continues to harm the right to education in South Sudan. Admittedly, the 2021 flood destroyed many school buildings and forced many children to drop out of schools, as there were no longer learning facilities.¹¹⁰ It is important to note that children’s right to education is one of the most affected rights in South Sudan. South Sudan is ranked 7th by UNICEF in the world in the level of ‘exposure’ of children to the impact of climate change.¹¹¹ Additional data indicate that 400,000 children have dropped out of school since 2021.¹¹² The reasons for their dropout are attributed to many issues including flooding and conflict.¹¹³ As provided above, climate change is a driver of conflict in South Sudan. For example, because of drought, people have been fighting over grazing areas and water points. These conflicts have oftentimes escalated hence displacing a vast number of people.

The recent 2022 flooding has also led to teachers deserting their teaching profession in order to ensure the safety of their families from flooding and its related impacts by relocating them to safe

¹⁰⁷ CRC (n79), article 28; CEDAW (n80), article 10; The Universal Declaration of Human Rights (1948), UNGA Res 217A (iii) (adopted 10 December 1948), art 26.

¹⁰⁸ ACHPR (n82), article 17.

¹⁰⁹ The Constitution (n92), article 29.

¹¹⁰ UN ‘426,000 affected by flooding in South Sudan: UN’ (*The Guardian Nigeria News - Nigeria and World News*, 21 September 2021) <<https://editor.guardian.ng/news/426000-affected-by-flooding-in-south-sudan-un/> (accessed 25 August 2022).

¹¹¹ Unicef ‘Children in South Sudan are at “extremely high risk” of the impacts of the climate crisis - UNICEF’ <<https://www.unicef.org/southsudan/press-releases/children-south-sudan-are-extremely-high-risk-impacts-climate-crisis-unicef> (accessed 24 August 2022).

¹¹² World Vision ‘The impact of South Sudan crises on education’ home-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.wvi.org/sites/default/files/2022-06/Education%20-%20South%20Sudan%20Case%20Study%202022_Final_compressed.pdf (accessed 25 August 2022).

¹¹³ As above.

havens.¹¹⁴ This has led to many children who live in areas mildly affected by climate change not attending classes.

It is noteworthy that most South Sudanese parents are either farmers or pastoralists. The 2021 and 2022 floods have clearly been the most devastating ones in the history of flooding in South Sudan. As a result, they greatly affected farming and subsequently agricultural products. On the other hand, pastoralists have lost their livestock and related products to the flooding. This has made many parents not to afford to send their children to safer areas where they would attend schools.

Regardless of the extent of the impacts of climate change on the right to education, the government has never attempted to do awareness campaigns on how to mitigate and adapt to the phenomenon. In other words, there have been no steps taken by the government to educate people about climate change and its consequences.¹¹⁵ This has worsened the situation further. As a result, this made UNICEF campaign and urge the government of South Sudan to equip children with climate change skills necessary for adaptation and generally for climate mitigation.¹¹⁶ In addition, UNICEF also continues to call for the provision of educational 'services' that will alleviate the consequences of climate change. It is my view that these educational services among them educate people to build infrastructure that would ensure strong resistance to climate shocks like flooding.

Undeniably, South Sudan has an obligation to adopt positive measures in ensuring the realisation of the right to climate education. These positive measures are normally in form of capacity building and training people about climate change.

2.5 The impact of climate change on the right to life.

Many legal instruments protect this right. Article 3 of the Universal Declaration enjoins that everyone has a right to life. As stated earlier, the Universal Declaration is just a declaration however, it is binding on States as its provisions reflect that of international custom. Additionally, the CRC under article 6 makes provision for the right to life and similarly gives an obligation to the SPs to ensure without impediment the protection of the children's right to life. The ACHPRs further provides this right.¹¹⁷

¹¹⁴ As above.

¹¹⁵ Unicef (n 111).

¹¹⁶ As above.

¹¹⁷ State Parties (n 101).

Article 11 of the Constitution of South Sudan entrenches the 'right to life' and further provides that 'no one' should be 'arbitrarily deprived of' this right.

Flooding has led to the death of many people in South Sudan's affected areas.¹¹⁸ These deaths have occurred in many ways. It is clear that some died from flooding by drowning.¹¹⁹ Literature also shows that floods bring animals like snakes closer to the people.¹²⁰ As a result, many people were bitten and succumbed to snake bites. In addition, many have also died of diseases associated with the presence of flooding.¹²¹

Climate shocks as provided above are being experienced in many ways. Therefore, in as much as many people have died from circumstances related to flooding, many have also died from factors linked with drought. Droughts in South Sudan have resulted in the loss of farm products and the death of cattle. This has created 'food insecurity' in the country and led to many dying of hunger.¹²²

It is common knowledge that South Sudan is one of the countries affected by conflicts. These conflicts are easily tied to political factors as the causes. However, it should be noted that droughts are drivers of conflict in South Sudan. South Sudanese communities largely depend on agriculture and pastoralism. Because of droughts, many pastoralists abandoned their original areas in search of greener pastures and as a consequence, they face stiff competition from the areas they go to hence resulting in infighting over grazing areas. Sometimes, the fight is not over the grazing areas, it is induced by starvation and hunger. The Majority of youth find it unreasonable to starve when there are neighbouring communities with enough food to solve their hunger issues.¹²³

¹¹⁸ D Machol 'Official: At least 20 people have died in South Sudan floods' (*AP NEWS*, 30 September 2021) <<https://apnews.com/article/africa-floods-united-nations-south-sudan-riek-machar-93a7c599819f6a4e4f21cf9837e70a6> (accessed 25 August 2022).

¹¹⁹ As above.

¹²⁰ UN (n 110).

¹²¹ H Pasquale and others 'Malaria control in South Sudan, 2006–2013: strategies, progress and challenges' (2013) 12 *Malaria Journal* 374.

¹²² Reliefweb 'Christian Aid responds to reports of deaths in South Sudan from starvation - South Sudan | ReliefWeb' <<https://reliefweb.int/report/south-sudan/christian-aid-responds-reports-deaths-south-sudan-starvation> (accessed 31 August 2022).

¹²³ HealthNet TPO 'Understanding South Sudan: Cattle Raiding' (*HealthNet TPO*) <<https://www.healthnettpo.org/en/news/understanding-south-sudan-cattle-raiding>(accessed 25 August 2022).

Obviously, there has been resistance from the said communities who have always been willing to fight back.¹²⁴ These infightings continue to cause death to pastoralists in South Sudan.¹²⁵

2.6 The impact of climate change on the right to water

It is worth noting that this is a right, which is less recognised in the South Sudan national laws. The Constitution of South Sudan does not provide for this right. In the same vein, the right to water faces the same issue of recognition both at international and regional levels. This is not to say it has not been recognised at all. However, in legal instruments where it has been strongly recognised, some countries including South Sudan are not SPs to these treaties.¹²⁶ South Sudan is neither a SP to the ICCPR¹²⁷ nor the CESCR.¹²⁸ In addition to the treaties that expressly and impliedly provide the right, the Committee on Economic, Social, and Cultural Rights (The Committee) has issued General Comment No.15 recognising the right to water as a right.¹²⁹ The committee drew its interpretation from articles 11 and 12 of the CESCR. Unfortunately as has already been stated, South Sudan is not a SP to CESCR and the comments made by the Committee generally are soft laws and do not bind the state.¹³⁰

Despite the fact that it is not an express right in the South Sudan national Constitution, it is important to note that there is no hope lost. The UNFCCC requires SPs to respect human rights when developing policy guidelines. In addition, article 4(e) of the UNFCCC directs SPs to commit themselves to fight climate change by 'developing and elaborating policies on water resources'. Furthermore, article 24(2) (c) of the CRC requires that in order to realise the right to health SPs should provide 'clean drinking water' without compromising environmental health.

¹²⁴ As above.

¹²⁵ As above.

¹²⁶ UN (n 74).

¹²⁷ Un 'Treaty bodies Treaties'

<https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?Treaty=CCPR&Lang=en(accessed 27 August 2022).

¹²⁸ 'International Covenant on Economic, Social and Cultural Rights' *Wikipedia* (2022)

<https://en.wikipedia.org/w/index.php?title=International_Covenant_on_Economic,_Social_and_Cultural_Rights&oldid=1095024006 (accessed 27 August 2022).

¹²⁹ UC on Economic and S and CR (29th sess : 2002 : Geneva) 'General comment no. 15 (2002), The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)'.
¹³⁰ SMA Salman and SA McInerney-Lankford *Human Right to Water: Legal and Policy Dimensions* (2004).

On 25 January 2013, South Sudan acceded to the four Geneva Conventions of 1949 (GCI-IV) and its Additional Protocols.¹³¹ Some of these Conventions provide and discuss the right to water. For instance, article 20 of the third Geneva Convention (GCIII)¹³² states that ‘the detaining’ authority has an obligation to ‘supply prisoners with ...potable water’ during evacuation. The language indicates the ‘detaining power’ has the duty while the detained is the right holder. Article 26 of the GCIII reiterates the language of article 20 above. It states that ‘detaining power’ has an obligation to make available enough ‘drinking water’ for ‘prisoners’ when taking their food.

Article 29 of the GCIII further requires ‘detaining power’ to provide water for their ‘personal toilets and washing the laundry’. This is in relation to their own hygiene in order to remain healthy. Again, article 46 of the GCIII provides that during the transfer of the detainees, the ‘detaining power’ is to consider the climatic conditions and ensure the provision of water to keep them in a state of health.

The Fourth Geneva Convention (GCIV) repeats the provisions of GCIII however in relation to the civilian persons detained.¹³³

As stated above, the right to water is argued to be less recognised in South Sudan because it has not been provided in the Constitution. The reason why it is not being argued that the right is completely not recognised however is that the CRC and the GCI-IV of 1949 have been ratified by South Sudan. In addition, the CRC and the GCI-IV have been given effect by transforming them into national legislation. The child Act of 2008 reflects the CRC provisions while the Geneva Conventions Act of 2012 has incorporated the provisions of GCI-IV and their additional protocols.

Hence, children and those who qualify or are affected by conflict benefit from both the Child Act and the Geneva Conventions Act. The construction that can be made in relation to the right to water from the Child and Geneva Conventions Act does not extend to other categories of people nor does it have the power to direct major policies related to water protection in South Sudan.

¹³¹ ‘South Sudan: International treaty status’ (*International Commission of Jurists*)

<<https://www.icj.org/cijlcountryprofiles/south-sudan/south-sudan-introduction/south-sudan-international-treaty-status/> (accessed 16 October 2022).

¹³² Geneva Convention Relative to the Treatment of Prisoners of War of 12 August 1949.

¹³³ Geneva Convention Relative to the Protection of Civilian Persons in Time of War of 12 August 1949, arts 85, 89 and 127.

Literature indicates that climate change continues to have consequences on water resources in South Sudan. For example, flooding has been identified to be ‘contaminating’ water resources.¹³⁴ Further, during droughts times, the availability of water becomes an issue and as such, has been identified as a driver of conflict among the pastoralist communities in South Sudan.

2.8 Conclusion

Climate change as evidenced above affects the enjoyment of various fundamental rights. This research has clearly identified the rights and demonstrated the extent to which these rights located at different legal instruments are being affected by climate change in South Sudan. As a result, the next chapter will review the strength or inefficiency of legal instruments on climate education in South Sudan.

¹³⁴ J Dora, L Emmanuel and B Xu ‘Impact of climate change on water in south Sudan’.

CHAPTER THREE

3. FRAMEWORKS ON CLIMATE EDUCATION APPLICABLE IN SOUTH SUDAN

3.1 Introduction

This chapter reviews and unpacks the concept of climate education as a means of addressing climate change and its effects. In doing so, the chapter considers global, regional, and national instruments applicable in South Sudan, with the aim to establish and guide the government on climate education. Thus, the overarching aim of this chapter is twofold. First, the chapter discusses the global and regional frameworks, ratified by South Sudan, and the national frameworks developed and enacted by the government as a way of domesticating the international frameworks. The chapter also flags other international instruments, such as the ICESCR and the African Children's Charter, relevant to the subject of this dissertation that South Sudan is yet to ratify. The intention here is to highlight and briefly discuss the added advantage South Sudan will have if these instruments are ratified.

3.2 Global legal frameworks

The most prominent international treaties on the right to climate education are the UNFCCC¹³⁵ and the PA.¹³⁶ Supplementing these treaties are the Action for Climate Empowerment (ACE) Agenda,¹³⁷ the Doha Work Programme (DWP) on article 6 of UNFCCC,¹³⁸ The Lima Ministerial Declaration on Education and Awareness-raising (LMDEAR),¹³⁹ the Bali Principles on climate justice¹⁴⁰ (BPCJ) and Education for Sustainable Development (ESD) and Climate Action Agenda.¹⁴¹

¹³⁵ Entered into force on 21 March 1994, the UNFCCC has a near universal ratification with 197 State Parties.

¹³⁶ The Paris Agreement 2015 was adopted at COP21 on 12 December 2015 and entered into force on 4 November 2016. It has a near universal ratification with 192 State Parties.

¹³⁷ The Parties to UNFCCC adopted the ACE in June 2015 at the 3rd annual dialogue on article 6 of UNFCCC in Bonn.

¹³⁸ The DWP was adopted in 2002 by the COP11 and was later extended by COP18 in 2012 for 8 years.

¹³⁹ The Lima Ministerial Declaration was adopted in 2014 by COP20 in Lima.

¹⁴⁰ The International Climate Justice Network adopted the Bali Principles of Climate Justice on 29 August 2002.

¹⁴¹ The World leaders adopted the SDGs on 25 September 2015.

The ESD and Climate Action stem from the SDGs 2030 agenda with 'climate action' as one of its action plans. Other pertinent treaties relevant are the Convention on Biological Diversity (CBD),¹⁴² CRC, CEDAW, and the Universal Declaration. The Universal Declaration as noted earlier is not a treaty but its provisions reflect international customary law and it has a provision on the right to education, which calls on the member states of the UN to realise the right to education for everyone by making it available and accessible.

There are other global treaties, which are obviously relevant but have not been ratified by South Sudan. These treaties include but are not limited to the KP, which is currently not operative,¹⁴³ the CESC, ¹⁴⁴ ICCPR,¹⁴⁵ and the UN Convention on the Rights of Persons with Disabilities (CRPD).¹⁴⁶

3.2.1 The UNFCCC

South Sudan ratified UNFCCC on 17 February 2014.¹⁴⁷ Article 6 of this Convention entrenches elements that the SPs should undertake to ensure the purpose of the UNFCCC, which is ensuring climate change mitigation and adaptation. The elements of addressing climate change mitigation

¹⁴² The Convention on Biological Diversity was adopted on 22 May 1992 and entered into force on 29 December 1993. It has near universal ratification with 168 Parties.

¹⁴³ UN 'United Nations Treaty Collection'

<https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-a&chapter=27&clang=_en (accessed 8 September 2022). The Kyoto Protocol was adopted on 11 December 1997 and entered into force on 16 February 2005.

¹⁴⁴ UN 'Treaty bodies Treaties'

<https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/treaty.aspx?treaty=cescr&lang=en (accessed 11 October 2022). The CESC was adopted in 1966 and entered into force in 1976.

¹⁴⁵ UN 'Treaty bodies Treaties'

<https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?Treaty=CCPR&Lang=en> accessed 11 October 2022. The ICCPR was adopted by UNGA Res 2200A (xxi) on 16 December 1966 and entered into force on 23 March 1976.

¹⁴⁶ UN 'Convention on the Rights of Persons with Disabilities (CRPD) | United Nations Enable'

<<https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html> (accessed 11 October 2022). The CRPD was adopted by UNGA on 13 December 2006 and entered into force on 3 May 2008.

¹⁴⁷ UN 'United Nations Treaty Collection'

<https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=IND&mtdsg_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=_en (accessed 11 October 2022).

and adaptation include 'climate education, training, public awareness, public participation, public access to information and international cooperation'.¹⁴⁸

According to article 6 of the UNFCCC, the aim of climate education is to ensure that people get to know about climate change. This helps ensure that people learn how to mitigate and adapt to climate change. Therefore, in as much as the above elements appear to be stand-alone areas, they are crucial in the realisation of the objectives of climate education. For instance, educating children alone without the training and involvement of those not in schools will not benefit the purpose of climate education. In addition, availing information on climate change to only young people at schools is not also effective to the greatest extent without availing it to all. Public awareness campaigns and international cooperation also further the aim of climate education. The former targets everyone and this enhances the knowledge gotten by those at schools and at the same time gives fresh knowledge to those not able to attend schools. The latter is crucial in a situation where other jurisdictions have better understood the causes and effects of climate change and have developed advanced educational tools and better knowledge on climate change and sharing all this with other states not well versed with climate change is useful in mitigating and adapting to climate change. As a result, all these elements will be discussed below. The discussion begins with climate education and is then followed by all the other elements located under article 6 of the UNFCCC.

3.2.1.1 Education

Under the UNFCCC, SPs are encouraged to commit themselves to 'promoting education' in their respective jurisdictions.¹⁴⁹ Article 6 of the UNFCCC requires SPs to fulfill this commitment by developing or entrenching educational measures on climate change into its existing legal frameworks. The most important thing to contextualise here is what role does these policies on education play in climate mitigation and adaptation.

Firstly, education is literally defined as:

¹⁴⁸ N143, article 6.

¹⁴⁹ As above, article 4(1) (I).

The act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life',¹⁵⁰ either at 'the universities, schools or colleges.'¹⁵¹

The life ahead is projected to be bleak because of climate change.¹⁵² As such, people will only be well placed to address climate change and its adverse impacts if they are equipped with climate change knowledge and skills.¹⁵³

In order to realise the right to climate education, South Sudan should develop new curricula in line with article 6 of the UNFCCC. The new curricula to be developed should be threefold. The first should target the teaching of climate change at the primary level, the second at the secondary level, and the third at the tertiary level.

3.2.1.2. Training

Article 4(1) (i) of the UNFCCC mandates SPs to commit to taking climate action by 'promoting and cooperating in training'. In order to put their commitment to training into action, SPs should adopt national measures to equip their citizens with the climate knowledge necessary for climate survival.¹⁵⁴

Regrettably, South Sudan has not developed policies as directed above. In fact, the literature examined earlier from South Sudan indicates that the country faces a devastating situation in the educational sector, as many teachers largely remained 'untrained'.¹⁵⁵ Obviously, the realisation of climate education can never be achievable with the absence of those who can transmit the

¹⁵⁰ Dictionary.com 'Education Definition & Meaning | Dictionary.com'

<<https://www.dictionary.com/browse/education> (accessed 9 September 2022).

¹⁵¹ Oxford learner's Dictionary 'Education noun - Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com'

<<https://www.oxfordlearnersdictionaries.com/definition/english/education> (accessed 9 September 2022).

¹⁵² The World Bank 'World Bank Climate Change Knowledge Portal'

<<https://climateknowledgeportal.worldbank.org/> (accessed 10 October 2022).

¹⁵³ S Camilla, HK Ellen and JKH Pal 'Climate Education: Empowering Today's Youth to Meet Tomorrow's Challenges'7-8.

¹⁵⁴ UNFCCC (143), article 6 (a) (iv).

¹⁵⁵ Reliefweb 'Teacher shortage besets South Sudan's schools - South Sudan | ReliefWeb'

<<https://reliefweb.int/report/south-sudan-republic/teacher-shortage-besets-south-sudan%E2%80%99s-schools> (accessed 10 October 2022).

knowledge of climate change. Therefore, South Sudan must ensure that teachers are trained and are equipped, and motivated to meaningfully carry out their duties without fail.

3.2.1.3 Public Awareness

The UNFCCC additionally stipulates public awareness as a commitment to be realised by SPs.¹⁵⁶ To realise it, SPs are required to adopt and implement measures on ‘public awareness’ in curbing climate change.¹⁵⁷ It is noted that education is an important tool in enabling public awareness.¹⁵⁸ South Sudan has not adopted measures on either public awareness or climate education. Hence, should ensure the realisation of this element by developing public awareness policies and legislation. It is proffered that this is an element, which speaks to the heart of informal education. Therefore, measures adopted should consider and include the roles of CSOs, community leaders at the local levels, and media houses in enhancing climate mitigation and adaptation initiatives.

3.2.1.4 Public access to information

Public access to information is provided as an obligation for all the SPs to UNFCCC.¹⁵⁹ Article 6 (a) (ii) provides that for this obligation to be fulfilled, SPs should ensure the establishment of mechanisms that would arm the public with climate information for mitigation and adaptation. For this to happen, parties to UNFCCC should provide information on the triggers, effects, and probable solutions to climate change. However, a country is an artificial entity and therefore only acts through its government.¹⁶⁰ Hence, there should be legal mechanisms vested with the power of collecting and revealing climate change information to the people. The Constitution provides the right to access information however, there are no procedural mechanisms in South Sudan’s legal frameworks that guarantee access to information. As such, mechanisms in this regard should be adopted to give citizens opportunities to act towards achieving the objectives of UNFCCC. However, not all this can happen without employing education as the tool for revealing information on climate change as it has clearly been established that climate education and access to information intertwine.

¹⁵⁶ UNFCCC (n143), article 4 (1) (i).

¹⁵⁷ As above, article 6 (a) (i).

¹⁵⁸ Camilla (n161).

¹⁵⁹ UNFCCC (n143).

¹⁶⁰ ‘COUNTRY | meaning, definition in Cambridge English Dictionary’

<<https://dictionary.cambridge.org/dictionary/english/country>> accessed 10 October 2022.

3.2.1.5 Public participation

Public participation is one of the cardinal elements provided as a duty to be enforced by the SPs under UNFCCC.¹⁶¹ This element requires states to ‘promote and facilitate’ it.¹⁶² To ensure this, SPs should engage with the public in public discourses on climate change. Recommendations that come out from these discussion forums on climate change should be used to develop strategic climate-oriented policies, and regulate and guide the state’s efforts to curb the impact of climate change. Public participation is an element that enables everyone to participate in decisions that affect them. Therefore, there should be laws and policies that promote this and ensure there is no hindrance in realising this element. Again, this is an area where CSOs and community leaders together with the government should use climate educational tools to mobilise people to take part in debates on climate change and climate solutions.

3.2.1.6 International Cooperation

Article 4(1) (i) of the UNFCCC, outlines the rationale of international cooperation in developing strategies to curb the impact of climate change. The UNFCCC provides that in order to enhance the fight against climate change, SPs should ‘develop’ and share among themselves ‘educational’ tools on ‘climate change and its effects’.¹⁶³ Further, States should cooperate in implementing ‘educational programmes’ on ‘climate change and its effects’.¹⁶⁴ While this is done, special consideration should be directed to empowering national institutions, and sharing of personnel ‘to train experts’ on climate change especially towards ‘developing countries’.¹⁶⁵ This cooperation should also extend to public awareness besides education and training.

South Sudan as a developing country and as required by article 6 of UNFCCC has been receiving financial support from developed countries and international organisations to help those affected by climate change.¹⁶⁶ However, this kind of support is not technical and by virtue of South Sudan

¹⁶¹ As above.

¹⁶² UNFCCC (n143) (iii).

¹⁶³ UNFCCC (n143) (b).

¹⁶⁴ As above.

¹⁶⁵ As above.

¹⁶⁶ UNDRR ‘South Sudan: USD 9M project to deal with climate change | PreventionWeb’

<<https://www.preventionweb.net/news/undp-unep-south-sudan-govt-sign-usd-9m-project-deal-climate-change>
(accessed 11 October 2022).

being a very corrupt country, the donated monies are unlikely invested in addressing climate change.¹⁶⁷ Hence, it is recommended that future support should be more technical than financial.

3.2.2 The PA on Climate Change

South Sudan ratified the PA on 23 February 2021.¹⁶⁸ The PA although it is referred to as an agreement is a binding international agreement that bound the SPs. The PA has a provision, that the author views to be identical to article 6 of the UNFCCC.¹⁶⁹ In fact, literature indicates that the beginning of the life of article 12 of PA is traced 'back' to article 6 of UNFCCC.¹⁷⁰ This provision of PA obligates States to cooperate in the realisation of the elements of climate education, training, public awareness, public participation and public access to information.¹⁷¹ Notably, the intention of article 12 of PA is to engage and 'empower' actors through all the elements enshrined under it to ensure the reduction of 'increase in global temperature rising'.¹⁷²

The commentary to article 12 of the PA clearly expounds on each element and the role they play in the war against climate change.¹⁷³ The commentary notes that climate education plays a crucial role in 'knowledge' consumption and output about climate change 'causes, effects, dangers, and threats'.¹⁷⁴ It also states that education shapes the 'understanding' of people and as such, people who have understood climate change would obviously 'change their behaviours' and ultimately take actions in climate prevention, mitigation, and adaptation. The commentary further identifies primary and secondary schools as well as universities as places where climate learning can effectively take place. However, this cannot be realised without introducing new curricula that have incorporated climate change learning and training.¹⁷⁵

¹⁶⁷ '2021 Corruption Perceptions Index - Explore the results' (*Transparency.org*)

<<https://www.transparency.org/en/cpi/2021> (accessed 15 October 2022).

¹⁶⁸ 'United Nations Treaty Collection'

<https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en (accessed 8 September 2022).

¹⁶⁹ The Paris Agreement 2015, article 12.

¹⁷⁰ G Van Calster and L Reins *The Paris Agreement on Climate Change: A Commentary* (2021).

¹⁷¹ The Paris (n 169).

¹⁷² Van Calster and Reins (n 170).

¹⁷³ As above.

¹⁷⁴ As above.

¹⁷⁵ As above.

In relation to training, the commentary notes the definition of training, described it as ‘learning by doing’, and cites ‘ability’ to carry out ‘climate’ information analysis, and ‘conducting inventories of national emissions as examples’¹⁷⁶

Of other particular concern is the realisation of the element of public awareness under the PA. The commentary notes ‘awareness as a means of learning and adopting behaviour’ with the sole purpose of mitigating and ‘incorporating actions to reduce GHG emissions’.¹⁷⁷ If one has a closer look at this, one would note the element of climate education and public awareness as seamlessly related. It is opined that in order to effectively realise this, national legal frameworks that clearly direct how to reach out to everyone in South Sudan have to be developed. These frameworks should clearly consider CSOs, local community leaders, and media houses as conduits of reaching out to everyone. The commentary on the PA generally notes that education, public access, and public participation have a common ‘aim’ of ‘increasing the level of knowledge and awareness’. However, the commentary particularly unpacks that ‘public participation and public access to information are the basis of individual claims against the States as they play a significant role in peoples’ participation on public issues’.¹⁷⁸ The element of cooperation is explained above and therefore deserves no repetition. Nevertheless, by way of example, the commentary notes the commonwealth education hub to demonstrate what international cooperation entails.

The PA offers more advantages to developing countries than the UNFCCC in relation to climate education. The PA for example emphasises the magnitude of climate change and the need to cooperate and take action on it by repeating the elements of climate education, training, public participation, and public access to information stipulated in its preamble and article 12 of the PA. It is noted that some States attempted to ensure that there was no ‘repetition’ but this attempt was ‘objected to’ by the African States who argued that this repetition was important as it demonstrates the usefulness of the elements in addressing climate change.¹⁷⁹

Additionally, article 12 of the PA is normally read together with article 7 of the PA.¹⁸⁰ The provision clearly emphasises the need to put developing countries at the centre stage in terms of international cooperation, financial and technical support on adaptation efforts and refers to the

¹⁷⁶ As above.

¹⁷⁷ As above.

¹⁷⁸ As above.

¹⁷⁹ *The Paris Agreement on Climate Change: Analysis and Commentary*, 296.

¹⁸⁰ As above.

Cancun Adaptation Framework.¹⁸¹ The contention is that South Sudan should make use of these two complementing treaties in adopting climate education measures and in engaging with the international community.

3.2.3 Analysis of supplementing frameworks: ACE, DWP, LMDEAR and SDGs

These frameworks are subsidiaries of the UNFCCC, PA, and KP. They expound and emphasise the parent laws above and how to realise them in unequivocal terms and as a result are going to be analysed as herewith below.

The aim of the ACE is to address climate change using elements of ‘education, training, public awareness, public participation and public access to information’. In fact, it has been regarded that any ‘action taken under article 6 of UNFCCC’ should be called ACE.¹⁸² The guidelines of ACE advance that through education and other elements, ‘understanding and participation’ of people in addressing climate related problems is the way forward. The guidelines are also there to aid the ‘work’ of National Focal Points (NFP) in ‘implementing ACE activities’.¹⁸³ Other instruments like the SDGs, the Global Action Programme (GAP) for ESD and the Bali Principles reiterate the essence of ACE.¹⁸⁴

The DWP in its observations clearly states the implementation of elements found in article 6 of UNFCCC as means of achieving the objective of UNFCCC. The work in its guiding principles sets out that in order to achieve the intentions of article 6 of the UNFCCC, it has to be ‘country driven’.¹⁸⁵ The document further lays out steps on how to implement the elements and encourages a high level of partnership between parties both at the international and regional levels.¹⁸⁶ It states that this cooperation and partnership should also include intergovernmental (IGOs) and non-governmental organisations (NGOs). It further discusses ‘support’ and points out prioritisation of areas that would require immediate ‘funding’.¹⁸⁷ While this is the case, the document encourages

¹⁸¹ The Cancun Adaptation Framework to UNFCCC is a Framework that aims to enhance action on adaptation (adopted by COP16 on 10 December 2010).

¹⁸² ‘Action for Climate Empowerment Guidelines | UNFCCC’ <<https://unfccc.int/topics/education-and-outreach/resources/ace-guidelines>> (accessed 14 September 2022).

¹⁸³ ‘Action for Climate Empowerment Guidelines | UNFCCC’ <<https://unfccc.int/topics/education-and-outreach/resources/ace-guidelines>> (accessed 8 September 2022).

¹⁸⁴ As above.

¹⁸⁵ DWP (n146).

¹⁸⁶ As above.

¹⁸⁷ As above.

the 'strengthening of national institutions and policies'.¹⁸⁸ It additionally stresses the importance of State reporting and that countries should be guided by these elements when reporting.¹⁸⁹ It also emphasises the role of all actors including all kinds of organisations in state reporting and progress on the elements.¹⁹⁰

The LMDEAR references article 6 UNFCCC and article 10 of the KP.¹⁹¹ It further reaffirms the pivotal role of DWP.¹⁹² The declaration calls SPs to 'develop educational strategies' to tackle climate change.¹⁹³

The agenda 2030 on the SDGs [agenda 2030] has two goals, which are crucial for this discourse. The first is goal number 4, which is on education, and the other is goal number 13, which is on climate action.

The SDGs through its goal number 4 note the growing concern of the majority of children not attending schools, especially in developing countries, most of which are in Africa.¹⁹⁴ The goal identifies natural disasters as causes of this concern.¹⁹⁵ To address the issue, the goal identifies 'education as one of the most powerful tools for sustainable development'.¹⁹⁶

In addition, the SDGs through goal number 13 establish the magnitude of the threat climate change imposes on humans and the environment. As a result, the goal intends to gather money for developing countries to ensure that they adapt to climate change and 'invest in low carbon development'.¹⁹⁷

3.2.4 Analysis of other relevant international treaties

South Sudan is a SP to CBD.¹⁹⁸ Article 13 of CBD obligates SPs to develop 'educational and public awareness programmes' on how to conserve and sustainably 'use' biodiversity. The CBD

¹⁸⁸ As above.

¹⁸⁹ As above.

¹⁹⁰ As above.

¹⁹¹ The Lima (n147).

¹⁹² As above.

¹⁹³ As above.

¹⁹⁴ UNDP 'Sustainable Development Goals | United Nations Development Programme' (*UNDP*) <<https://www.undp.org/sustainable-development-goals> (accessed 14 September 2022).

¹⁹⁵ As above.

¹⁹⁶ As above.

¹⁹⁷ As above.

¹⁹⁸ B Unit 'List of Parties' <<https://www.cbd.int/information/parties.shtml> (accessed 8 September 2022).

encourages protection and ‘understanding’ of biological diversity. This understanding can be effected by including biodiversity teachings in the educational and awareness programmes as well as dissemination of information through other conduits like ‘media’. It further requires SPs to cooperate in this context.

The CRC under article 28 recognises the right of every child to education. It also, calls SPs to ‘promote and cooperate’ on matters related to education. In addition, article 29 explicitly provides that education should be meant to guide the child to develop and become a ‘responsible’ citizen. Furthermore, the intention of education in the wording of article 29 should be to teach children ‘to live a responsible life and respect the environment’. Therefore, education is crucial in preparing children for climate action.

Article 10 of CEDAW directs all SPs to adopt measures that would ensure that women including girls are not discriminated against in accessing education. This is essential in the sense that educating women on all matters including climate change would be useful in guaranteeing their participation in climate change awareness and decision-making.

The Universal Declaration under article 26 recognises education as a human right. It also regards it as a means of ‘strengthening respect for human rights’. It is known that climate change greatly affects human rights and therefore an education that addresses this, meets the objective of article 26. It also indicates that education aims to ‘promote understanding’. The understanding referenced could be one between States and individual citizens about issues that affect them.

Concisely, the elements under article 6 of the UNFCCC that are enablers of education are also found in these aforesaid treaties.

3.3 Regional legal frameworks

The most relevant treaties at the regional level that explicitly or impliedly advance the argument of climate education as a solution are the ACHPRs, the African Union Convention for the Protection and Assistance of Internally displaced Persons (The Kampala Convention), the Treaty Establishing East African Community (EAC treaty), Organisation of African Unity Refugee Convention (OAU-RC) and the AU guidelines on climate change.

Other regional treaties, which are relevant but have not been ratified by South Sudan, are the African Charter on the Rights and Welfare of the Child (ACRWC),¹⁹⁹ the Protocol to the ACHPRs

¹⁹⁹ The African Children’s Charter was adopted in 1990 by the OUA and entered into force in 1999.

on the Rights of Women in Africa (Maputo Protocol),²⁰⁰ the African Disability Protocol²⁰¹ and the African Youth Charter.²⁰²

3.3.1 Analysis of the Regional Treaties

3.3.1.1 The ACHPRs

The ACHPRs to which South Sudan is a SP to, is very crucial in the realisation of climate education. ACHPRs recognises the right of everyone to education under article 17(1). To attain this right article 1 of the ACHPRs requires SPs to 'adopt laws and other measures' in order to ensure the realisation of the rights recognised. The provision of the right to education does not exclude the right of everyone to climate education. Therefore, States should interpret this provision broadly to include realisation of the right to climate education.

In addition, article 25 calls for the States to 'promote' all the rights recognised 'through education, teaching, and publication'. Further, SPs are to ensure that the message on all these rights reaches out to everyone. The ACHPRs recognises other elements like the right to participation and to access information. The argument that these elements are enablers of the realisation of the right to education is completely addressed above.

3.3.1.2 The Kampala Convention

The Kampala Convention, which South Sudan has ratified, is the only regional treaty that enjoins the rights of internally displaced persons. This treaty is the only leading reference even at the international level as there is no international treaty on internally displaced persons. In terms of article 9, the Convention directs SPs to ensure the provision of education to all affected people either by human-induced or natural factors. In addition, the Convention requires States to engage with displaced persons and ensure that they participate in discussions on problems and solutions relevant to 'protection and assistance and other matters. Consequently, SPs should undertake measures to realise these commitments. Article 5 makes particular reference to climate change as one of the disasters that States should solve by adopting measures. Undoubtedly, the measures to be adopted should include measures on climate education. Also in solving issues related to displacement, SPs should cooperate and support States that are devastated by disasters causing displacement. This support should also extend to climate change displacees. To recapitulate, the Kampala Convention is an important and relevant treaty in furthering

²⁰⁰ The Maputo Protocol was adopted on 1 July 2003 and entered into force on 25 November 2005 by OUA.

²⁰¹ Adopted by the AU on 29 January 2018 and has not entered into force.

²⁰² Adopted by the AU on 2 July 2006 and entered into force on 8 August 2009.

arguments on the realisation of climate education. South Sudan should transform this treaty into its domestic law for it to be effective as required by article 3 of the treaty.

3.3.1.3 The EAC treaty

The EAC treaty in its article 5 indicates that the aim of the SPs to the EAC treaty 'shall be to develop policies and programmes' in ensuring 'cooperation' in all areas. The Parties to this treaty including South Sudan should obviously utilise this provision as a basis for cooperating in developing climate education programmes and ensuring that these programmes are shared among the SPs. Article 8 provides direction on how to execute the objectives stipulated under article 5. It includes the adoption of laws and the setting up of relevant institutions that would monitor the implementation of the treaty objectives.

3.3.1.4 The OAU-RC

Article 7 of the OAU-RC requires the 'cooperation of national authorities with the OAU' on issues related to refugees. This cooperation can be interpreted to extend to addressing causes of refuge including climate education as a means of solving climate change as a cause of refuge.

3.3.1.5 AU Green Recovery Action Plan (AU-GRAP)

One of the focus areas under GRAP is climate financing. It states that climate financing should be prioritised and that funds should be directed toward climate mitigation and adaptation. To this end, climate education is one of the ways of addressing climate mitigation and adaptation. Therefore injecting funds received for climate change into programmes on climate education is useful in achieving the mission. The GRAP also provides that lack of participation from all 'can increase inequalities and decrease effectiveness' in fighting climate change. As such, people should be educated about how their inclusion is essential in achieving the goal of climate mitigation and adaptation.

It is therefore unequivocally stated that AU-GRAP is an important tool for activists that should be used to encourage AU member states to adopt policies and programmes on climate education.

3.4 Challenges posed by non-ratification of key treaties on realisation and protection of human rights

South Sudan has not ratified most of the treaties that normally have provisions on human rights realisation and protection. The CESCRs for instance has provisions for the realisation and protection of socio-economic and cultural rights. South Sudan does not have a single provision on the water right. The CESCR in this regard is useful in ensuring realisation and protection of

the right to water as it explicitly provides this right. The KP in its article 10 provides the right to climate education and encourages public awareness and training. Although the protocol's applicability has ended, the measures stipulated in relation to climate education are still very relevant and useful. South Sudan is encouraged to adopt the measures without ratification since it is clear that the protocol's applicability has ceased.

The ICCPR has many provisions on civil rights. The Human Rights Committee ensures the implementation of ICCPR provisions. South Sudan in its Constitution has provisions, which are similar to the ICCPR provisions, however its judiciary is on the brink of death and therefore protection of civil rights is not guaranteed at the national level. It is therefore argued that ratifying the ICCPR would be helpful to South Sudanese citizens.

Furthermore, the previous chapter has shown that children, women, and disabled persons are the most disproportionately affected by climate change yet the country has not ratified the ACRWC nor the Maputo Protocol, or the African Disability Protocol. South Sudan might have ratified the CRC and CEDAW but the ACRWC and the Maputo Protocol present features, which are unique to African children and women respectively. In addition, the country has also not ratified the African Disability Protocol, which like the ACRWC and the Maputo Protocol addresses issues, which uniquely affect persons with disabilities in Africa. Moreover, South Sudan has not ratified the CRPD. Ratification of the African Disability Protocol should be a starting point that should also lead to the ratification of the CRPD.

South Sudan youth make up 73.7% of the country's population.²⁰³ What is more interesting is that the same literature indicates that 73.7% are below 30.²⁰⁴ This shows the population that is greatly affected by climate change are youth who also include children. Hence, South Sudan should also ratify the African Youth Charter.

The absence of these treaties has played a key role in the non-realisation of human rights and has oftentimes led to the non-respect of rights. Ratifying all the above treaties will be crucial in the realisation of rights and would be essential in enhancing policies and programmes on climate change.

²⁰³ Y Admin 'UN Secretary-General's Envoy on Youth visits South Sudan' (*Office of the Secretary-General's Envoy on Youth*, 20 February 2020) <<https://www.un.org/youthenvoy/2020/02/un-secretary-generals-envoy-on-youth-visits-south-sudan/>> accessed 16 September 2022.

²⁰⁴ As above.

3.5 National legal frameworks

This part discusses the national frameworks generally on education in South Sudan. The goal here is to uncover the gaps and expose provisions where the concept of climate education is expressly or impliedly provided.

3.5.1 The South Sudan Constitution

Article 29 of the Constitution provides the right to education. It further requires the government to adopt measures in the realisation of the right to education. Although the Constitution does not reference climate education, it is presented that article 29 should be the basis of putting in place mechanisms or policies to actualise climate education under the broad umbrella of education. Additionally, provisions on access to information²⁰⁵ and the right to participation²⁰⁶ should be used as justifications for realising the right to climate education as well. Another beneficial provision for the realisation of climate education is article 41. This article makes provision for the right to a healthy environment and mandates the government to adopt policies for environmental protection. Article 41, should therefore be interpreted as a ground for adopting climate education policies. However, a major concern, which needs to be addressed, is that this provision is provided under a chapter on guiding principles. This could invoke arguments on the justiciability of this right. It is argued that this provision be pushed to the Bill of Rights chapter in order to prevent prospective arguments. Additionally, the constitution provides that all human rights treaties are an 'integral part of the constitution' however, this does not apply to non-human rights treaties, and therefore there is a need to incorporate non-human rights treaties on climate education into the domestic law.

3.5.2 The Child Act 2008

The Child Act has no mention of climate education. However, the Act under section 14 provides the right to education. It is suggested that this provision should be the basis for introducing climate change teachings to the children of South Sudan in school curricula. Additionally, other authorities, for example, the courts should be able to make progressive interpretations of this provision to extend the provision to include climate education in their reasonings.

3.5.3 The NAPA

This action plan discusses a whole range of issues related to climate change. The NAPA provides that the country does not have 'policy and institutional frameworks' on climate change, however,

²⁰⁵ The Constitution (n 92), article 32.

²⁰⁶ As above, article 26.

it points out climate education, public awareness, and training policies to be prioritised and developed. This is surely a good step in the right direction. However, the concern is that the NAPA vaguely mentions the adoption of policies on climate education and other programmes on climate change. For instance, the NAPA encourages the introduction of curricula on climate education but does not state the roadmap and what would be the focus of climate education. In addition, the NAPA does not also state at what levels the inclusion of curriculum of climate education should be necessary. Furthermore, the document does not mention for example the role of CSOs in awareness campaigns on climate change to ensure the realisation of the right to climate education. Therefore, before the adoption of policies and programmes on climate education, the above issues should be noted for the effective realisation of climate education.

3.5.4 The INC

The INC unequivocally admits that South Sudan does not have legislation and policies on climate change. Additionally, bills and policies, which are currently in the pipeline, make no provision for climate change. The INC identifies weak institutions as a result of no personnel and lack of funding as issues that would derail prospective steps in the adoption and implementation of policies on climate change. This document, also recommends the inclusion of climate change teachings without framing how this should be approached.

3.5.5 Intended Nationally Determined Contribution (INDC)

The INDC is a bit more elaborate and refers to NAPA where it has not extensively discussed some elements. The INDC does not differ from the other documents above in recognising that there are no national legislation and policies on climate change. Nonetheless, the document recommends inclusion into the national curriculum the teaching of climate change, and at the same time adoption of programmes to be conveyed to the public. However, the document does not explicitly state whether the curriculum is that of primary, secondary, or higher institutions. This is important because everyone studying in the country at whatever level ought to learn about climate change.

3.5.6 The SNDC

The SNDC outlines the policies that the country has adopted. In addition, the document reveals the bills that are in the making for example the Environmental bill and policy. These policies and Bills do not include programmes on climate education. They only direct the government to adopt policies on climate change but do not specifically reference climate education. Therefore, South

Sudan should initiate a bill that would be passed into a Climate Change Act. In addition, policies that include climate education programmes should be adopted.

3.6 Conclusion

This chapter has analysed all the legal frameworks and in analyzing these frameworks, the chapter has revealed the non-adoption of legislation and policies as required by the international and regional legal instruments. In addition, it has also exposed that the existing national frameworks do not contain provisions on climate education.

CHAPTER FOUR

4. SUSTAINABLE APPROACHES TO CLIMATE EDUCATION FROM SELECTED EXEMPLAR COUNTRIES

4.1 Introduction

The preceding chapter analysed the nexus and impact of climate change on selected human rights, protected in international, regional, and national frameworks. The chapter also examined existing national climate-oriented policies and the extent to which the government of South Sudan has complied with its obligations under international and regional instruments.

Building from the analyses in the previous chapter, this chapter, is aimed at justifying the need and rationale for South Sudan to design, adopt and implement sustainable climate education strategies in school curricula in South Sudan. In doing so, the chapter draws best practices and lessons from countries such as South Africa, Italy, and New Zealand.

4.2 Rationale for the selected countries

Firstly, there are some commonalities that these selected countries share with South Sudan. For example, South Africa, Italy, and New Zealand are all Parties to the UNFCCC²⁰⁷ and the PA,²⁰⁸ treaties that have been ratified by South Sudan and explicitly provide for climate education. Commonalities are even deeper between South Africa and South Sudan as the two countries are both developing countries and are Parties to the ACHPRs.²⁰⁹

²⁰⁷ UN 'United Nations Treaty Collection'

<https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=IND&mtdsg_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=_en (accessed 5 October 2022).

²⁰⁸ UN 'United Nations Treaty Collection'

<https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en (accessed 5 October 2022).

²⁰⁹ State parties to the ACHPRs (n 78).

South Africa is currently the leading carbon emitter on the African continent.²¹⁰ Its emissions emanate from its 'industrial, agricultural and economic activities'.²¹¹ For example, the country emits '8.2tCO₂ per person' therefore attaining a position as one of the leading 'per capita rates in the world'.²¹² In an effort to address the impact of climate change and its consequences, the country has comprehensive climate change provisions in its laws and policies.²¹³ The country's legal frameworks make specific reference to climate education as a tool for addressing climate change and its effects.²¹⁴ For example, the national climate change response white paper policy requires that South Africa introduce climate change teachings into school curricula.

Moreover, South Africa has established institutions to ensure the effective implementation of climate education laws and policies.²¹⁵

Italy on the other hand is one of the leading emitters in the world.²¹⁶ It also faces the devastating effects of climate change. Consequently, the country broadly makes provisions for climate change in its laws and policies. Italy generally has 'more than 100 laws and policies on climate change'.²¹⁷ What makes Italy unique is that it is the first and the only country to have introduced compulsory teaching of climate change at primary, secondary, and adult education levels in the world.²¹⁸

²¹⁰ Statista 'Africa: CO₂ emissions by country' (*Statista*) <<https://www.statista.com/statistics/1268395/production-based-co2-emissions-in-africa-by-country/>> (accessed 29 September 2022).

²¹¹ UNESCO 'South Africa Climate change communication and education Profiles' <<https://education-profiles.org/sub-saharan-africa/south-africa/~climate-change-communication-and-education>> (accessed 19 September 2022).

²¹² Global Carbon Atlas 'CO₂ Emissions | Global Carbon Atlas' <<http://www.globalcarbonatlas.org/en/CO2-emissions>> (accessed 1 October 2022).

²¹³ UNESCO (n 211).

²¹⁴ As above.

²¹⁵ As above.

²¹⁶ P Friedlingstein and others 'Global Carbon Budget 2021' (2021) preprint <<https://essd.copernicus.org/preprints/essd-2021-386/essd-2021-386.pdf>> (accessed 1 October 2022).

²¹⁷ UNESCO 'Italy's Climate Change Communication and Education Profiles' <<https://education-profiles.org/europe-and-northern-america/italy/~climate-change-communication-and-education>> (accessed 1 October 2022).

²¹⁸ As above.

New Zealand is a moderate 'high emitting country'.²¹⁹ The country contributes to world emissions and ultimately climate change through its 'energy, agricultural and industrial' sectors.²²⁰ Because of this and its location, New Zealand is one of those countries prone to climate change and its consequences.²²¹ As such, New Zealand has laws²²² and policies²²³ on climate change and has usually been presented as a country that has set a clear roadmap on the teachings of climate change and its impacts.²²⁴ Following environmental education guidelines, New Zealand has constructed a new national curriculum that 'put the country at the forefront' in the world on the teaching of climate change.²²⁵ Although New Zealand emits less GHG, it is nonetheless one of the very few countries applauded for having put its commitments required by the PA into action.²²⁶ Also of particular importance to note is that the country has an education curriculum in two languages, one fully developed in English for English schools and the other fully developed and taught in Maori language in Maori schools. The fact that New Zealand has developed its education curriculum in two languages is significant and relevant because, in as much as English is the official language in South Sudan, Arabic is still by far the most spoken and in some schools the language of instruction in the country.

The three countries' best practices on the teachings of climate change are in line with international laws on climate change and hence their legal regimes should guide South Sudan in putting its international and regional commitments on climate education into action.

²¹⁹ UNESCO 'New Zealand Climate Change Communication and Education Profiles' <<https://education-profiles.org/oceania/new-zealand/~climate-change-communication-and-education> (accessed 1 October 2022).

²²⁰ As above.

²²¹ As above.

²²² As above.

²²³ Ministry of education 'The New Zealand Curriculum / Kia ora - NZ Curriculum Online' <<https://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum> (accessed 6 October 2022).

²²⁴ G Van Calster and L Reins *The Paris Agreement on Climate Change: A Commentary* (2021)292.

²²⁵ C Graham-McLay 'New Zealand schools to teach students about climate crisis, activism and "eco anxiety"' *The Guardian* (13 January 2020) <<https://www.theguardian.com/world/2020/jan/13/new-zealand-schools-to-teach-students-about-climate-crisis-activism-and-eco-anxiety> (accessed 1 October 2022).

²²⁶ As above.

4.3 The South African legal instruments on climate education

Climate education provisions in South Africa are not stipulated in single and specific legislation, policy, or plan, but are precisely located in legal frameworks generally on education and climate change.²²⁷

4.3.1 The 1996 Constitution of South Africa

The Constitution recognises the right to environment and education. Article 24 of the constitution requires South Africa to adopt legislation and measures that ‘prevent’ and protect the environment and ‘promote sustainable development’. This provision is relevant in this context because ‘sustainable development’ has been construed as the basis of ‘climate education’.²²⁸

Additionally, article 29 inclines South Africa to adopt ‘reasonable measures’ that would ‘progressively’ ensure that education is ‘available and accessible’ to all.

These two articles have been presented as the parental provisions of climate change and climate education legislation, policies, and plans. The 1994 Reconstruction and Development Programme (RDP),²²⁹ which makes specific reference to environmental education, shaped these provisions.²³⁰ Although environmental education and climate education are distinct areas, the provisions nonetheless have been applicable and instrumental in adopting legislation and policies on the latter.

Notably, the constitution of South Africa unlike the South Sudan Constitution has stipulated the above provisions in a Bill of Rights chapter,²³¹ hence avoiding questions of their justiciability.

4.3.2 The 1995 white paper on education and training

The 1995 white paper on education and training identifies ‘environmental education’ as a value and principle that should guide South Africa in adopting legislation and actions on the preservation of the environment.²³² The document requires that ‘environmental education’ must include ‘an interdisciplinary, integrated and active approach to learning’.²³³ It further presents that these

²²⁷ UNESCO (n 211).

²²⁸ As above.

²²⁹ As above.

²³⁰ As above.

²³¹ The Constitution of South Africa 1996, article 24.

²³² ‘White paper on education and training’

<https://www.gov.za/sites/default/files/gcis_document/201409/16312gen1960.pdf (accessed 1 October 2022).

²³³ As Above.

important 'elements' must guide all the 'levels and programmes on education and training system'.²³⁴ This will ensure that all South Africans are 'environmentally literate and active'.²³⁵ Their literacy and activeness provides a platform for both 'present and future generation to enjoy' and sustainably use their environment. It is crucial to note that this document is in line with the South African Constitution.

4.3.3 The 2011 national curriculum and assessment policy statements

These policy statements present the South African national educational curriculum, particularly for primary and secondary education.²³⁶ The curriculum is deeply informed by the South African's Bill of Rights.²³⁷ The curriculum clearly has 'elements' of climate education. Climate change teaching is not consolidated and taught as one subject, but its elements have been integrated into different subjects such as economic and management sciences among others.

4.3.4 The 2010 Global Change Grand Challenge National Research Plan

Whereas the 2011 national curriculum and assessment policy statements cover only the teachings of climate change at the primary and secondary level, the 2010 global change grand challenge national research plan on the other hand extends the teaching of climate change through research at the higher education levels.²³⁸ This plan came about because of the 2008-2018 ten-year innovation plan, which was engineered by the department of science and technology. The department mentions and stresses in the document the role technology play in 'response to global change' and further identifies related themes, which are also emphasised by the research plan as hereunder. The plan states learning about the 'changing world', discouraging climate-contributing activities, and 'adapting the way people live' as areas people should research to broadly ensure effective addressing of issues related to these themes.²³⁹

²³⁴ As above.

²³⁵ As above.

²³⁶ Department of Basic Education 'Curriculum Assessment Policy Statements' <[https://www.education.gov.za/Curriculum/CurriculumAssessmentPolicyStatements\(CAPS\).aspx](https://www.education.gov.za/Curriculum/CurriculumAssessmentPolicyStatements(CAPS).aspx) (accessed 2 October 2022).

²³⁷ UNESCO (n 211).

²³⁸ Department of Science and technology 'Globalchangeresearchplan-conciseversion-draft1.pdf' <https://www.gov.za/sites/default/files/gcis_document/201409/globalchangeresearchplan-conciseversion-draft1.pdf (accessed 2 October 2022).

²³⁹ As above.

In addition to the above research, the plan is a similar plan usually referred to as the 'second version' constructed by the department of science and innovation in 2021.²⁴⁰ It is termed as the Global Change Social Sciences Research Plan. The plan captures themes on climate education and 'green skills' as important areas for research in the search for durable solutions to global changes.²⁴¹

4.3.5 The 2011 South Africa national climate change response white paper

This document has a provision on climate education. The paper identifies climate change as an unusual and contemporary issue that has 'cross-disciplinary and cross-sectoral' impacts in South Africa.²⁴² The paper presents that a deeper understanding of its 'concept, impacts, and adaptation' is crucial to 'future development' roadmaps and 'wellbeing of South Africans'. The document provides that climate education should be introduced into school curricula to 'empower and capacitate' South Africans. It further provides that introducing climate education into 'broad framework on education' should be normalised. The paper states that the inclusion of climate education into formal education curricula would ensure that the future generation is equipped to deal with a 'changing' world and 'a transition towards low carbon society'. Additionally, the document presents that climate change skills and programmes should be entrenched in the 'informal and non-formal sectors of education and training system'. The document further encourages the award of scholarships and 'bursaries' to engage students to effectively learn and research in the climate change arena for climate solutions. The document also tasks the tertiary level and other 'research institutions' to clearly articulate 'national guidelines for a climate resilient South Africa'.

4.3.6 The Action Plan 2024 towards realisation of schooling 2030

This Action plan discusses 'curriculum innovations' that are fit for 'the 21st-century skills'. The document articulates that the elements of education such as knowledge, literacy, and skills should be steered toward addressing the challenges of the 21st century. The plan discusses in it the AU and UN goals 'for the need of innovations in curriculum'. It provides that education should effectively train the young generation 'for a society which has changed in so many respects'. The plan furthermore requires South Africa to undertake measures to strengthen its citizens by

²⁴⁰ UNESCO (n 211).

²⁴¹ As above.

²⁴² South Africa National Response White Paper, 2011.

‘educating’ and training them and ensure the effectiveness of its ‘Institutions’ for ‘climate adaptation and mitigation’.

4.3.7 The 3rd National communication to the UNFCCC

In this communication, South Africa admitted that it has taken notice of climate education frameworks. It presented that climate education programmes were first ‘integrated’ into environmental education. The communication also references policies with climate education provisions, for example, the 1995 white paper on Education and Training.

Additionally, the document articulates that the government has in place mechanisms that are playing a vital role in climate change awareness for example the department of science and technology, which ‘focuses on the practical application of climate knowledge’. Additionally, the document identifies CSOs and other NGOs both local and international to be doing awareness campaigns on climate change. The communication also mentions the pivotal role of the Media in climate education and awareness.

4.3.7 South Africa’s 1st Nationally Determined Contributions (NDC)

The first NDC does not explicitly refer to climate education. However, it broadly states climate education under goal number 5 as one of the means of achieving effective climate adaptation. It provides that in order to ‘respond’ to climate change ‘impacts’, there should be an ‘improved understanding of climate change impacts’. It highlights the role of ‘awareness’ raising in addressing climate adaptation.

Although the first NDC does expressly make provision for climate education, the South African INDC unequivocally makes explicit reference to climate education. It urges the government to ‘develop and implement climate education’ with the intention of ‘driving behaviour change based on the early warnings and vulnerability assessment’.

4.3.8 Impact of implementing climate education in South Africa

It is noted that South African GHG emission has greatly reduced by 2.8%.²⁴³ South Africa’s fourth Biennial report to UNFCCC mentions the industry sector as the highest emitter with 85.2%.²⁴⁴ In as much as the report acknowledged the ‘decline’ of emissions from the industry sectors, its words for praise were for the use of land in South Africa. The report submitted 32% of emissions as

²⁴³ Department of forestry, fisheries and the Environment ‘South Africa’s 4th Biennial Update Report to the United Nations Framework Convention on Climate Change, 2021’.

²⁴⁴ As above.

'removal' from land use. Furthermore, on land use, agricultural activities that contribute to GHG emissions have been noted to have reduced hence the 'decline' in GHG emissions. Additionally, the report also provides that emissions from 'biomass burning' have also been reduced.

Admittedly, climate education played a greater role in this regard, as it has been proven above that climate education influences people to reach desired and informed action. The inference that climate education played a critical role can be drawn from this report.²⁴⁵ The report notes that all the policies related to climate change adopted by South Africa massively contributed to the reduction of GHG emissions.²⁴⁶ Concisely, climate education has played a part in the reduction but not the elimination of GHG emissions. Hence, it should be noted that if even there are persisting climate disasters in South Africa it is because climate change factors have not been eradicated but rather reduced. It is submitted that if climate education laws and policies continue to manifest, then climate change disasters at some point will be a matter of the past.

4.4. Italy's legal regimes on climate change education

Generally, three laws that are the 'law 13th July n.107 "La Buona Scuola", Law 59/1997, and Presidential decree 275 /1999', guide the education system in Italy.²⁴⁷ However, the laws that specifically direct the state to introduce climate education into the Italian education system are the Decree 7 October 2010,n.211; Decree 16 November 2012,n.254 and Decree 24 May 2018,n.92.²⁴⁸ Consequently, Italy has developed comprehensive laws on climate change and climate education that are so detailed and numerous. As a result and to meet the objective, this part only selects and discusses the most relevant ones.

4.4.1 Law 13th July n.107 La Buona Scuola 2015

The La Buona Scuola is the parent law that is most relevant in the context of climate education. It does not however make explicit provisions for climate education. It only references 'environmental education for sustainability'. Nonetheless, a closer reading of its content suggests that the law impliedly encourages the teachings of climate change. For example, article 1(7) states that the objective of Italian education should be to 'develop responsible behaviour inspired by knowledge and respect for sustainable environment'.²⁴⁹

²⁴⁵ As above.

²⁴⁶ As above, 218.

²⁴⁷ UNESCO (n 217).

²⁴⁸ As above.

²⁴⁹ 'Official Gazette' <<https://www.gazzettaufficiale.it/eli/id/2015/07/15/15G00122/sg> (accessed 4 October 2022).

Furthermore, article 1 (6) gives educational institutions freedom to make their own volition in respect to ‘curriculum’ development and ‘teachings’. It is argued that this provision serves as a channel for introducing climate education into school curriculums.²⁵⁰

Because of the inadequacy of La Buona Scuola in various aspects including climate education, the government of Italy in 2017 adopted guidelines for primary and secondary education to supplement it. The guidelines pay keen attention to ‘sustainability and global citizenship’.²⁵¹ They recommend to the state to make the inclusion of SDGs in school ‘curriculums and content development’.

4.4.2 Decree 16 November 2012, n.254

This is the law that is responsible for directing ‘curriculum development for pre-primary and primary education’.²⁵² Decree 16 is pivotal as it enshrines and directs the teaching of climate change in the school's curriculums. For example, climate change teaching is included in subjects like geography and biology at this level of education.²⁵³ Additionally, the government of Italy through the guidelines²⁵⁴ has made the teaching of environmental education, which is indistinguishable from climate education, at this level compulsory.

4.4.3 Decree 7 October 2010, n.211

Decree n.211 is the law that regulates the educational activities or programmes of secondary education in Italy.²⁵⁵ It is normally regarded as the national curriculum of secondary education.²⁵⁶ This decree also includes and directs the teaching of climate change in secondary school subjects. It also makes provision for ‘compulsory teaching of environmental education’.

²⁵⁰ As above.

²⁵¹ UNESCO (n 217).

²⁵² ‘DECREE 16 November 2012, n. 254 - Normative’

<<https://www.normattiva.it/atto/caricaDettaglioAtto?atto.dataPubblicazioneGazzetta=2013-02-05&atto.codiceRedazionale=13G00034&atto.articolo.numero=0&atto.articolo.sottoArticolo=1&atto.articolo.sottoArticolo1=10&qId=e02dd5ff-47c8-4498-a0cb-08cc401cc720> (accessed 4 October 2022).

²⁵³ (n 217).

²⁵⁴ ‘Acts and rules’ <https://www.istruzione.it/educazione_civica/norme.html (accessed 4 October 2022).

²⁵⁵ ‘DECREE 7 October 2010, n. 211 - Normative’

<<https://www.normattiva.it/atto/caricaDettaglioAtto?atto.dataPubblicazioneGazzetta=2010-12-14&atto.codiceRedazionale=010G0232&atto.articolo.numero=0&atto.articolo.sottoArticolo=1&atto.articolo.sottoArticolo1=10&qId=e02dd5ff-47c8-4498-a0cb-08cc401cc720> (accessed 4 October 2022).

²⁵⁶ UNESCO (n 217).

4.4.4 Decree 24 May 2018, n.92

Decree n.92²⁵⁷ is usually understood as the national curriculum for higher education particularly ‘technical and vocational education and training programmes’.²⁵⁸ This curriculum-like law also references climate change in its content. The Italian policy to make climate change studies compulsory also applies to this level.

4.4.5 The 7th National communication to UNFCCC 2017

The document presents that Italy has over time made progress in developing legal instruments for climate change.²⁵⁹ It refers to La Buona Scuola as the lifeline of all climate education laws and policies. The adoption of La Buona Scuola triggered the adoption of various policy directions such as the ‘guidelines on environmental education’. Although the guidelines read for environmental education, they additionally contain ‘themes’ on ‘climate change’ teaching. This document also references relevant initiatives undertaken by the government, for example, the signing of the ‘Rome Charter on environmental education and ESD’ and the adoption of the ‘New National Strategy (NNS)’. The Rome Charter offers an opportunity for the State signatories to ‘share good practices’ on environmental education and ESD whereas the NNS ensures that the Italian laws and policies are in line with the SDGs. The NNS contains provisions on climate education. The strategy indicates that to implement the objective, teachers should be trained on climate change. The communication also mentions other measures, for example, the provision of scholarships on climate change. It also notes activities like the ‘climate days’ that are usually organised by the University of Bologna.

4.5.6 Impact of implementing climate education in Italy

The Italian’s GHG emissions have tremendously ‘decreased by 17.4%’.²⁶⁰ This decrease is said to have occurred between 1990 to 2017.²⁶¹ The decrease in GHG emissions is clearly linked to the adoption of climate change laws and policies. The role climate education plays in climate

²⁵⁷ ‘DECREE 24 May 2018, n. 92 - Normative’

<<https://www.normattiva.it/atto/caricaDettaglioAtto?atto.dataPubblicazioneGazzetta=2018-07-27&atto.codiceRedazionale=18G00117&atto.articolo.numero=0&atto.articolo.sottoArticolo=1&atto.articolo.sottoArticolo1=10&qId=e02dd5ff-47c8-4498-a0cb-08cc401cc720> (accessed 4 October 2022).

²⁵⁸ UNESCO (n 217).

²⁵⁹ Ministry for the environment, land and sea ‘Seventh National Communication under the UNFCCC, Italy 2017’, 308.

²⁶⁰ Ministry for the Environment, Land and Sea ‘4th Biennial Report to UNFCCC, 2019’.

²⁶¹ As above.

change mitigation and adaptation cannot be overstated, as it is an obvious fact. For example, the report states that Italy's agricultural emissions have declined by 11.4% in 2017. The report ties this result to the non-use of fertilizers by farmers. It is to be inferred that climate knowledge played a role in stopping farmers from using fertilizers.

4.5 New Zealand

The education and Training Act 2020 is currently the parent law that governs New Zealand's education system. The law makes mention of the Climate Change Response Act (CCRA) 2002. It also references environmental education. The CCRA is the most specific law that is clearly concerned with the regulation of climate change programmes. Although the Act does not make particular mention of climate education, it is the legal basis of many guidelines that touch on climate education. As such, there are many policies and plans in this regard some of which will deserve a worthy mention.

4.5.1 The guidelines for environmental education in New Zealand Schools

These are the guidelines that inform the New Zealand curriculum and Te Marautanga.²⁶² The guidelines direct schools to engage students more in 'knowledge' production and 'understanding' of 'environmental' impacts. They also focus on 'attitudes and values' building 'that reflect feelings of concern for environment'. They also require 'skills' in locating environmental problems and consequently, environmental solutions should be prioritised. The guidelines further champion the concept that to make students participate and take action on environmental issues, they should first be informed about the problems before they could engage in offering solutions.²⁶³

4.5.2 The New Zealand National Curriculum

This curriculum covers New Zealand and Te Marautanga o Aotearoa.²⁶⁴ The latter guides the teaching activities conducted in Maori language.²⁶⁵ The national curriculum is a policy direction for schools and 'students learning'.²⁶⁶ It guides schools in developing objectives for their curriculum.

²⁶² Ministry of education 'Guidelines for Environmental Education in New Zealand Schools / Why Efs? / Education for sustainability / Curriculum resources / Kia ora - NZ Curriculum Online' <<https://nzcurriculum.tki.org.nz/Curriculum-resources/Education-for-sustainability/Why-Efs/Guidelines-for-Environmental-Education-in-New-Zealand-Schools> (accessed 6 October 2022).

²⁶³ As above.

²⁶⁴ 'The New Zealand Curriculum (n 223).

²⁶⁵ Ministry of education 'Te Marautanga o Aotearoa / Kāinga - TMOA' <<https://tmoa.tki.org.nz/Te-Marautanga-o-A-otearoa> (accessed 6 October 2022).

²⁶⁶ 'The New Zealand Curriculum (n 223).

It also references climate change broadly and includes the teaching of environmental education. Although the curriculum does not make specific mention of climate education, it gives the schools ‘the autonomy’ to include climate education in their school curricula should they choose to do so.²⁶⁷ For example, ‘students in 11-13 years’ have the freedom to select ‘subjects on education for sustainability’.²⁶⁸ The planet earth and beyond is another curriculum direction that provides the basis for climate education.²⁶⁹ This is because the document considers learning of ‘earth system’ as an area, which captures all issues related to the earth including climate change. The national curriculum provides teaching of climate change at all levels from pre-primary, primary, and secondary education. However, climate education is not compulsory. Students are only allowed to choose whether to engage in climate change learning or not. The government of New Zealand has also adopted ‘instructions’ guided by the curriculum that has made the inclusion of climate change into various subjects at different levels of the country’s education system.²⁷⁰ Additionally, the country has made efforts by making provisions for education for sustainability in its national qualification framework.²⁷¹ This framework closely co-exists with the national curriculum. Besides, learning climate change in class, other activities aim at climate change teaching at schools for instance ‘LEARNZ’.²⁷² LEARNZ is an initiative that requires students to go on field trips to learn about earth-related problems including ‘impacts’ of climatic ‘conditions’.²⁷³

4.5.3 The seventh National communication 2017

This communication begins by mentioning the New Zealand curriculum, which references climate education. The report further makes mention of Te Kete Ipurangi, which is the portal for the

²⁶⁷ OECD ‘Education Policy Outlook: New Zealand, 2013’.

²⁶⁸ Ministry of education ‘Education for sustainability / Social sciences / Home - Senior Secondary’
<<https://seniorsecondary.tki.org.nz/Social-sciences/Education-for-sustainability> (accessed 6 October 2022).

²⁶⁹ ‘Achievement objectives / Science / The New Zealand Curriculum / Kia ora - NZ Curriculum Online’
<<https://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum/Science/Achievement-objectives#collapsible1>
(accessed 6 October 2022).

²⁷⁰ Ministry of education ‘Search - Instructional Series’,
<https://instructionalseries.tki.org.nz/content/search?SearchText=climate+change&SearchButton=&CurrentTab=i_s_homepage&SubTreeArray%5B%5D=22574&ColourWheelLevel=all&CurriculumLevel=all&ReadingYearLevel=all&LearningArea=all (accessed 6 October 2022).

²⁷¹ New Zealand qualification Authority (NZQA) ‘Background to the New Zealand Qualifications Framework’
<<https://www.nzqa.govt.nz/qualifications-standards/understanding-nzqf/background/> (accessed 6 October 2022).

²⁷² Learnz ‘LEARNZ Virtual Field Trip Chooser - Enrol in field trips for current and future years plus access the back-catalog of LEARNZ field trips.’ <<http://www2.learnz.org.nz/core-fieldtrips.php> (accessed 6 October 2022).

²⁷³ As above.

ministry of education.²⁷⁴ It states that the portal ‘provides schools and students with information, resources and curriculum materials on climate change’.²⁷⁵ The communication also states that the government has made important strides in climate education by adopting plans that ensure the teaching of climate change. It proffers education for sustainability strategy and action plans as an example. It indicates that this plan ‘refreshes the environmental education strategy released in 1998’ to ‘reflect’ current events. It provides that the plan is concerned with ‘knowledge and values on environmental education’. However, this extends to climate education.

The document provides that New Zealand ‘supports’ Institutions concerned with the promotion of climate education programmes such as the Science Media Centre which engages with journalists who disseminate climate information.

4.5.4 Impact of implementing climate education in New Zealand

New Zealand’s GHG emissions are noted to have increased in 2017 by 23.1%.²⁷⁶ This is because New Zealand’s ‘harvest’ of ‘timbers’ from its forest resources massively ‘increased’ in 2017 more than ever before.²⁷⁷ However, the state took initiatives to ‘offset 29.6%’ of its ‘gross emission in 2017’.²⁷⁸ New Zealand’s learning about the reason why the GHG increased is climate knowledge and hence enabled them to adopt climate education policies to address climate change. As the report indicates, timber cutting is where the state contributed to GHG emissions massively and ultimately climate change. This has been identified and the knowledge from this has led to the country offsetting its GHG emissions and adopting laws to curb climate change.²⁷⁹ Consequently, GHG emissions are projected to decrease in New Zealand.²⁸⁰

4.6 Conclusion

This chapter concludes that South Sudan should take note of the best practices from other jurisdictions that have adopted comprehensive frameworks on climate education in adopting its

²⁷⁴ Ministry of education ‘Te Kete Ipurangi (TKI)’ <<https://www.tki.org.nz/> (accessed 6 October 2022).

²⁷⁵ As above.

²⁷⁶ As above.

²⁷⁷ As above.

²⁷⁸ As above.

²⁷⁹ Climate Action Tracker ‘New Zealand’ <<https://climateactiontracker.org/countries/new-zealand/> (accessed 13 October 2022).

²⁸⁰ TG Staff ‘New Zealand pledges to halve greenhouse gas emissions by 2030’ *The Guardian* (31 October 2021) <<https://www.theguardian.com/world/2021/oct/31/new-zealand-pledges-to-halve-greenhouse-emissions-by-2030> (accessed 13 October 2022).

frameworks. However, this process should be devoid of copy-pasting of other jurisdictions' frameworks as was the case with South Sudan's Labour Act, copy-pasted from the Sudanese Labour Act. To this end, South Sudan should draw its lessons from South Africa, Italy, and New Zealand. South Africa unlike South Sudan makes provision for environmental protection in its Bill of Rights section in the Constitution. Additionally, South Africa is a developing country and therefore has detailed legal frameworks mainly on climate adaptation. This context is relevant for South Sudan as the country is also a developing country with vast resources not exploited and hence should be concerned more with climate adaptation rather than climate mitigation. Italy on the other hand has well-developed laws on climate education and has made teachings about climate change compulsory. Should South Sudan decides to adopt legal instruments that make the teaching of climate change compulsory then Italy is the jurisdiction to look out for. New Zealand has detailed frameworks generally on environmental education and specifically on climate education. Notably, the country has developed its legal instruments on climate education in two widely spoken languages in New Zealand. This is relevant for South Sudan as the country widely uses English and Arabic in all its activities.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This research has demonstrated the extent to which climate change has continued to affect various human rights in South Sudan. It further reviewed the laws, policies, and plans and highlighted that these frameworks do not significantly have provisions on climate education. It has shown that South Sudan has not ratified some key treaties and even those treaties they have ratified have not been incorporated into domestic law. The research has also highlighted that South Sudan has provided the right to a healthy environment in a chapter on guiding principles in the Constitution hence making it unjusticiable. The research was further concerned with how best the right to climate education can be realised and to do so, the research consulted legal regimes of other jurisdictions that have detailed laws, policies, and plans on climate education such as South Africa, Italy, and New Zealand to draw lessons or best practices from them. It is stated that South Africa specifically has comprehensive laws on climate education on adaptation and since South Sudan is a developing country in this regard, focusing on climate adaptation in its climate teachings would be more useful than paying attention to climate mitigation. On the other hand, Italy has made the teaching of climate change compulsory, and should South Sudan design and adopt laws, policies, and plans on compulsory teaching of climate change, then Italy is the jurisdiction that should guide their process. Additionally, New Zealand has developed its climate education laws, policies, and plans in two languages of English and Maori. South Sudan on the other hand uses two languages mainly that is Arabic and English. Should the country decide to do, New Zealand's way then they have to be guided by the laws, policies, and plans of New Zealand. To realise the right to climate education in South Sudan, the research recommends the following.

5.2 Recommendations

- I. South Sudan should ratify the ACRWC, the ICESCR, the ICCPR, the Maputo Protocol, the African Disability Protocol and the African Youth Charter. It is recommended that South Sudan look into the KP for guidance instead of ratifying it, as the treaty is not operative.
- II. South Sudan should adopt comprehensive laws, policies and plans that make provisions for climate education. These frameworks should clearly provide the teaching of climate change in school curricula.

- III. South Sudan should develop laws, policies, and plans on climate pieces of training. Teachers who do the teaching should be systemically trained to ensure accurate climate knowledge is passed to the consumers.
- IV. South Sudan should set up institutions that would ensure public awareness campaigns on climate change. Additionally, the state should encourage and empower CSOs and community leaders to aid the country in carrying out public awareness campaigns on climate change. Community leaders particularly will play a crucial role in reaching out to the people in rural areas they govern.
- V. The government should also ensure that information on climate change is availed to the public. To effect this, laws should mandate that information on climate change should be availed to mechanisms such as television stations, media houses, Facebook pages, and radios among others to disseminate it. However, disseminating this information should not only be left to the above means as many people in South Sudan do not have access to modern technology hence involving CSOs and community leaders should be encouraged. The government should specifically focus more on agriculturalists particularly educating them about crops that are climate resilient and informing them about the near future climate projections that might temper their cultivation and agricultural products.
- VI. South Sudan should provide provisions in its laws that ensure everyone is informed about climate change and people are then allowed to participate in climate decisions, especially children and women who happen to be disproportionately affected by climate change in South Sudan.
- VII. The government of South Sudan through provisions on international cooperation should engage with countries that have developed comprehensive climate education materials.
- VIII. South Sudan should cease investing in war by buying guns and turns its attention to investing in the fight against climate change.
- IX. South Sudan should review the existing bills and policies, for example, the environmental protection bill and policy, and the forest bill and policy among others to include provisions on climate education.
- X. Schools should be directed to broaden the teaching of climate change by including practical climate change teaching through field trips and other means.
- XI. Schools should be engaged in climate change conferences that would include everyone including policymakers and not only students.
- XII. South Sudan should set up research centres and encourage existing universities and institutions to engage in climate change research output. The country should take further

steps by sponsoring and sending students to countries that have effective research and teaching tools on climate change for example Italy, South Africa, and New Zealand.

- XIII. South Sudan should remove and entrench the right to a healthy environment in its Bill of Rights chapter in the constitution to make it justiciable.
- XIV. The government of South Sudan should construct schools that are climate resilient.
- XV. The government of South Sudan should incorporate into its Constitution the right to water.
- XVI. The government should identify and invest in social media platforms for the effective realisation of the right to climate education.

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