



SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS IN NATIONAL CLIMATE POLICY
A REVIEW OF 50 NATIONALLY DETERMINED CONTRIBUTION DOCUMENTS



United Nations Population Fund

Delivering a world where
every pregnancy is wanted
every childbirth is safe and
every young person's
potential is fulfilled

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Deteriorating sexual and reproductive health and rights (SRHR) are not often linked to climate change. However, there are several reasons why SRHR are under threat in the face of an unstable and unpredictable environment.

LIST OF ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
CC	Climate change
ESARO	East and Southern Africa Regional Office
GAP	Gender Action Plan
GBV	Gender-based violence
GEO	Global Environment Outlook
GGEI	Global Gender Equality Index
GHG	Global greenhouse gas
HIV	Human Immunodeficiency Virus
ICDP	International Conference on Population and Development
iNDC	Intended Nationally Determined Contributions
LGBTQIA+	Lesbian, gay, bisexual, transgender, queer/questioning, intersex and asexual
MDG	Millennium Development Goals
NAP	National Adaptation Plans
NDC	Nationally Determined Contributions

OHCHR	Office of the United Nations High Commissioner for Human Rights
SDG	Sustainable Development Goal
SIDS	Small Island and Developing States
SRH	Sexual and reproductive health
SRHR	Sexual and reproductive health and rights
STI	Sexually transmitted infection
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
WGC	Women and Gender Constituency
WHO	World Health Organization
WMO	World Meteorological Organization



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FOREWORD



Approximately 27 years ago, at the International Conference on Population and Development (ICPD) in Cairo, countries committed to realizing the sexual and reproductive health and rights (SRHR) of all people, including women and young people. The noticeably intensifying impacts of climate change

have gradually but consistently made this goal harder to reach, requiring our urgent action to protect women and young girls everywhere.

Climate change is exacerbating the vulnerability of women and girls across the world. Unfortunately, during climate-induced natural disasters, conflicts and public health emergencies, sexual and reproductive health needs are often overlooked, with staggering consequences including increased unintended pregnancies, higher risk of maternal deaths, rise in child marriage and gender-based violence (GBV).

Yet, climate-induced disasters are on the rise and will make a critical situation worse.

In the lead up to the UN Climate Change Conference, COP26, the majority of UN Member States will submit revised Nationally Determined Contributions (NDCs). These are national plans of action that detail how countries intend to mitigate, respond and adapt to climate change. These NDCs will drive the implementation of the Paris Agreement for the next five years. There is an opportunity to influence the national commitment on adaptation in the current documents or in the subsequent updates to ensure that countries reflect crucial language on SRHR, gender, and emphasize the need to build the resilience of the most vulnerable and marginalized groups in their NDCs.

To understand the context and existing gaps better, UNFPA through a collaboration with Queen Mary University of London, undertook a review study of key climate change documents such as the NDCs. The review, which covered

50 countries, assessed how issues of gender and health, including sexual and reproductive health and rights, have been included in national climate action frameworks, plans and strategies.

Sexual and Reproductive Health and Rights in National Climate Policy: A Review of 50 Nationally Determined Contribution (NDC) Documents supports the implementation of the Paris Agreement and stands as one of the many steps UNFPA is taking to ensure that women, adolescent girls and the very young are not left behind as countries strive to meet their climate commitments. It is also part of the agency's effort to deepen its work on climate adaptation in order to safeguard the livelihoods of all, especially women and young girls who bear the brunt of climate change. To this end, ensuring that countries and partners integrate climate adaptation with SRHR components is thus equally important to the climate action movement aimed at building sustainable and resilient communities.

Ensuring that climate resilience is rights-focused, gender-sensitive and people-centered, are core values of UNFPA's approach to climate action, and these aspects guided the review process of the NDCs that were studied.

The findings of this review are crucial as they reveal critical gaps in the national climate policies of countries, giving guidance on how these gaps can be addressed. Further, the review will inform and strengthen UNFPA's work and guide the agency's collaborations with governments and partners in this area. UNFPA strongly believes that with collective effort, we can move with speed and advance SRHR, gender and the climate change agenda for the benefit of women and girls, young people and the planet.

As countries update their NDCs, it is paramount that they take bold and calculated steps to empower women and young people to build resilient communities in order to protect their wellbeing and their livelihoods in the face of an ever-changing climate. We owe the people and the communities we serve that much because they have trusted us to deliver on this very promise.

Dr. Julitta Onabanjo

UNFPA Regional Director for East and Southern Africa

EXECUTIVE SUMMARY

Deteriorating sexual and reproductive health and rights (SRHR) are not often linked to climate change. However, there are several reasons why SRHR are under threat in the face of an unstable and unpredictable environment. Maternal health is threatened by increasing temperatures (Kuehn & McCormick, 2017) and climate-related diseases (WHO, 2017), while disasters can disrupt SRH services (Behrman & Weitzman, 2016; Benjamin, 2016) and lead to increases in gender-based violence and child marriage (McLeod, Barr & Rall, 2019). Inversely, realization of SRHR can help build resilience to the effects of climate change and allow women and their families to better adapt to a changing environment. Denial of SRHR prevents women and girls from fully engaging in climate action, thereby impeding their educational and economic opportunities and hindering their ability to participate in local and national decision-making. Realizing SRHR is crucial to achieving gender equality and is a central component of gender-responsive adaptation to climate change. A cornerstone of resilience, SRHR enables people, couples and communities to better realize their human rights, make choices that best suit their personal circumstances and protect themselves and their communities from harm.

National climate policies play a key role in determining responses to climate change, including plans for building adaptive capacity and resilience. Evaluation of current climate policy for aspects of SRHR develops our understanding of the current state of play and can provide important information for areas of potential improvement and greater inclusion. A recent review of National Adaptation Plans (NAPs) – documents that detail a country’s intended measures for adapting to climate change – found that almost half of the NAPs reviewed contained no references to SRHR (Women

Deliver, 2021). Where SRHR was included, the vulnerability of pregnant women and infants to the effects of climate change and gender-based violence were most commonly cited.

Established by the Paris Agreement which came into force in 2016, Nationally Determined Contributions (NDCs) are documents submitted by countries every five years that outline future efforts to reduce emissions and include information on national plans for adaptation to the effects of climate change. Unlike NAPs, submission of NDCs is mandatory, making them the most globally-representative national climate policies, with many more countries having submitted NDCs than NAPs. To complement the recent review of NAPs, evaluation of NDCs is therefore an important part of understanding the full scope of how SRHR is currently included in climate policy.

This report details the findings of a systematic content analysis for the inclusion of references to SRHR in the first wave of submitted NDCs for 50 countries. The analysis was initially performed for all 23 countries of the Eastern and Southern African region and was extended to include 27 countries from four further UNFPA regions: Arab States, Asia Pacific, Western and Central Africa, and Latin America and the Caribbean. To evaluate areas of relevance for SRHR, the analysis also explored references to themes directly related to SRHR: gender, health, population dynamics, human rights, participation, and considerations for vulnerable groups. Population dynamics was included in part to assess consistency with the International Conference on Population and Development (ICPD) Programme of Action and to assess whether references reflect commitments to a voluntary, rights-based approach to reproductive choices.

**This report details the findings of a systematic content analysis for the inclusion of references to SRHR, principally from the first wave of NDCs and iNDCs for 50 countries. The analysis was initially performed for all 23 countries of the East and Southern African region and was extended to include 27 countries from four further UNFPA regions: Arab States, Asia Pacific, Western and Central Africa, and Latin America and the Caribbean.*

* NDC (Rwanda) reflects the second wave of submissions.

The key findings and recommendations from this analysis are:

1. **Six out of the 50 NDCs included references to aspects of SRHR but there is scope for greater and more meaningful inclusion of the full range of SRHR.** Maternal health was the most commonly cited area of SRHR, with access to family planning services, gender-based violence, and people living with HIV also referenced.
2. **Gender-based violence (GBV) represents a key intersection of SRHR and climate change that should be addressed in climate change adaptation policy.** GBV is known to increase during times of stress and scarcity and following disasters, yet only one of the NDCs reviewed made reference to GBV. Adapting to a changing climate must include action on GBV.
3. **Thematic areas directly related to SRHR are frequently described and often intersect.** All 50 NDCs included references to health, 36 referred to gender, 25 described an aspect of population dynamics in relation to climate change, 38 referred to the vulnerability of certain groups to climate change, 40 described an aspect of participation in policy and decision-making, and 12 made reference to human rights. Many of the references cross-cut several themes, for example simultaneously addressing aspects of gender, health and vulnerability. These intersections represent key entry points for greater inclusion of SRHR in climate policy.
4. **SRH services are fundamental to health and should be central to strengthening health systems' resilience to climate change.** Despite descriptions in many NDCs of the vulnerability of the health sector to climate change, disruption of SRH services remains under-recognized. SRH services should be a core component of building health system resilience to climate change.
5. **Increased recognition and action on the gender, health and human rights impacts of climate change has synergistic benefits for SRHR and the achievement of Sustainable Development Goals (SDGs).** Some references to thematic areas related to SRHR were superficial or incompletely explored, such as brief or vague descriptions of gender equality and participation. More substantial and meaningful inclusion of these important and intersecting areas in climate policy will have synergistic benefits for SRHR. Similarly, climate action that reduces inequalities and removes barriers to the participation of marginalized groups in decision-making will positively impact existing SRHR goals.
6. **The inclusion of SRHR and population dynamics in climate policy must be human rights-based and reflect the ICPD Programme of Action.** Some references included in the NDCs, such as to controlling population size, may not be consistent with ICPD principles. Climate policy must be underpinned by a rights-based voluntary approach to reproductive choices, not on population numbers or targets.
7. **Realization of SRHR helps build resilience and adaptive capacity for climate change while reducing inequality and enabling justice.** Bodily autonomy enables people to best adapt to their personal circumstances, including the effects of climate-related shocks and the availability and sustainability of natural resources.
8. **Sexual and reproductive health and rights is a cross-cutting issue and should receive a stronger focus in climate policy and programming.** One example of how SRHR intersects with other key areas of climate action is in energy transitions. The use of local biomass as a household energy source exemplifies the disproportionate impacts of climate change on women and children and highlights how elements of their health and rights are central to climate action.
9. **Recognize the linkages between the climate crisis and other environmental crises.** Many of the challenges described in this report also relate to environmental crises beyond climate change. Considering the impacts of the waste and ecological crises, for example, is important in addressing contemporary challenges to the achievement of SRHR.

10. **An intersectional approach that explicitly considers existing barriers and inequalities will best promote the full realization of SRHR with corresponding benefits for climate adaptation and resilience.** Many of the people who already face barriers to SRH services and realization of their sexual and reproductive rights are being disproportionately affected by climate change. Factors related to identity and social position are experienced as overlapping and intersecting drivers of marginalization. An intersectional approach is essential to tackling existing inequalities in SRHR and maximizing the power of SRHR to help build adaptive capacity and resilience to climate change.

Links between climate change and SRHR are increasingly being recognized, including in the climate policy space. SRHR is being negatively affected by climate change yet realization of SRHR represents an important pathway for building resilience and adaptive capacity to climate change and enabling women and girls to fully engage with climate

action. Leaving SRHR behind in the global response to climate change would further entrench existing inequalities. Current climate policy documents contain few specific aspects of SRHR. Still, there are multiple entry points for greater inclusion of SRHR in future climate policy, including future waves of NDC submission.



1. INTRODUCTION

Climate change impacts SRHR and the ability to enact and realize fundamental human rights. Realizing SRHR would mean reductions in inequality and increases in resilience and helps ensure no one is left behind as climate impacts intensify. As responding to climate change becomes more deterministic of national and global policy efforts, the effects of climate change on SRHR must be reflected and acted upon.

Climate change is a major threat to the vision of human-centred sustainable development as outlined in the International Conference on Population and Development (ICPD) Programme of Action and reinforced by the Nairobi Summit on ICPD25. It poses a significant challenge to the realization of SRHR, exacerbating existing health vulnerabilities (including insufficient access to safe water and improved sanitation), food insecurity, and access to health care and education. Climate-related displacement and livelihood impacts are challenging both the protection and the realization of human rights.

Widely understood as an inequality amplifier, climate impacts are hitting the places least responsible for global greenhouse gas (GHG) emissions hardest. These areas typically have limited resources for adapting and responding to rapid and slow onset climatic changes and are settings where climate change is already exacerbating existing inequalities and hindering the achievement of development goals, human rights fulfilments and sustained access to basic needs.

Many of the people who live in areas most affected by climate change already face multiple intersecting inequalities related to identity factors and social position, such as gender, age and ethnicity. As a result, they are often less able to access the social, political and material resources that would support just transitions and adaptations in the face of the climate crisis. The range of rights, freedoms and health issues covered within the definition of SRHR relate to some of the most intimate, yet stigmatized, aspects of life. As a result, this is often a site of acute marginalization, and the full realization of SRHR is hindered by numerous social, political and

cultural factors. Achieving climate change resilience and sustainable development requires climate action and policy that recognizes and addresses existing inequalities and their intersections and explicitly engages with SRHR as an area of impact.

Climate change has direct implications for SRHR. Heat worsens maternal and neonatal health outcomes, with research suggesting that an increase of one degree Celsius in the week before delivery corresponds with a six per cent greater likelihood of stillbirth (Ha et al., 2017). Increased poverty and food insecurity driven by climate-related loss of livelihoods will also impact maternal health (IPCC AR5, 2014). Climate-related emergencies cause major disruptions in access to health services and life-saving commodities, including contraception (Behrman & Weitzman, 2016). Additionally, climate-related loss or change of livelihoods, as well as displacement and migration, increase risks of gender-based violence and harmful practices, including child marriage (McLeod, Barr & Rall, 2019). The Intergovernmental Panel on Climate Change has noted the likelihood that both climate change and gender-blind climate-change interventions could worsen gender inequality (IPCC, 2018). SRHR is required to build adaptive capacity and resilience for climate shocks and impacts and fulfil fundamental human rights. As the linkages between SRHR and climate change become more established, it is important to understand how they may be accounted for in climate change planning, policy and programming.

The Nationally Determined Contributions

In 2016, 196 parties adopted the Paris Agreement, a legally binding international treaty on climate change which sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C (UNFCCC, 2015). The agreement also aims to strengthen countries' resilience to the impacts of climate change and support them in their adaptation efforts. The Paris Agreement highlights the need for gender-responsive climate action, the first time this has been recognized in international law (UNFCCC, 2015).

As part of the Paris Agreement, each country is required to put forth a national plan and a set of nationally defined contributions to limit further global warming, enhance climate change adaptation and resilience, and align financial flows with low emissions pathways. The NDCs are documents submitted by each country to the UNFCCC and outline future efforts to reduce their national emissions, taking into account national capabilities and circumstances. While NDCs are principally documents outlining mitigation efforts (reducing emissions), many countries include significant sections on adaptation to climate change. This is particularly the case for countries with small overall GHGs contributions but large adaptation requirements. It is the adaptation components included in NDCs that are particularly of relevance to SRHR.

NDCs are submitted every five years, and 2020 marks the first five-year cycle since the Paris Agreement. To date, 190 countries have submitted an NDC between 2016 and 2020, with at least 72 countries submitting an updated NDC in 2020 and early 2021. National Adaptation Plans (NAPs) also form part of national plans for responding to climate change and are also submitted to the UNFCCC. NAPs describe adaptation measures that will be undertaken by countries to respond, adapt and build resilience to climate change. The goals of the NAP process — established under the 2010 Cancun Adaptation Framework — are for countries to build resilience to the impacts of climate change through medium-to-long-term planning and to integrate adaptation considerations into all relevant policies and strategies. However, significantly fewer countries have submitted NAPs than NDCs, meaning NDCs allow for a broader overview of adaptation

plans and enable greater cross-country analysis. For this reason NDCs/iNDCs rather than NAPs are evaluated in this report as they are currently the most central and globally representative national climate change policy documents and contain substantial adaptation sections.

The contribution of this report

In this report, we relay the findings of an analysis of the inclusion of SRHR and related themes in 50 NDCs from five United Nations Population Fund (UNFPA) regions, namely the Arab States, Asia and Pacific, Western and Central Africa, East and Southern Africa, and Latin America and the Caribbean. iNDC/NDC content was reviewed for direct references to SRHR, as well as for references to related themes including gender, health, population dynamics, vulnerable groups, human rights and participation. The relationship of each of these thematic areas to climate change and SRHR is explored below and was guided by the following framework (See Figures 1 and 2).

Due to the scope, scale and multiplicity of impacts and scenarios regarding SRHR and climate, and to assist analysis and conceptualization of the interlinkages between SRHR and climate changes, a framework was developed to guide the analysis. The framework is informed by the existing literature and evidence on the linkages between SRHR and climate change, but also by the preliminary review of the NDCs included in the analysis presented in this report. It conceptualizes the interlinkages between the drivers and effects of climate change, with the topic areas of health, gender, rights and equality and population dynamics and how these come together to impact SRHR.



Figure 1: Climate change and SRHR analysis methodological framework

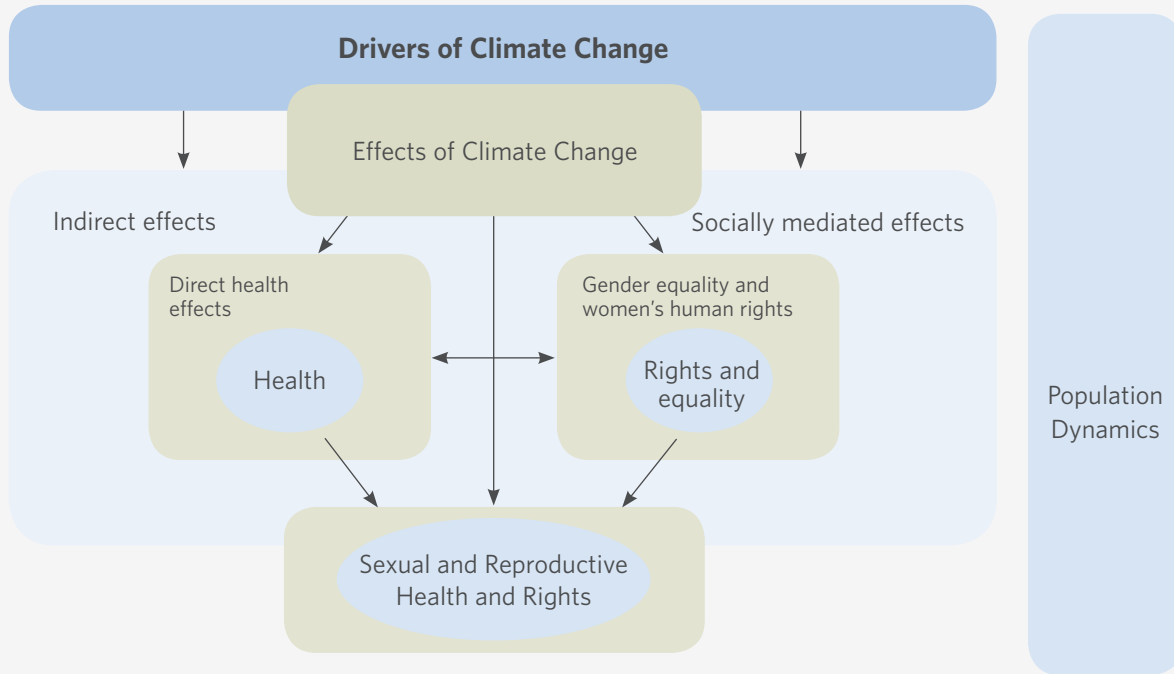
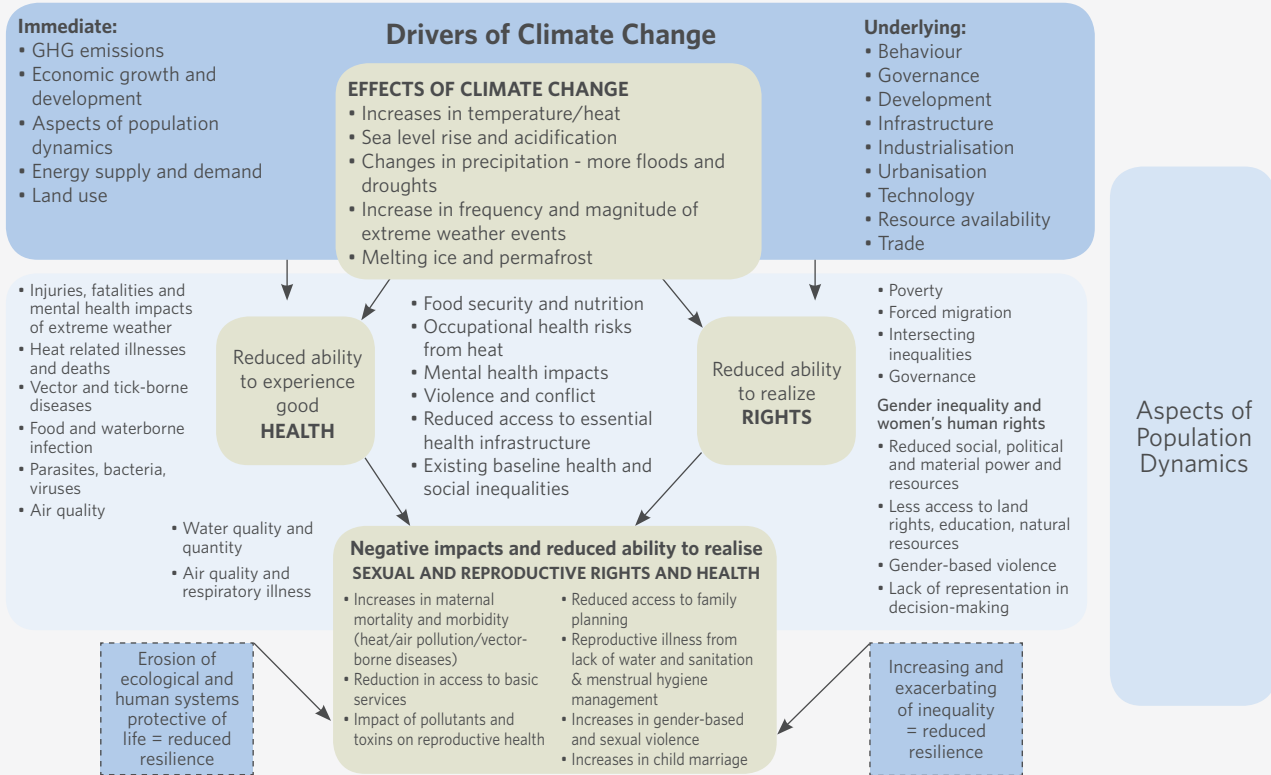


Figure 2: Elaborated climate change and SRHR analysis methodological framework



While this review explores thematic areas and references related to SRHR in the NDCs, it is not suggesting the promotion of SRHR as a climate change mitigation strategy.

As stated by Dr Natalia Kanem: “Many fears about population growth are not borne out by the evidence, and the relationship between population growth and climate change is no exception. The Programme of Action of the International Conference on Population and Development (ICPD), held in Cairo in 1994, shifted the prevailing population discourse away from a focus on numbers and population targets. Instead, it moved the conversation towards actions to uphold universal principles of human rights and freedom of choice, particularly for women and girls to exercise decisions over their own bodies.” (Kanem, 2017).

As previously explained, NDCs were reviewed as they are currently the most central and globally representative national climate change policy documents and contain substantial adaptation sections. What becomes apparent from the analysis is that the full range of SRHR is being impacted by climate change in multiple and intersecting ways and that this should be reflected more explicitly in climate policy. Bodily autonomy and human rights are a cornerstone of resilient communities and recognizing SRHR in relation to climate change is essential for ensuring just responses and building resilience and adaptive capacity to intensifying threats and impacts. Wealthy and more consumptive nations are the most responsible for global emissions, and the burden of mitigating climate change and support for adaptation should reflect this. Linkages between population growth and climate change should be treated with scepticism and SRHR defended in its own right (Kanem, 2017).

Climate change and SRHR

Climate change will negatively impact SRHR through a variety of direct and indirect effects. The realization of SRHR is fundamental to achieving gender equality and can help build the resilience and adaptive capacity of women and their communities to the impact of climate change. Since denial of SRHR can limit women and girls from fully engaging in climate action, efforts to realize SRHR must be included in climate action and policy.

Climate change will adversely affect SRHR, with negative impacts on maternal health as a result of increases in temperature (Kuehn & McCormick, 2017), air pollution (Bekkar et al., 2020), climate-related diseases (WHO, 2017), food insecurity, and increasingly salinated water (Khan et al., 2011). Climate-related events can jeopardize access to clean water essential for safe births and personal hygiene. The El Niño-induced drought in

Mozambique resulted in scarcity not only of clean water but also of the absorbent plant used locally for producing menstrual products for girls and women (Fischer, 2016).

Gender-based violence (GBV) and child marriage are known to increase in times of stress and scarcity and following extreme weather events and disasters (McLoed, Barr & Rall, 2019). GBV can limit women’s ability to build resilience to climate change, impeding the capacity of survivors and their dependents to proactively and positively respond to and manage ongoing challenges and crises (Le Masson, 2019).

Climate change is predicted to increase the number of people living with HIV, with one study projecting between 11.6 and 16 million additional cases of HIV by 2050 in 25 countries in sub-Saharan Africa (Baker, 2020).

Extreme weather events disrupt healthcare facilities and infrastructure and interrupt supply chains, directly limiting access to SRH services (Benjamin, 2016). Moreover, the economic consequences for households of climate-related shocks can indirectly limit access to paid-for SRH services on the grounds of affordability. In addition, the impacts of climate change can affect national investment in other areas of development, including the health sector, by diverting funding for health and SRHR to climate-related responses. Disruption to SRH services can have widespread effects on health, including increases in STIs, unwanted pregnancies, maternal complications, and death during childbirth (Behrman & Weitzman, 2016). The challenge climate change poses to access to SRH services will be felt most keenly by those who already face discrimination and marginalization (e.g. LGBTQIA+ people, ethnic minority groups, Indigenous people, people with disabilities) and in areas where access to services may already be limited (e.g. humanitarian settings and areas affected by conflict).

Failure to realize SRHR can hamper women and girls' capacity to engage in climate action and policy-making. By hindering opportunities for education and development of livelihoods, gaps in the realization of SRHR can prevent women from taking part in household and community decision-making. Girls forced to marry before completing their education may be affected in their ability to receive and act on climate information and alerts from disaster early warning systems. Realization of SRHR, particularly for those already facing discrimination, can empower people to exercise their agency and engage in climate action. For those affected by intersecting inequalities, realization of SRHR can allow the needs and priorities of marginalized groups to be better addressed, including in climate action and policy.

Realization of SRHR is fundamental to achieving gender equality, making it a key aspect of gender-responsive climate action. Bodily autonomy is essential for responding to a changing environment, and a loss of ecosystem services and pressure on diminishing natural resources can make providing for families a challenge, particularly when there are pre-existing unmet needs for family planning services and little ability to enact reproductive choices. To date, the full scope of SRHR has been under-recognized in the climate change space, and the role of SRHR in building healthier, more equal and more resilient populations has been undervalued.

Leaving SRHR behind in responding to the immense global challenge of climate change would entrench the disadvantage that communities are already facing. Evaluating national climate plans and policies for aspects related to SRHR is one step towards acknowledging and accounting for the transformational role SRHR can play in building resilience and adapting to a changing planet, particularly for those that are most vulnerable to the effects of climate change.

A recent evaluation of National Adaptation Plans found that only 10 of the 19 plans reviewed contained any specific references to SRHR (Women Deliver, 2021). The vulnerability of pregnant women and infants to the effects of climate change was the most commonly cited issue, while four NAPs included references to GBV. Though gender considerations were not universally included in the NAPs, the report recommends promoting gender-responsive climate action as a logical entry point for addressing SRHR and climate change. For example, it advocates for gender-disaggregated vulnerability assessments that take an intersectional approach and expressly consider sub-groups such as pregnant women and people living with HIV. Adaptation of the health sector to climate change is suggested as another entry point, with greater investment in future-proofing health systems against shocks and stresses likely to have indirect benefits for SRHR. Facilitating the involvement of key gender and women's health actors and stakeholders in climate policy and promoting collaboration on intersecting areas of gender equality, health and climate change are key recommendations of that report.

Table 1: Summary of select key intersections between SRHR and climate change

Summary of select key intersections: Sexual and reproductive health and rights and climate change	
Access to essential services	Climate change can have direct and indirect effects on limiting access to essential SRHR services. Extreme weather events can disrupt health facilities and infrastructure, and medical supply chains. Reduced access to skilled birth attendants and emergency obstetric care, as well as to contraception and safe abortion services, can result in increases in maternal mortality and morbidity, as well as increases in sexually transmitted infections and unwanted pregnancies. Effects of climate-related shocks on household economic resources can indirectly limit access to SRH services. When families are low on resources and are required to pay for health services, women and girls may be the last to receive support. For groups already navigating an intersection of barriers that reduce their ability to access high-quality SRH services, climate change may increase this difficulty, further contributing to their vulnerability.

Maternal and neonatal health	The role of heat and air pollution on maternal and neonatal health is being rapidly established and includes higher rates of miscarriage, preterm birth and poorer neonatal outcomes. ^{1,2} Increased poverty and food insecurity driven by climate-related loss of livelihoods, will also impact maternal mortality. Global heating impacts the patterns of vector-borne diseases, such as malaria, with negative outcomes such as maternal illness and low birth weight. ³ Access to fresh and clean water has implications for maternal health care and is required for safe births and pregnancies. The negative impacts of salinized water intake on pregnancy outcomes have also been documented. ⁴
Gender-based violence	The stress, scarcity and humanitarian crises brought on by climate change increase gender-based violence (GBV). ^{5,6} GBV, child, early and forced marriages, and trafficking have been seen to increase following disasters and extreme weather events. ^{7,8} When women and girls need to travel further distances to gather necessities such as water and firewood, they can also be at increased risk of physical and sexual violence. ⁹ Stress on livelihoods due to disruptions in access to natural resources can also result in violence. Women who are environmental defenders have also been assaulted and killed while defending environmental commons. ^{10,11}
Early, forced and child marriage	Pressure on families due to floods, droughts, disasters and other climate impacts can also result in early, forced and child marriage. ^{12,13} In circumstances where there are insufficient resources to support the family, marriages can be seen as a way to reduce pressure and secure resources for the family or the child. In humanitarian settings, following extreme weather events or disasters, marriage can be seen as a means to protect girls from sexual violence. ¹⁴ Early and child marriage is sometimes linked with female genital cutting and other harmful practices. ^{15,16}
The impacts of pollutants and toxins on SRHR	When the climate crisis is combined with the related nature and pollution crises, there are further impacts of SRHR. Pollutants and toxins impact the ability to maintain safe and sanitary conditions for life, impacting the food and water systems necessary for human health. Toxins can impact endocrine systems, disrupting fertility. ¹⁷ Changes in the use of fertilisers and pesticides without proper training and protections can also have adverse health impacts, including on reproductive health. ¹⁸

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¹⁵ https://www.popcouncil.org/uploads/pdfs/2017RH_FGMC-ChildMarriage.pdf

¹⁶ Alston, M, Whittenbury, K, et al (2014) Are climate challenges reinforcing child and forced marriage and dowry as adaptation strategies in the context of Bangladesh? *Women's Studies International Forum*. Vol. 47, Part A, 137-144 <https://doi.org/10.1016/j.wsif.2014.08.005>

¹⁷ United Nations Environment Programme.(2020) Global Environment Outlook 6: Technical Summary.

¹⁸ Piazza, MJ, Urbanetz, AA. (2019) Environmental toxins and the impact of other endocrine disrupting chemicals in women's reproductive health, *JBRA Assist Reprod*. 2019 Apr-Jun; 23(2): 154-164.

HIV	Access to health services, including impacts on supply chains can interfere with adherence and management of HIV infection, while reductions in food security can compromise the nutrition required for the proper functioning of medications and to maintain good health. ^{19,20} Climate-related events may also enable situations where people are at greater risk of contracting HIV, for example, young women aged 15 to 24 in areas affected by drought were more likely to have earlier first-time sex, transactional sex and were less likely to stay in school. ²¹ Coupled with reduced access to reproductive health supplies, such as condoms, HIV transmission is more likely.
Sexual orientation, gender identity and sex characteristics	People with diverse sexual orientations, gender identities and sex characteristics, such as lesbian, gay, transgender and intersex individuals, may be at increased risk of poor outcomes due to climate impacts. ²² This is as a result of their pre-existing social marginalization, legal status and the lack of recognition of specific health and social needs in service provision, such as disaster preparedness. ²³
Population dynamics	Aspects of population dynamics, including urbanization and population growth, have been described as a driver of climate change by the IPCC and as a driver affecting the health of the planet by the United Nations Environment Programme (UNEP) Global Environment Outlook 6 (GEO-6) ^{24,25} which describes 'unequal access to education and lack of empowerment of women, as well as women's lack of access to sexual and reproductive health services' contributing to high birth rates' (Geo-6, pg 9). A large unmet need for contraception remains a global challenge, and access to voluntary rights-based family planning services remains an essential component of achieving SRHR. Bodily autonomy and human rights are a cornerstone of resilient communities and recognizing SRHR in relation to climate change is essential for ensuring just responses and building resilience and adaptive capacity to intensifying threats and impacts. Wealthy and more consumptive nations are the most responsible for global emissions and the burden of mitigating climate change and support for adaptation should reflect this. Linkages between population growth and climate change should be complex and SRHR defended in its own right (Kanem, 2017).

Women and gender

Women and marginalized groups face greater challenges in responding to climate change, and gender equality is recognized as essential for combating climate change, ensuring sustainable solutions and effective adaptation to climate change. Gender equality will not be possible without the realization of sexual and reproductive health and rights (SRHR). Unequal social power, participation in decision-making and planning, and control over economic resources mean climate impacts hit women harder.

Women's contributions to natural resource management

and agricultural output are also under-recognized and are often excluded from the training and information needed to adapt and cope with climate impacts (UNEP, 2020).

As ecosystem services become increasingly degraded, the domestic burdens on women and girls increase because they are most commonly tasked with activities such as gathering household water and energy biomass (e.g. firewood). Women and children are also more vulnerable to the negative effects of climate change. For example, they are more likely to die in disasters (Neumayer &

¹⁹ Young, S., Wheeler, A. C., McCoy, S. I., & Weiser, S. D. (2014). A review of the role of food insecurity in adherence to care and treatment among adult and pediatric populations living with HIV and AIDS. *AIDS and behavior, 18 Suppl 5*(0 5), S505–S515. <https://doi.org/10.1007/s10461-013-0547-4>

²⁰ UNAIDS and UNEP. Climate Change and AIDS: A Working Paper. Available at: <https://www.uncllearn.org/wp-content/uploads/library/unaid01.pdf>

²¹ Low, A. J., Frederix, K., McCracken, S., Manyau, S., Gummerson, E., Radin, E., Davia, S., Longwe, H., Ahmed, N., Parekh, B., Findley, S., & Schwitters, A. (2019). Association between severe drought and HIV prevention and care behaviors in Lesotho: A population-based survey 2016–2017. *PLoS medicine, 16*(1), e1002727. <https://doi.org/10.1371/journal.pmed.1002727>

²² Friends of the Earth Scotland (2020) Why Climate change is an LGBTIQ+ issue. Available at: <https://foe.scot/why-climate-change-is-an-lgbtq-issue/>

²³ Gaillard, J.C, Gorman-Murray, A, Fordha, M. (2017) Sexual and gender minorities in disaster, Gender, Place & Culture, 24:1, 18-26, <https://doi.org/10.1080/0966369X.2016.1263438>.

²⁴ United Nations Environment Programme.(2020) Global Environment Outlook 6: Technical Summary.

²⁵ IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland.

Plumper, 2007), from domestic air pollution (WHO, 2018a), and because they have to travel farther to gather resources, they become more exposed to physical and sexual violence and less able to participate in education and other productive activities (UNEP, 2020). Climate-related loss of, or change, in livelihoods, as well as displacement and migration, increase the risk of gender-based violence and harmful practices, including child marriage (McLeod, Barr & Rall, 2019; UN Women, 2009).

Climate disasters especially affect women and girls as they bear a disproportionate burden to provide for their families - whether going without meals to feed others or trekking increasingly long distances to find potable water and suitable food. What resources women do have control over tend to be used to support the health of the family and community and when women are more meaningfully engaged in natural resource management and climate-responsive solutions, the outcomes are positive (UNDP, 2018).

Poverty, underlying vulnerabilities and gender-discriminatory norms increase the vulnerability of women and girls to climate change impacts. Examples of these are: low socio-economic status; high dependence on natural resources and agricultural sustainability that make women farmers and fishers highly vulnerable; protection concerns; limited mobility (prohibitions against being in public that discourage evacuation and gendered clothing that makes movement cumbersome); concentration in domestic sphere (remaining in poorly constructed houses can be risky during storms and mean there is less access to public information); less experience with skills that could mitigate risk (climbing a tree or swimming); lower rates of literacy (preventing women from accessing early warnings); exclusion from the decision-making process; limited land ownership and hereditary laws precluding women's ownership of land; lack of access to credit or insurance that can provide protection from climate impacts or facilitate rebuilding; and for adolescent girls, increased risk of being married as a child due to climate-induced economic and movement pressures (GBV AoR Helpdesk, 2020). There are also important gendered dimensions to consider and address when comparing slow-onset events to acute disasters (Red Cross Climate Centre, 2014).

In 2017, at COP 23, the Gender Action Plan (GAP) was adopted. The GAP sets out the objectives and activities of the UNFCCC in areas related to women and gender in five priority areas: A) capacity building, knowledge management and communication, B) gender-balance, participation and women's leadership, C) coherence, D) gender-responsive implementation and means of implementation and E) monitoring and reporting (UNFCCC, 2017). The Women and Gender Constituency (WGC) of the UNFCCC plays an active role in climate policy-making and serves as the main focal point for the UNFCCC to engage with civil society and non-governmental organizations on topics related to women and gender rights (WGC, 2020).

Health

Climate change challenges the most fundamental needs for human survival: safe air, clean water, sufficient food and shelter. Some of the most immediate and definitive impacts of climate change on human health and well-being include 'increasing heat-related illnesses, illnesses caused by poor air quality, undernutrition from reduced food quality and security, and selected vector-borne diseases' (Haines & Ebi, 2019). The World Meteorological Organization (WMO) describes Africa as particularly at risk for negative health outcomes due to 'high-burdens of climate-sensitive diseases and low preparedness and adaptive and response capacity at the institutional and community level' (WMO, 2020 p.23).

Regions are becoming newly endemic for malaria and other vector-borne diseases, increasing mortality and morbidity and pressuring health systems. Air pollution kills approximately seven million people per year, and is a risk factor for multiple other illnesses (WHO, 2018a). Four million of these deaths are due to household air pollution (WHO, 2018a). Bioenergy is used for daily activities by approximately 80 per cent of the African population and household air pollution contributes to over 600,000 deaths in Africa each year, with women, children and people with the least resources most affected (African Development Bank, 2018; Africa Progress Panel 2015).

In addition, in the past 60 years, the number of reported weather-related natural disasters has more than tripled.

Every year these disasters result in over 60,000 deaths, mainly in low resource settings (WHO, 2018b).

In many Small Island and Developing States (SIDS), rising sea levels and increasingly extreme weather events will destroy homes, medical facilities and other essential services. More than half of the world's population lives within 60 km of the ocean. People may be forced to move, which in turn heightens the risk of a range of health effects, from mental ill-health to communicable diseases (WHO, 2018b).

Climate change not only has direct impacts on human health (e.g. through injuries and illness from extreme weather events) but also threatens the capacity of health systems to manage and protect population health (e.g. through the vulnerability and reliability of infrastructure or critical services). A key component of building resilience to climate change is strengthening health systems so that they continue to be efficient and responsive in an unstable and changing climate (WHO, 2020).

Population Dynamics

Population dynamics may refer to the size, structure, composition, movement, growth and decline of populations and are an area of cross-cutting relevance for climate change. There are numerous intersections between population dynamics and climate change. Some populations face an existential threat due to climate change and an inevitable migration to safer lands. Other populations are rapidly urbanizing, and this results in changes in behaviour related to modes of production and consumption. In the findings of this report, countries describe both small and large populations as a challenge in responding to climate change.

With human activities driving climate change, overly simplistic associations are often made between specific aspects of population dynamics, such as population growth and emissions. Population dynamics, including urbanization and population growth, have been described as a driver of climate change by the IPCC and as a driver affecting the health of the planet by the United Nations Environment Programme (UNEP) Global Environment Outlook 6 (GEO-6), which describes 'unequal access to education and lack of empowerment of women, as well as

women's lack of access to sexual and reproductive health services, contributing to high birth rates' (UNEP, 2016, pg 9; IPCC AR5, 2014).

When looking at the relationship between greenhouse gas (GHG) emissions and climate change, the claim that population is the most important driver of climate change is not only too simplistic but not supported by facts. It is evident that emissions are not equally distributed across the world's population (Kanem, 2017) and that some populations are more responsible for climate change than others. With the richest 10 per cent of the global population responsible for 52 per cent of cumulative GHGs, and the richest 1 per cent contributing a full 15 per cent, it becomes clear that countries with high and rapid population growth are neither responsible for creating nor should be held responsible for solving climate change (Oxfam, 2020).

Individual bodily autonomy is fundamental to the population trends described here, though they are reflected at much larger scales. Links between demography and development share a complex history, in part due to population control policies that violate bodily integrity and autonomy and result in human rights abuses (Pizzarossa, 2018). The International Conference on Population and Development (ICPD) turned the international community's focus towards individual rights and freedoms and away from population number targets. References to population dynamics were included as they intersect aspects of sexual and reproductive health and rights but also because exploring references to population dynamics in climate policy is a means of evaluating whether or not country language and plans are coherent with the vision set out by the ICPD and represent a human rights-based approach that prioritizes the choices of individuals and couples to make decisions involving their bodies.

A large unmet need for family planning remains a global challenge and access to voluntary rights-based family planning services is inherent to achieving SRHR. Climate change impacts the full range of SRHR, and determining the accurate relationship between demography and climate change while reinforcing human rights-based and gender equal approaches upholds the commitments of the ICPD. When people have bodily autonomy and

integrity, they can make the choices that best reflect their individual and contextual circumstances, including those impacted by climate change.

Human rights, participation and the consideration of vulnerable groups

Climate change reduces the ability to realize human rights and requires a 'global rights-based response' (OHCHR, 2020). Climate change 'directly and indirectly threatens the full and effective enjoyment of a range of human rights by people throughout the world, including the rights to life, safe drinking water and sanitation, food, health, housing, self-determination, culture, work and development – as affirmed by the IPCC and Human Rights Council resolution 41/21.' (OHCHR, 2020). Women's human rights and aspects of sexual and reproductive health and rights are particularly threatened, in part due to the role of patriarchal norms that afford women less power. The multiple and intersecting challenges brought on by climate change are not evenly spread, and some groups such as women and girls and people with diverse sexual orientations, gender identities and expressions, and sex characteristics, are hit harder. This is as a result of their pre-existing social marginalization, legal status and the lack of recognition of specific health and social needs in service provision, such as disaster preparedness (Gaillard, Gorman-Murray & Fordha, 2017).

Failure to integrate human rights in climate policy and action will undermine the goals of the Paris Agreement. The effective integration of human rights in climate policies is essential for the just transitions required to support people and the planet. The Paris Agreement recognizes both human rights and the vulnerability

of particular groups to climate change impacts in its preamble where it encourages parties to 'when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity...' (UNFCCC, 2015).

The Office of the United Nations High Commissioner for Human Rights suggests that incorporating human rights into the NDCs is essential. Parties should provide a comprehensive plan for integrating human rights in climate action and how they will comply with the commitment to human rights made in the Paris Agreement, highlight priorities, implementation and support needs for respecting and promoting rights, and ensuring meaningful participation and engagement with climate policy including the right to participation for listed vulnerable groups (OHCHR, 2020).

Reviewing the NDCs for SRHR entry points

The following review explores the NDC documents of 50 countries in five UNFPA regions. This analysis does not represent a complete view of the NDCs but suggests entry points for considering aspects of SRHR in relation to climate change and provides a methodology for replicating the analysis (See Appendix 2). SRHR is essential for building adaptation and resilience to climate change, and understanding how the NDCs currently describe and include related themes is an essential step in determining how SRHR fits into existing climate change plans and policies.



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2. METHODOLOGY

Documents related to the NDCs for 50 countries were reviewed in this analysis. This includes four Intended Nationally Determined Contributions (iNDCs) not yet formally submitted to the UNFCCC and 46 NDCs submitted between 2015 and 2020. (See list of documents reviewed in the Appendices). iNDCs and NDCs are listed and freely accessible on two online UNFCCC registers (INDC Register, 2021; NDC Register, 2021). For the remainder of this report, 'NDCs' will be used to describe both NDCs and iNDCs.

Initially, the analysis was performed for all 23 countries of the East and Southern African region. To elicit a more global view, it was extended to include a further 27 countries representative of four UNFPA regions: Arab States, Asia Pacific, Western and Central Africa, and Latin America and the Caribbean. The countries analysed from these four regions were selected to best represent a range of geographic, socio-economic and cultural factors.

A systematic process of content analysis was performed for each NDC. The following question guided their analysis: How do existing documents on Determined Contributions currently include and describe thematic areas of relevance for sexual and reproductive health and rights?

This analysis of iNDCs/NDCs was developed in relation to six thematic areas: gender, health, population dynamics, human rights, participation, and vulnerable groups.²⁶

The content analysis was conducted in three stages. In the first stage, references to the thematic areas were gathered from each NDC into a spreadsheet. Large portions of text were included here as a first exploration and comprehensive overview of the NDC contents for further analysis. The spreadsheet organized the data by theme and by location of text in the NDC (i.e. introduction, mitigation, adaptation). In a second stage, content specific to the thematic areas was grouped together to identify the range of concerns or ambitions identified across countries. Finally, a country and cross-country analysis was undertaken with the aim of situating the frequency of such concerns and ambitions and their connections and relation to SRHR. A full description of the methodology used in this analysis is presented in Appendix 2. This methodology was found to be robust between observers and can be used to extend the analysis to further countries or future NDCs.

Four researchers conducted the analysis. One researcher is fluent in French and Spanish and was able to interpret NDCs written in French (Mali, Haiti, Comoros and Congo) and Spanish (Ecuador). A validation of the cross-country table (see Appendix 4, Appendix 5, Appendix 6 and Appendix 7) was performed in reference to the source documents.



²⁶ The term 'vulnerable groups' is not meant to suggest the inherent vulnerability of particular groups but reflect descriptions of groups as particularly vulnerable to the impacts of climate change in the NDCs. This is often as a result of power relations and social position or a relationship to an aspect of the natural environment experiencing substantial climate change impacts.

3. FINDINGS

Overarching findings:

The analysis revealed six NDCs with direct references to SRHR, including references to maternal mortality, access to family planning services, gender-based violence (GBV) and people living with HIV. References to thematic areas relevant to SRHR, such as gender and health, were more numerous. Gender was referenced in 36 of the 50 NDCs with gender mainstreaming and sensitivity referenced in 18 of the 50 NDCs. Women are noted as particularly vulnerable to climate impacts (16 of the 50 documents). Health as a relevant area was referenced in all NDCs. Climate-related diseases were cited most often (35/50), with emphasis on vector-borne diseases such as malaria. Food security was a strong theme across the NDCs, including specific references to malnutrition, hunger and food-related diseases (42/50). Air pollution (9/50) and respiratory illness (3/50) was referenced, along with diarrhoeal disease (4/50), sanitation and waste-related health concerns (19/50).

Changes to population structure were described as a challenge to health systems in five NDCs. These references overlapped with references to population dynamics which were present in some form in many NDCs (38/50). However, these were often included only as a general description. In 25 documents, aspects

of population dynamics were referenced as a challenge exacerbating climate change issues, including two island nations describing their small populations as a challenge to climate change adaptation.

Aspects of participation were included in most NDCs (40/50) but with few details and most often in reference to the process of NDC development. However, many NDCs referred to participatory processes for aspects of natural resource management such as afforestation, agriculture and marine resources. Human rights were sometimes referenced (12/50,) either explicitly as in Uganda, Chad and Indonesia's NDCs, or in relation to existing rights, such as within the constitution.

The analysis makes apparent that while not always explicit, SRHR is directly and substantially impacted by climate change. Ensuring healthy and resilient communities that can withstand the challenges presented by climate change means supporting the full achievement of sexual and reproductive health and rights. An intersectional approach that recognizes intersecting and multiple forms of discrimination, including in relation to gender and sexuality, is essential for ensuring just adaptations and truly resilient communities.

SRHR in the NDCs

References to SRHR were identified in six NDCs, including references to maternal mortality, access to family planning services, gender-based violence (GBV) and people living with HIV.

Maternal health was the most commonly described aspect of SRHR in NDCs. The Solomon Islands included a reference to achieving Millennium Development Goal 5 (Improve maternal health), while Yemen and Ecuador described maternal mortality as an important health and social development indicator (Yemen iNDC, 2015: 2; Ecuador, 2019: p42). Zambia describes the benefits of renewable energy for its positive health impacts on child and maternal mortality (Zambia NDC, 2017: p7).

The importance of access to contraception and family planning services was another domain of SRHR described in NDCs. The Solomon Islands states that 'women have poor access to health and family planning services in the rural areas' (Solomon Islands iNDC, 2015, p4). Kiribati included a reference to low rates of contraceptive use and consequently high fertility rates, linking these with aspects of national demography (Kiribati iNDC, 2015: p15).

Gender-based violence was referenced only once among the 50 countries analysed. The Kiribati iNDC states that 'the effects of climate change are felt first and most acutely by vulnerable and marginalized populations, including women, children, youth, people with disabilities, minorities, the elderly and the urban poor. Violence

against women and children is a widespread issue within Kiribati society, which can be exacerbated in times of disasters when normal social protection may be missing. In addition, the population is facing stress due to the uncertainty over their livelihood, culture and homeland.' (Kiribati iNDC, 2015: 15).

The particular vulnerability of people living with HIV to climate change was noted in one NDC. Eswatini

describes how people living with HIV will be more severely impacted by climate change in part due to food insecurity: '50 per cent of the population are currently dependent on food aid/26 per cent of Swaziland's adult population is currently living with HIV.' and further describes how 'the health sector will be affected by climate change impacts, with groups such as households with members living with HIV expected to be particularly vulnerable' (Eswatini NDC, 2016: 2).

Table 2: SRHR references from the review of 50 NDCs

YEMEN	'Furthermore, Yemen ranks lowest on the Global Gender Equality Index (GGEI). Social development indicators, such as child malnutrition, maternal mortality, and educational attainment, remain discouraging.' (p.2)
KIRIBATI	<p>'The effects of climate change are felt first and most acutely by vulnerable and marginalized populations, including women, children, youth, people with disabilities, minorities, the elderly and the urban poor. Violence against women and children is a widespread issue within Kiribati society, which can be exacerbated in times of disasters when normal social protection may be missing. In addition, the population is facing stress due to the uncertainty over their livelihood, culture and homeland. Climate variability, climate change and disaster risks. In combination with the factors that make Kiribati particularly vulnerable to them, are affecting the environment and all socio-economic sectors, including agriculture, education, fisheries, freshwater, health, infrastructure, trade and commerce.' (p.15)</p> <p>A high population and growth rate on South Tarawa in the Gilbert Group (50,182 inhabitants with a population density of 3,184 persons per square kilometer) as well as on Kiritimati in the Line Islands Group (5,586 inhabitants), which is due to a high proportion of children and youth, high levels of fertility, low rates of contraceptive use, and disparities between the different islands of Kiribati (resulting in internal migration, displacement, and urbanization), all effecting the resilience of the population and natural ecosystems.</p>
SOLOMON ISLANDS	'On the achievement of Millennium Development Goals (MDGs) a range of social indicators show that the country is likely to meet Goal 2 (achieve universal primary education) and Goal 5 (improve maternal health). Females still have less access than males to secondary and tertiary education while women have poor access to health and family planning services in the rural areas.' (p.4)
ECUADOR	<p>'Algunas de las principales causas de mortalidad infantil (niños menores a 1 año) son: dificultad respiratoria del recién nacido (14,68%) y neumonía (6,24%) (INEC).' (p.7)</p> <p>'Todas estas circunstancias, entre otras, suman a las limitaciones de la capacidad de la población para acceder a servicios básicos, a educación básica y bachillerato, a reducir tasas de mortalidad infantil y materna y generan a nivel general consecuencias sociales adversas, incluyendo circunstancias de hacinamiento, desnutrición infantil, analfabetismo y pobreza.' (p.42)</p>

ESWATINI

'Evidence of climate change is already visible in Swaziland through the dwindling crop yields, violent storms and persistent drought. This is exacerbating the country's existing challenges which include chronic poverty, food insecurity*, the ability to attain the United Nations Sustainable Development Goals, and the highest prevalence of HIV/AIDS in an adult population in the world.' (p.2)

[*In note: 25 - 50% of the population are currently dependent on food aid. 26% of Swaziland's adult population is currently living with HIV.]

'The health sector will be affected by climate change impacts, with groups such as households with members living with HIV expected to be particularly vulnerable. The health sector is a cross-cutting sector and is dependent on the climate resilience of the agriculture, water, and biodiversity and ecosystems sectors.' (p.2)

ZAMBIA

Zambia's Renewable Energy and Energy Efficiency Programme contributes to its national mitigation goal of 'Improved health impacts due to child and maternal mortality and retention of medical personnel.' (p4)





Gender in the NDCs

Any reference to gender²⁷ in the NDC was documented for analysis. This included the location of the reference in the document, the type of language used, whether the reference was specific or cross-cutting, linked to any other thematic areas and if any budget information was included. (See Appendix 4 for a full account of the gender references gathered.)

The majority of NDCs included in this analysis make some reference to gender (36/50). The depth of the reference was variable across the documents, with some references appearing in a general listing of areas to be impacted by climate change. Other NDCs had more substantial gender components that appeared in various sections of the NDC. Prominent references in regards to gender included: the importance of gender mainstreaming and sensitivity within climate processes; gender as a cross-cutting issue of relevance; women as particularly vulnerable to climate change impacts; gender rights and equality; increasing the participation and decision-making power of women; empowering and building the capacity of women; and women in relation to particular sectors and areas such as energy and agriculture.

The importance of gender issues, mainstreaming and sensitivity was recognized in many of the NDCs (18/50), although few details were provided. Gender, rights and equality were also mentioned, sometimes with reference to the Paris Agreement or national laws and constitutions. The disproportionate impacts of climate change on women were recognized in numerous NDCs (15/50) with women frequently listed as a vulnerable group. Lesotho states: ‘the majority of the world’s poor are women, as such they face higher risks and greater burdens



LESOTHO

Women face higher risks and greater burdens from the impacts of climate change.



UGANDA

Women are more vulnerable to food insecurity, water shortage and fuelwood scarcity.



YEMEN

More than half of the population is living on less than \$2 a day.

²⁷ Gender appeared to be used interchangeably with women in most cases, with no male or other gender specific references identified.

from the impacts of climate change. Furthermore, women’s unequal participation in decision-making processes and labour markets compound inequalities and often prevent women from fully contributing to climate-related planning, policy-making and implementation.’ (Lesotho NDC, 2017: p27). In some cases, specific vulnerabilities are described. For example, the Ugandan NDC describes women as more vulnerable in regards to food insecurity, water shortage and fuelwood scarcity (Uganda NDC, 2015: p4). Yemen linked gender-related vulnerabilities and poverty, reporting that ‘more than half of the population is living on less than \$2 a day and most of the disproportionately affected poor groups include women, children, small scale farmers and sharecroppers, landless labour, nomadic herders and artisanal fishermen who are spread over 133,000 small rural settlements’ (Yemen iNDC, 2015: p2). As described in the SRHR references above, gender-based violence and the potential for climate change to increase this risk was explicitly described in Kiribati’s iNDC (Kiribati iNDC, 2015: p15).

Enhancing the capacity of women, including with new technologies and skills, was mentioned in some NDCs, and this was often in regards to agricultural practices and energy use. 12/50 countries referred to gender in relation to women’s empowerment and capacity building, such as in Burundi, which aims to: ‘Strengthen the aptitudes of actors (especially women and farmers) in new technical processes, in the interest of intensified, sustainable production methods (new crop systems and techniques) as an adaptation need in the area of human and institutional capacity (Burundi NDC, 2015: p4). Enhancing capacity and empowerment may also be combined with increasing the participation and decision-making power of women which was present in 14/50 NDCs reviewed. For example, in regards to adaptation contributions in the realm of agriculture, Sudan describes the importance of ‘establishing women cooperative societies’ for empowerment and resilience and to ‘enhance the participation of women and youth in activities related to adaptation and environmental conservation in order to enhance their adaptive capacity including through establishment of rural women development programme’ (Sudan NDC, 2017: p13.) Similarly, Morocco describes how its Cactus Planting Programme of ‘revegetation of bare or eroded lands with 128,600 hectares of cacti’ will help to generate ‘small farmers and women’s cooperative income’ and includes a budget line detailing the expected costs of the programme (Morocco NDC, 2016: p28).

Promoting renewable energy activities and reducing reliance on firewood and charcoal for household energy was a theme across many of the NDCs, although only seven NDCs linked this issue to gender. Transitioning towards more sustainable use of biomass as a household energy source and increasing the utilization of renewable energy were key aims. In particular, the promotion of energy-saving stoves was discussed in several African NDCs and sometimes included a gender component. Eritrea describes such moves as important for helping secure the ‘health and well-being of women and children’ (Eritrea NDC, 2018: p21) while Nigeria reports that ‘women benefit most from clean, efficient cookstoves, gaining in health and in productive time where these are introduced’



BURUNDI

Strengthen the aptitudes of actors (especially women and farmers) in new technical processes.



SUDAN

Enhance the participation of women and youth in activities related to adaptation and environmental conservation.



MOROCCO

Revegetation of bare or eroded lands with 128,600 hectares of cacti will help to generate income for small farmers and women’s cooperatives.



ERITREA

Health and well-being of women and children.



NIGERIA

Women benefit most from clean, efficient cookstoves, gaining in health and in productive time where these are introduced.

(Nigeria iNDC, 2015: p16). The Malawian NDC describes how ‘vulnerable and disadvantaged groups carry the burden of impacts of climate change. Women and girls are particularly impacted, as they have to walk further in search of basic commodities for the family such as firewood and water. Yet, women may not have the authority to decide on alternative and climate-resilient solutions for the household.’ (Malawi NDC, 2017: p11). In Zambia’s description of mitigation goals, under the Renewable Energy and Energy Efficiency section, ‘improved health impacts due to child and maternal mortality and retention of medical personnel’ is listed, along with ‘creation of opportunities for the girl child and women’s education’ and ‘improved food security due to increased agriculture production resulting from use of irrigation especially for women’ are listed as benefits of mitigation and renewable energy use (Zambia NDC, 2017: p4). Niger describes how access to modern energy services can ‘make a major contribution...to freeing women from chores such as gathering wood and water’ (Niger iNDC, 2015: p7).

Health in the NDCs

Any reference to health in the 50 NDCs was documented in the analysis. The location of the reference and the health dimension was documented for review and included whether any budget information was provided. (See Appendix 5 for a full listing of health references gathered.)

Some reference to human health was featured in all 50 documents reviewed. Sixteen countries made direct references to increases in mortality due to climate change, most often in regards to loss of life due to extreme events. Madagascar also notes an increasing mortality rate caused by the consumption of polluted fish, while Lebanon describes increases in heat-related mortality. Some references cited further specific health challenges and a description of how climate change is a multiplier of health vulnerabilities. For example, in Rwanda’s NDC, a summary of health impacts is described: ‘diseases have a close linkage with climate change, such as malaria, which is a vector-borne disease, tuberculosis which is affected by environmental pollution and malnutrition which may indicate the persistence of food insecurity among population. Morbidity may indicate that acute respiratory infections are the leading causes of death in the country, followed by malaria and intestinal parasites.’ (Rwanda NDC, 2020: p40).

Specific references to aspects of sexual and reproductive health are made in six NDCs and are described above. Gender specific references featured in some NDCs with several highlighting the link between energy saving cookstoves and the health and well-being of women and children (Burkina Faso iNDC, 2015: p28; Eritrea NDC, 2018: p21; Nigeria NDC, 2015: p16).

Climate-related disease references featured prominently in the NDCs (35/50). Some countries explicitly described how changes in temperatures and weather patterns are increasing disease incidence. Vector-borne diseases (21/50), and specifically malaria (14/50), were the strongest disease-specific references, while dengue fever (8/50) and diarrhoeal disease (4/50) and other more specific diseases were also referenced.



MALAWI

Women and girls are particularly impacted, as they have to walk further in search of basic commodities.



ZAMBIA

Improved health impacts due to child and maternal mortality and retention of medical personnel.



NIGER

Access to modern energy services can ‘make a major contribution...to freeing women from chores such as gathering wood and water’.



RWANDA

Diseases have a close linkage with climate change which is affected by environmental pollution and malnutrition.



SEYCHELLES

Known challenges within the coastal zones related to chemical and solid waste.

Air pollution, pollution in general and health challenges in regards to sanitation and waste were also referenced by 22/50 countries. Reported increases in related respiratory disease (3/50) also featured in a few cases. Air pollution and gender are specifically linked in Nigeria's iNDC: 'those who rely on fuelwood and charcoal for cooking and heating, primarily women, are exposed to serious indoor air pollution. Providing affordable clean alternatives is the only way forward.' (Nigeria iNDC, 2015: p16). Regarding pollution, the Seychelles describes 'known challenges within the coastal zones related to chemical and solid waste' (Seychelles NDC, 2015: p12) while the Maldives notes the adverse effects of disasters on access to safe water and sanitation (Maldives iNDC, 2015: p7). Some countries included references to programmes designed to improve sanitation. For example, India describes its 'Swachh Bharat (Clean India) Mission', which includes 'solid waste management' and the construction of millions of household and public/community toilets (India iNDC, 2015: p14).

Food and water security were frequently described as important concerns related to health (44/50). The Seychelles describes food security as 'a crucial issue' and observes that 'there are clear linkages between water, food, ecosystem health and the well-being of people' (Seychelles NDC, 2015: p12). In Madagascar, increases in mortality are linked to some of the fish supply being infected with accumulated dinoflagellate algae due to sea-surface temperature rise.

Competition over resources and the potential for food and water scarcity to contribute to conflict is referenced in various NDCs. Yemen comments that 'climate change and expanding ecological scarcities' may trigger 'further social tensions and resources conflicts' while Somalia describes how 'watering points have an inherent potential to act as conflict triggers...particularly during times of drought' (Yemen iNDC, 2015: p3; Somalia iNDC, 2015: p19). Sudan describes competition over resources and conflicts as a key area of vulnerability (Sudan iNDC, 2017: p11). Addressing climate-related droughts, disasters and food scarcity, Indonesia notes the importance of 'conflict prevention and resolution' in building social resilience to climate change (Indonesia NDC, 2018: p12). Other negative social consequences of stress and scarcity are described in Kiribati's iNDC, with a link drawn specifically to gender-based violence, as described earlier (Kiribati iNDC, 2015: p15).

The vulnerability of the health sector to climate change and the need for its adaptation was described in many NDCs (42/50). For example, Morocco describes how 'vulnerability to climate change of the health sector is explained by the presence of endemic illnesses such as malaria, schistosomiasis, typhoid and cholera, likely to be made worse by climate change. Even though resources are dedicated to combat the spread of these illnesses, resurgence as a result of the impacts of climate change is possible.' (Morocco NDC, 2016: p18). Many health systems are not prepared for climate shocks and impacts and building their resilience would provide multiple benefits and help protect marginalized groups.



MALDIVES

The adverse effects of disasters on access to safe water and sanitation.



INDIA

Solid waste management and the construction of millions of household and public/community toilets.



INDONESIA

Conflict prevention and resolution in building social resilience to climate change.



MAURITIUS

The need to adapt the health sector to respond to population increase and its additional climate-related health burden.



NIGERIA

Intensifying immunization of children and youth to provide protection against diseases more prevalent with climate change.

In two small island states, the Seychelles and Mauritius, increases in population density was described as placing pressure on the health system. Mauritius describes the need to adapt the 'health sector to respond to population increase and its additional climate-related health burden' (Mauritius NDC, 2015: p4), while the Seychelles describes a similar need, particularly for populations in coastal regions and lists dengue fever and leptospirosis as examples of climate-related health impacts (Seychelles NDC, 2015: p4).

Increasing health surveillance (24/50), strengthening health systems, and increasing access to health services (16/50) were also described in numerous adaptation plans and strategies. In its key adaptation strategies, Sierra Leone includes strengthening the 'integration of climate change adaptation into the health sector' (Sierra Leone iNDC, 2015: p9) while Nigeria includes specific examples of adaptations of the health sector, including 'intensify[ing] immunization of children and youth to provide protection against diseases that are expected to become more prevalent with climate change' and 'retrain[ing] health-workers to appreciate emerging climate change challenges' (Nigeria iNDC, 2015: p22).

Disaster risk reduction was another key theme of health-related adaptation. For example, the Philippines describes the importance of mainstreaming disaster risk reduction into development plans and projects (Philippines iNDC, 2015: p5). Linking vulnerable groups to disaster risk reduction, the Solomon Islands notes the need for knowledge around climate change adaptation and disaster risk reduction 'particularly in the outer islands and amongst marginalized populations' (Solomon Islands iNDC, 2015: p13).

In some cases (9/50), countries reference the need for research on the linkages between climate change and health. For example, the Maldives describes the 'urgent need to study the effects of climate change on the prevalence of vector-borne diseases in the Maldives' (Maldives iNDC, 2015: p7). Others described the need for greater adaptation actions to respond to these changes, such as public education and campaigns regarding climate and health impacts (8/50). Twelve countries included a budget line related to health, mostly pertaining to the estimated cost of adaptation.

Population dynamics in the NDCs:

Population references were gathered if countries included descriptions of the national population dynamics, referring to population growth, density, structure, mobility/migration, urbanization and human displacement. It was also recorded if there were any budget lines associated with population dynamics broadly. (See Appendix 6 for a full set of population dynamics references.)

Population dynamics references proved challenging to categorize. This is in part because many references proved to be solely descriptive of country characteristics and not linked to any specific challenge or climate impact.



PHILIPPINES

The importance of mainstreaming disaster risk reduction into development plans and projects.



SOLOMON ISLANDS

The need for knowledge around climate change adaptation and disaster risk reduction.



MALDIVES

Urgent need to study the effects of climate change on the prevalence of vector-borne diseases.



TUVALU

Low lying atolls are at greatest risk of sea level rise due to climate change.



KIRIBATI

Violence against women and children can be exacerbated in times of disasters when normal social protection may be missing.

Fourteen countries refer specifically to aspects of population dynamics as a challenge in relation to climate change concerns, including emissions, public systems, and food and water security. Niger describes population growth as a direct challenge to the implementation of its iNDC (Niger iNDC, 2015: p16). The concept of controlling population growth is described in two NDCs (Egypt iNDC, 2015: p7; Mali NDC, 2016: p22).

Five countries (Lebanon, Solomon Islands, Kiribati, Mauritius and Seychelles) describe high-density populations and urbanization as placing pressures on health systems and water supplies as well as impacting infrastructure and waste and sanitation systems. The Seychelles is the only country with a budget line that refers explicitly to population dynamics, and this is in regards to increasing demands on the health system due to population increase.

In contrast, two countries refer to their small population size as a climate-related challenge, particularly for adaptation. Tuvalu states that 'Due to the small population and lack of land area and resources, the scope for economic diversification, including exports, is minimal' (Tuvalu iNDC, 2015: p5), while Kiribati cites 'insufficient human resource' as a concern in both the 'Vulnerability to climate change' and 'Adaptation' sections (Kiribati iNDC, 2015: p23).

A majority of countries (29/50) refer to urbanization, migration and human displacement. Adaptation to migration was a common reference. For example, Haiti describes migration as a factor to be accounted for in disaster risk reduction and urban planning (Haiti iNDC, 2015: p13). Region-specific contexts are highlighted as relevant to human displacement, with Lebanon's iNDC providing one example. It refers to the Syrian refugee crisis as a factor that will exacerbate climate change-related challenges, describing it as a challenge to 'health care, education, energy, water, sanitation and security' (Lebanon iNDC, 2015: p1).

Two island nations included references to sea level rise and its existential and migratory effects. Tuvalu comments that 'the Government of Tuvalu believes that climate change is real and is the greatest threat to its low lying atolls and people. Negative effects are already taking place and these will gravely undermine efforts towards sustainable development and threaten the survival and the sovereignty of the nation and her people. While longer term impacts such as sea level rise could result in the unavoidable out-migration of some of her people, they have a right to pursue any and all means to ensure their nation survives and the legacy remains, with future generations living productive lives on these islands' (Tuvalu iNDC, 2015: p9). Kiribati describes how sea level rise 'will threaten the very existence of Kiribati as a nation' and includes 'establishing host country agreements to government-sponsored and self-sponsored emigration to resettle I-Kiribati overseas and assist the inevitable migration of the population, due to climate change as and when this eventually arrives' in its adaptation plans (Kiribati iNDC, 2015: pp15,19).



EGYPT & MALI

Controlling population growth is described in two NDCs.



TUVALU

Longer term impacts such as sea level rise could result in the unavoidable out-migration of some of her people.



UGANDA

Observance of human rights in all climate change and adaptation and mitigation actions.



ZIMBABWE

Protecting the environment for the benefit of present and future generations.



INDONESIA

Draws together human rights with health, gender and vulnerable groups such as the Adat communities.

Many NDCs include reference to 'human pressures' on natural resources, such as deforestation. Such references proved difficult to categorize and were in some cases linked to aspects of population dynamics. However, these references often included a broader discussion of poverty, inequality, infrastructure, education and other development aspects.

Human rights, participation and consideration of vulnerable groups in the NDCs

References to human rights, participation in climate policy or action, and considerations for specific vulnerable groups were reviewed. (See Appendix 7 for a full account of rights, participation and vulnerable groups references.)

References to participation in climate policy or action were found in the majority of the NDCs (40/50). In most cases, the NDCs described an element of participation in their development, usually through a brief description of inclusive engagement and wide consultation with stakeholders. In some cases (16/50), the importance of participatory adaptive strategies for sustainable resources management was described, such as in the areas of afforestation (Eritrea, Ethiopia, Indonesia, Lebanon, Sudan, Zambia), sustainable agriculture (Somalia) or marine fisheries (Angola). Other NDCs stressed the importance of participation by 'the entire population' in responding to climate change (Ethiopia) and the importance of engagement by all stakeholders. Many NDCs specifically referred to the participation of women (12/50).

In some cases, NDCs referred to constitutional rights, aspects of the Paris Agreement that stipulate rights and participation, or to other existing national policies that further delineate participatory and consultative processes or aspects of rights and inclusion (12/50). Specific human rights did not feature prominently in the NDCs. The Ugandan NDC calls for the 'observance of human rights in all climate change and adaptation and mitigation actions' (Uganda NDC, 2017: p15). The

Zimbabwe NDC quotes constitutional environmental rights, including citizen rights to an 'environment that is not harmful to their health or well-being' and that is 'protected for the benefit of present and future generations' (Zimbabwe NDC, 2017: p1). The prevention of pollution and environmental degradation, ensuring sustainable development and access to natural resources and the promotion of conservation are also cited (Zimbabwe NDC, 2017: p1). Ecuador references its Constitution in describing not only the right to live in an ecologically balanced and healthy environment free from contamination but also the right to health (Ecuador NDC, 2019: p7). Gender rights references were reported earlier but also formed a part of the references to rights included in the documents.

Finally, most NDCs described sections of their population as particularly vulnerable to climate change (38/50). Specific references to vulnerable groups included mention of women (16/50). The Indonesian NDC draws together rights with health, gender and vulnerable groups, commenting that 'in line with the Paris Agreement, Indonesia respects, promotes and considers its obligation on human rights, the right to health, the right of Adat communities (Indonesia: Masyarakat Hukum Adat and internationally known as indigenous people), local communities, migrants, children, persons with different abilities, and people in vulnerable situations, and the right to development, as well as gender equality, empowerment of women and intergenerational equity' (Indonesia NDC, 2018: p6).

References to children and young people, the elderly, people living with disabilities and environmental refugees reflect text from the Paris Agreement. Eswatini also considers people living with HIV as particularly vulnerable to climate change, directly connecting vulnerability to health. In most cases however (28/50), rural populations, farmers and pastoralists, fishers and those most reliant on natural resources were described as vulnerable due to their reliance on unstable resources for sustenance and livelihood.

Discussion

Aspects of sexual and reproductive health and rights are reflected in the NDCs, but there is scope for greater and more meaningful inclusion of the full range of SRHR.

The analysis established six direct references to SRHR in the 50 NDCs reviewed. These inclusions represent positive examples of how aspects of SRHR may be included in climate change policy documents. Ranging from maternal mortality and gender-based violence to people living with HIV and access to family planning services, the references identified demonstrate some key ways in which SRHR is relevant to climate change policy in the realm of adaptation and resilience. However, there are opportunities for greater inclusion of the full range of SRHR and how its realization can help build resilience and adaptive capacity.

Gender-based violence (GBV) represents a key intersection of SRHR and climate change that should be addressed in climate change adaptation policy.

Gender-based violence is well-known to increase during crises and disasters, including climate-related events. Vulnerability to GBV is linked to existing inequalities. Women with disabilities, the LGBTQIA+ community, ethnic minority women, and women of low caste are more likely to be affected by violence. Despite the clear link between disasters and GBV, only one of the NDCs reviewed here mentioned GBV. Addressing GBV as a consequence of climate-related disasters and climate-related stress and scarcity represents an important area of future inclusion of SRHR in climate policy. Adapting to a changing climate must include action to prevent GBV.

Thematic areas related to sexual and reproductive health and rights span the NDCs and often intersect.

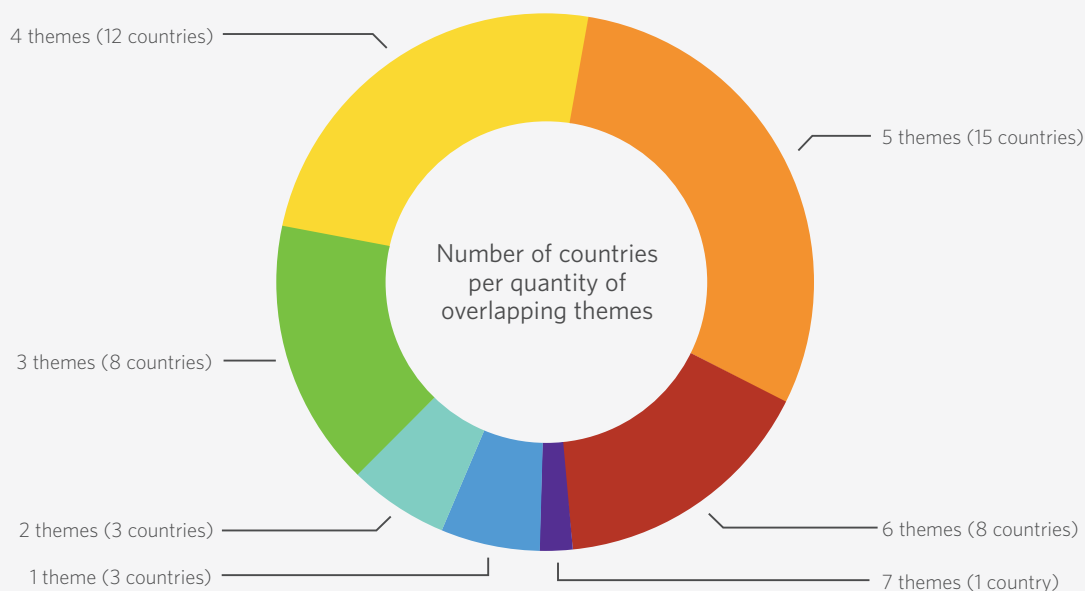
Thematic areas directly related to SRHR, such as health, gender, population dynamics, and human rights and participation, were frequently described. All 50 countries included references to health in their NDC, and 16 noted women to be particularly vulnerable to the effects of climate change. In fact, a large majority (36/50) included references to at least four of the thematic areas (See Figure 3). Such significant inclusion of these themes, as well as references that cross-cut several themes, demonstrate that there are multiple existing areas of relevance to SRHR. Moving forward, this provides a broad and encouraging basis for greater future inclusion of SRHR in the climate policy agenda.

Eswatini's NDC highlights the SDGs and the intersection of themes

'Evidence of climate change is already visible in Swaziland through the dwindling crop yields, violent storms and persistent drought. This is exacerbating the country's existing challenges which include chronic poverty, food insecurity, the ability to attain the United Nations Sustainable Development Goals, and the highest prevalence of HIV/AIDS in an adult population in the world.'

'The health sector will be affected by climate change impacts, with groups such as households with members living with HIV expected to be particularly vulnerable. The health sector is a cross-cutting sector and is dependent on the climate resilience of the agriculture, water, and biodiversity and ecosystems sectors.'

Figure 3: Number of countries per quantity of overlapping themes



SRH services are fundamental to health and should be central to strengthening health systems' resilience to climate change.

While many (42/50) NDCs described the vulnerability of the health sector to climate change in broad terms, disruption of SRH services remains under-recognized. Assessing the vulnerability of SRH services to climate-related changes and events and addressing these vulnerabilities should be a core component of building health systems' resilience to climate change, including in disaster risk reduction.

Increased recognition and action on the gender, health and human rights impacts of climate change has synergistic benefits for sexual and reproductive health and rights and the achievement of Sustainable Development Goals.

While many countries included references to SRHR-related themes, these were often superficial or incompletely explored. For example, while highlighting the importance of gender equality is valuable, specific actions or strategies to achieve this goal could be included. This analysis yields many positive examples of the relevance of SRHR and related themes to climate change, yet there remain significant gaps. Very few countries included a direct reference to SRHR, and a significant minority (14/50) did not include a single reference to gender. Many NDCs included references to the participation of the population in climate policy and action, but most of these were brief or vague descriptions. More substantial and meaningful explanations of how people, particularly those facing barriers to their inclusion, will be facilitated to participate should be included in future. Developing the conversation around SRHR is an important step in the future direction of climate change policy. Progress in related areas has synergistic benefits for SRHR, as do reductions in inequality, equal participation, and fulfilment of rights.

The inclusion of aspects of sexual and reproductive health and rights and population dynamics in climate policy must be human-rights based and reflect the commitment of the International Conference on Population and Development (ICPD) Programme of Action (PoA).

However, the analysis also illustrates areas in which the discussion of SRHR and its related themes can be improved. Some of the language used to describe aspects of population dynamics in the NDCs could

represent greater consistency with the principles set forth in the 1994 International Conference on Population and Development (ICPD). This includes direct references to controlling population size in some cases (2/50). Identifying the accurate relationship between aspects of climate change and demography, reinforcing rights-based approaches and upholding the principles and commitments of ICPD are essential in the climate change response (Kanem, 2017).

Realizing sexual and reproductive health and rights builds resilience and adaptive capacity for climate change while reducing inequality and enabling justice.

Despite the range of thematic areas covered, the view from NDC references alone can miss what becomes apparent with a more holistic reading. For example, in areas where communities are dependent on local biomass as a household energy source, there is a true intersection of thematic areas. Due to the impacts of climate change, women and children may be travelling further to gather water and firefuel to support their families. Longer journeys may expose them to violence and prevent them from participating in education and other productive activities, as identified in some of the NDCs reviewed here. The burden of these journeys can impact their health, and if pregnant, the health of the fetus. Burning this fuel at home results in domestic air pollution that disproportionately kills women and children. These activities can also put pressure on natural resources and ecosystems. When people and couples can enact their human rights and choose if, when, and how many children to have, they can consider the availability and sustainability of life-sustaining resources in this equation and make the choices that best suit their personal circumstances.

Sexual and reproductive health and rights is a cross-cutting issue and should receive stronger focus in climate policy and programming.

Such examples make evident the chain of impacts climate change brings forth and the importance of a development agenda that tackles poverty, gender inequality and climate change and recognizes the importance of SRHR. The example above places women squarely in the picture for energy transitions and how elements of their health and rights are essential to this. These descriptions also highlight the important role of cross-sectoral working, demonstrating the intersectionality of issues in people's everyday lives and how this can be better reflected in policy and programming.

Recognize the linkages between the climate crisis and other environmental crises.

Many of the challenges described in this report also relate to environmental crises beyond climate change. The waste and ecological crises, for example, and the impact of pollutants on reproductive health is being increasingly recognized. This extends beyond climate change and reflects broader elements of environmental sustainability. Considering these crises is also important in recognizing and accounting for contemporary challenges to the achievement of SRHR.

An intersectional approach that explicitly considers existing barriers and inequalities will best promote the full realization of SRHR with corresponding benefits for climate adaptation and resilience.

Many of the people who already face barriers to SRH services and realization of their sexual and reproductive rights are likely to be disproportionately affected by climate change. Factors related to identity and social position, including age, gender, sexuality, disability and ethnicity, are experienced as overlapping and intersecting drivers of marginalization and inequality. An intersectional approach is essential to tackling existing inequalities in SRHR and ensuring they are not exacerbated by climate change. Also, while women and girls are traditionally central to efforts in realization of SRHR, it is vital that people of diverse and underrepresented gender identities, gender expressions, sexual orientations and sex characteristics are explicitly considered and included in such efforts. Maximizing the power of SRHR to help build adaptive capacity and resilience to climate change requires an intersectional approach that accounts for and addresses existing barriers and inequalities.

Limitations

The analysis was limited to the NDC and iNDC documents for 50 countries. The initial focus on the East and Southern African region means the results are weighted towards this region, but many of the trends identified carry through across the four other regions.

While the descriptions of challenges and plans in the NDCs have dimensions that are relevant to SRHR, there may be other policy documents that include more information on adaptation and areas of relevance for SRHR. These may be National Adaptation Plans, National Development Plans, National Climate Policies, or other country-specific agreements. The view from NDCs alone is undoubtedly limited, yet was considered important due to the centrality of NDC documents and the requirements

regarding their formal submission, which allowed for cross-country analysis.

The NDCs and iNDCs included in this analysis are principally taken from the first wave of submission.* The fast-developing space of climate policy represents a challenge to comprehensive analyses, with some second wave NDCs already being submitted. The methodology used in this analysis is robust across observers and is presented in the Appendix, allowing for its open use for analysis of future documents. Similarly, this methodology can readily be applied to provide an analysis of countries not included here or to other climate-related documents such as National Adaptation Plans or National Climate Policies.

Conclusion

Increasing resilience to climate change means reducing inequalities. Many of the populations described in the NDCs reviewed here face multiple intersecting inequalities and disadvantages made worse by climate shocks and impacts. Reducing poverty, increasing the status of women and girls, and assigning the right responsibility for the mitigation of climate change to wealthier, more consumptive nations while supporting the adaptation efforts of harder hit countries, are

all required to respond to the climate crisis. Bodily autonomy and integrity are fundamental in responding to climate change. Sexual and reproductive rights are essential in and of themselves but take on renewed urgency in the face of an unstable and unpredictable environment. A cornerstone of resilience, SRHR enables people, couples and communities to better realize their human rights, make choices that best suit their personal circumstances and protect themselves and their communities from harm.



*The Rwandan NDC reviewed represents the second submission.

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APPENDICES

Appendix 1. Most recent Nationally Determined Contribution Documents, included in analysis

UNFPA Regional Office	Country	iNDC	NDC (*iNDC submitted as NDCs)	Revised NDC	Document name, number of pages Date of submission and link
East and Southern Africa	Angola	X			Intended Nationally Determined Contribution (iNDC) of the Republic of Angola, 20p. INDC submitted on 2015-11-29, available at: https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Angola/1/INDC%20Angola%20deposito.pdf
	Botswana		X*		Botswana Intended Nationally Determined Contribution, 5p. Submitted as NDC on 11/11/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Botswana%20First/BOTSWANA.pdf
	Burundi		X*		Intended Nationally Determined Contribution/Burundi, 14p. Submitted as NDC on 17/01/2018, available at: https://www4.unfccc.int/sites/ndcstaging/Pages/Party.aspx?party=BDI&prototype=1
	Comoros		X*		Contributions Prévues Déterminées au niveau National de l'Union des Comores, 23p. (in French) Submitted as NDC on 23/11/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Comoros%20First/INDC_Comores_Version_Francaise.pdf
	Congo		X*		Contribution Nationale Prévues Déterminées au Niveau National au Titre de la Convention des Nations Unies sur les Changements Climatiques. 12p. (in French) Submitted as NDC on 21/04/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Congo%20First/INDC_Congo_RAPPORT.pdf
	Eritrea		X		Nationally Determined Contributions (NDCs) Report to UNFCCC, 30p. Submitted on 19/06/2018, available at: https://www4.unfccc.int/sites/ndcstaging/Pages/Party.aspx?party=ERI&prototype=1
	Eswatini		X*		Swaziland's iNDC, 7p. Submitted as NDC on 21/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Eswatini%20First/Eswatini's%20INDC.pdf
	Ethiopia		X*		Intended Nationally Determined Contribution (iNDC) of the Federal Democratic Republic of Ethiopia, 13p. Submitted as NDC on 09/03/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Ethiopia%20First/INDC-Ethiopia-100615.pdf
	Kenya		X*		Kenya's Intended Nationally Determined Contribution (iNDC), 7p. Submitted as NDC on 28/12/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Kenya%20First/Kenya_NDC_20150723.pdf
	Lesotho				X Lesotho's Nationally Determined Contribution, 36p. Re-submitted on 22/06/2018, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Lesotho%20First/Lesotho%20First%20NDC.pdf

UNFPA Regional Office	Country	iNDC	NDC (*iNDC submitted as NDCs)	Revised NDC	Document name, number of pages Date of submission and link
East and Southern Africa	Madagascar		X*		Madagascar's Intended Nationally Determined Contribution, 13p. Submitted as NDC on 21/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Madagascar%20First/Madagascar%20INDC%20Eng.pdf
	Malawi		X*		Republic of Malawi Intended Nationally Determined Contribution, 13p. Submitted as NDC on 29/06/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Malawi%20First/MALAWI%20INDC%20SUBMITTED%20TO%20UNFCCC%20REV.pdf
	Mauritius		X*		Intended Nationally Determined Contribution For The Republic Of Mauritius, 6p. Submitted as NDC on 22/04/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mauritius%20First/Final%20INDC%20for%20Mauritius%2028%20Sept%202015.pdf
	Mozambique		X*		Intended Nationally Determined Contribution (iNDC) of Mozambique to the United Nations Framework Convention on Climate Change, 12p. Submitted as NDC on 04/06/2018, available at: https://www4.unfccc.int/sites/ndcstaging/Pages/Party.aspx?party=MOZ&prototype=1
	Namibia		X*		Intended Nationally Determined Contributions (iNDC) of The Republic of Namibia to the United Nations Framework Convention on Climate Change, 21p. Submitted as NDC on 21/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Namibia%20First/INDC%20of%20Namibia%20Final%20pdf.pdf
	Rwanda			X	Updated Nationally Determined Contribution, 96p. Re-submitted on 20/05/2020, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Rwanda%20First/Rwanda_Updated_NDC_May_2020.pdf
	Seychelles		X*		Intended Nationally Determined Contribution (iNDC) Under the United Nations Framework Convention on Climate Change, 18p. Submitted as NDC on 29/04/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Seychelles%20First/INDC%20of%20Seychelles.pdf
	South Africa		X*		South Africa's Intended Nationally Determined Contribution (iNDC), p.11 Submitted as NDC on 01/11/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/South%20Africa%20First/South%20Africa.pdf
	South Sudan	X			Intended Nationally Determined Contribution (Draft) , p.9 iNDC submitted on 2015-11-23, available at: https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/South%20Sudan/1/South%20Sudan%20Intended%20Nationally%20Determined%20%20%20%20Contribution.pdf
	Tanzania		X*		Intended Nationally Determined Contributions, 8p. Submitted as NDC on 18/05/2018, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/The%20United%20Republic%20of%20Tanzania%20First%20NDC/The%20United%20Republic%20of%20Tanzania%20First%20NDC.pdf

UNFPA Regional Office	Country	iNDC	NDC (*iNDC submitted as NDCs)	Revised NDC	Document name, number of pages Date of submission and link
East and Southern Africa	Uganda		X*		Uganda's Intended Nationally Determined Contribution, 18p. Submitted as NDC on 21/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Uganda%20First/INDC%20Uganda%20final%20%2014%20October%20%202015.pdf
	Zambia		X*		Zambia's Intended Nationally Determined Contribution (iNDC) to the 2015 Agreement on Climate Change, 12p. + Communication and update on Zambia's Nationally Determined Contribution (NDC) in accordance with the UNFCCC Decision 1/CP.21 of the Paris Agreement, 1p. Submitted as NDC on 09/12/2016 + communication on 24/03/2020, available at: https://www4.unfccc.int/sites/NDCStaging/pages/Party.aspx?party=ZMB
	Zimbabwe		X*		Zimbabwe's Intended Nationally Determined Contribution (iNDC) Submitted to the United Nations Framework Convention on Climate Change, 12p. Submitted as NDC on 07/08/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Zimbabwe%20First/Zimbabwe%20First%20NDC.pdf
Arab States	Egypt		X*		Egyptian Intended Nationally determined Contribution, 13p. Submitted as NDC on 29/06/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Egypt%20First/Egyptian%20INDC.pdf
	Lebanon		X*		Lebanon's Intended Nationally Determined Contribution, 10p. Submitted as NDC on 05/02/2020, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Lebanon%20First/Republic%20of%20Lebanon%20-%20INDC%20-%20September%202015.pdf
	Morocco		X		Nationally Determined Contribution under the UNFCCC, 32p. Submitted on 19/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/publisheddocuments/Morocco%20First/Morocco%20First%20NDC-English.pdf
	Somalia		X*		Somalia's Intended Nationally Determined Contributions (INDCS), 47p. Submitted as NDC on 22/04/2016, available at: https://www4.unfccc.int/sites/ndcstaging/publisheddocuments/Somalia%20First/Somalia's%20indcs.pdf
	Sudan		X*		Intended Nationally Determined Contributions, 18p. Submitted as NDC on 02/08/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Sudan%20First/28Oct15-Sudan%20INDC.pdf
	Yemen	X			Intended Nationally Determined Contribution (iNDC) Under The UNFCCC, 16p. Submitted on 2015-11-23, available at: https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Yemen/1/Yemen%20INDC%2021%20Nov.%202015.pdf

UNFPA Regional Office	Country	iNDC	NDC (*iNDC submitted as NDCs)	Revised NDC	Document name, number of pages Date of submission and link
Asia and Pacific	Bangladesh		X*		Intended Nationally Determined Contributions (iNDC), 15p. Submitted as NDC on 21/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Bangladesh%20First/INDC_2015_of_Bangladesh.pdf
	Fiji		X*		Fiji's Intended Nationally Determined Contribution, 10p. Submitted as NDC on 22/04/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Fiji%20First/FIJI_iNDC_Final_051115.pdf
	India		X*		India's Intended Nationally Determined Contribution, 38p. Submitted as NDC on 02/10/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/India%20First/INDIA%20INDC%20TO%20UNFCCC.pdf
	Indonesia		X		First Nationally Determined Contribution Republic of Indonesia, 19p. Submitted on 06/11/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Indonesia%20First/First%20NDC%20Indonesia_submitted%20to%20UNFCCC%20Set_November%20%202016.pdf
	Kiribati		X*		Republic of Kiribati Intended Nationally Determined Contribution, 27p. Submitted as NDC on 21/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Kiribati%20First/INDC_KIRIBATI.pdf
	Maldives		X*		Maldives' Intended Determined Contributions, 12p. Submitted as NDC on 22/04/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Maldives%20First/Maldives%20INDC.pdf
	Malaysia		X*		Intended Nationally Determined Contribution of The Government of Malaysia, 6p. Submitted as NDC on 16/11/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Malaysia%20First/INDC%20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.Pdf
	Philippines	X			Republic of The Philippines Intended Nationally Determined Contributions, 6p. Submitted on 01/10/2015, available at: https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Philippines/1/Philippines%20-%20Final%20INDC%20submission.pdf
	Samoa		X*		Samoa's Intended Nationally Determined Contribution, 8p. Submitted as NDC on 22/04/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Samoa%20First/Samoa%20INDC_Submission%20to%20UNFCCC.pdf
	Solomon Islands		X*		Intended Nationally Determined Contribution, 14p. Submitted as NDC on 21/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Solomon%20Islands%20First/SOLOMON%20ISLANDS%20INDC.pdf
Tuvalu		X*		Government of Tuvalu, Intended Nationally Determined Contributions, 10p. Submitted as NDC on 22/04/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Tuvalu%20First/TUVALU%20INDC.pdf	

UNFPA Regional Office	Country	iNDC	NDC (*iNDC submitted as NDCs)	Revised NDC	Document name, number of pages Date of submission and link
West and Central Africa	Burkina Faso		X*		Intended Nationally Determined Contribution in Burkina Faso Submitted as NDC on 11/11/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Burkina%20Faso%20First/INDC%20Burkina_ENG.%20version_finale.pdf
	Chad		X*		Intended Nationally Determined Contribution for the Republic of Chad, 17p. Submitted as NDC on 12/01/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Chad%20First/INDC%20Chad_Official%20version_English.pdf
	Mali		X		Contribution Déterminée au Niveau National, 27p. Submitted on 23/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mali%20First/Mali_revised%20NDC.pdf
	Niger		X*		Intended Nationally Determined Contribution of Niger, 21p. Submitted as NDC on 21/09/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Niger%20First/Niger-INDC-final_Eng.pdf
	Nigeria		X*		Nigeria's Intended Nationally Determined Contribution, 23p. Submitted as NDC on 16/05/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nigeria%20First/Approved%20Nigeria%27s%20INDC_271115.pdf
	Sierra Leone		X*		Sierra Leone's intended nationally Determined Contribution, 10p. Submitted as NDC on 01/11/2016, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Sierra%20Leone%20First/SIERRA%20LEONE%20INDC.pdf
Latin America and the Caribbean	Colombia		X*		Intended Nationally Determined Contribution" (iNDC), 10p. Submitted as NDC on 12/07/2018, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Colombia%20First/Colombia%20iNDC%20Unofficial%20translation%20Eng.pdf
	Dominican Republic		X*		Dominican Republic Intended Nationally Determined Contribution INDC-DR, 4p. Submitted as NDC on 21/09/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Dominican%20Republic%20First/INDC-DR%20August%202015%20(unofficial%20translation).pdf
	Ecuador		X		Primera Contribución Determinada a Nivel Nacional para el Acuerdo de París bajo la Convención Marco de Naciones Unidas sobre Cambio Climático, 44p. Submitted on 29/03/2019, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Ecuador%20First/Primera%20NDC%20Ecuador.pdf
	Haiti		X*		Contribution Prévue Déterminée au niveau National, 15p. Submitted as NDC on 31/07/2017, available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Haiti%20First/CPDN_Republique%20d%27Haiti.pdf

Appendix 2. Content Analysis Methodology for NDC Analysis

This document describes a methodology for the content analysis of Nationally Determined Contributions (NDCs) for references to sexual and reproductive health and rights (SRHR). It is intended as an accessible step-by-step guide to allow the creation of reproducible systematic content analyses of NDCs for references to SRHR and related themes: gender, health, population dynamics, human rights, participation and vulnerable groups.

Content analysis determines the presence of relevant words, themes or concepts in a text to systematically quantify and analyse the presence, meanings and connections of such words, themes and concepts. The process requires an intensive and systematic review of the text, extracting relevant sections and summarizing key points. Links between these identified sections can then be described and related to the overarching analysis, in this case, the inclusion of SRHR and related themes in NDCs.

Step-by-step methodology:

1. Find an NDC or iNDC:

All submitted NDCs are available on the UNFCCC NDC Registry. If a country has not submitted an NDC, Intended Nationally Determined Contributions (iNDCs) are available on the INDC submission portal. INDCs were submitted prior to the 2015 Paris Agreement, communicating an intended national climate policy.

2. Extract relevant information

A framework for analysis of one NDC is provided below. It can be used to summarize the key information extracted from the text and organize it by theme (colour-coded) and according to which part of the NDC it is extracted from (e.g. Introduction, Mitigation section).

2.1. Identify climate policy context

To support the thematic analysis, compile contextual information from the NDC on expected impacts of climate change and the main mitigation and adaptation strategies (white boxes of the framework in Appendix).

- **Identify climate change impacts and vulnerabilities:** What are the country's specific vulnerabilities and expected impacts of climate change? E.g. drought, flooding, sea level rise, extreme temperatures;
- **Sectors affected:** Which particular sectors are most vulnerable? E.g. social sectors, agriculture, fishing;
- **Main mitigation pillars:** Summarize the key mitigation pillars and sectors described in the NDC;
- **Main adaptation pillars:** Summarize the key adaptation pillars and sectors described in the NDC;
- **Other documents or initiatives cited in the NDC:** A summary list of important documents or initiatives cited in the text of the NDC that provide contextualising information.

2.2. Map inclusion of SRHR

Extract quotations that reference sexual and reproductive rights and health, including any reference to the range of SRHR rights listed in the 2018 Gutmacher-Lancet Commission definition. Few NDCs are known to explicitly reference SRHR.



Examples of 'SRHR' keywords: (please note this is not a complete list)

Sexual health, sexual orientation, sexuality, gender identity
Reproduction, reproductive health
Menstruation, menstrual health
Maternal health, maternal mortality
Pregnancy, antenatal, childbirth, postnatal, infertility
(Sexual and reproductive health) education
Contraception, family planning, abortion
Gender-based violence
Marriage, consent, early, forced, child marriage

2.3. Map inclusion of health issues

Extract references to health issues, including:

- Vector-borne diseases
- Diarrhoeal diseases
- Respiratory disease
- Air pollution and quality
- Pollution, waste and sanitation
- SRHR/Gender and health references
- Health surveillance and monitoring (including early warning systems)
- Health as a vulnerable sector
- health services
- Malnutrition/hunger/food-related diseases
- Water-related health challenges or illnesses
- Need for further climate and health-related research
- Health information and campaigns
- Any budget information related to health

Examples of 'health' keywords:

Health, well-being
Disaster, hazards,
Pollution, sanitation, waste
Disease, illness, epidemic, malaria, dengue, cholera etc.
Mortality, morbidity, death/dead/died, loss of life, casualty
Malnutrition, hunger, starvation, famine, food security

2.4. Map inclusion of gender

Extract references to gender, including:

- Gender mainstreaming and sensitivity
- Vulnerability/vulnerable groups/disproportionate impacts
- Women's participation/involvement in decision-making
- Capacity building/empowerment
- In relation to health
- In relation to energy
- In relation to agriculture
- In relation to water and food security

Examples of 'gender' keywords:

Gender, women, men, girls, boys, gender identity, male, female, transgender, non-binary (Gender) mainstreaming, sensitivity

2.5. Map inclusion of population dynamics

Extract references to population dynamics, including:

- Description of national population or aspects of its dynamics
- Description of migration, urbanization or human displacement
- Population growth or density
- Description of population dynamics as a challenge
- Description of population dynamics as a challenge to health or public systems
- Any budget information related to population

Examples of 'population dynamics' keywords:

Population, people, community (population) size, growth, structure, density, pressure, decline, migration, urbanization, displacement, mobility, movements, refugees, migrants

2.6. Map inclusion of human rights, participation and vulnerable groups

Extract references to human rights, participation and vulnerable groups, including:

- Vulnerable groups as main climate change mitigation or adaptation strategy pillar
- Communities depending on natural resources
- Vulnerable groups in relation to health
- Vulnerable groups in relation to gender
- Public participation in climate change policy development (including the NDC)
- Sustainable local resource management (forests, energy, agriculture)
- Public participation in relation to gender
- Human rights

Examples of 'human rights, participation and vulnerable groups,' keywords:

Rights, public, participation, consultation, dialogue, civil society, CSO, stakeholders, power, politics, decision-making
Vulnerable, marginalized, at-risk

2.7. Identify salient features of the NDC not captured in the above groups

A free text note (white box in framework in Appendix) to record important aspects of or reflections on the NDC that have not been fully captured in the thematic content extraction above. Examples could include: repeated reference to a particular issue (e.g. deforestation), references to conflict, references to poverty or inequality, or the notable absence of reference to relevant issues.

3. Analyse the extracted contents

3.1. Within themes

Review extracted information within each thematic area and draw generalisations and conclusions based on the quantity and type of information within the theme and its relation to the overarching climate policy identified in the white boxes.

3.2. Across themes

Review extracted information and consider the intersections/areas of overlap of different themes.

3.3. From identifying needs to fulfilment

Review extracted information for links to specific actions, policy commitments or budgets.

4. Cross-country analysis

After reviewing more than one NDC, compare conclusions of content analyses between countries' NDCs.

5. Example Framework for analysis of one NDC:

Climate change impacts and vulnerabilities:	Sectors affected by climate change:
Main mitigation pillars:	Main adaptation pillars:
Other important documents and initiatives cited in the NDC:	Salient aspects of NDC not fully captured in thematic review:

	Location of Extracted Information in NDC	Extracted Information
Sexual and Reproductive Health and Rights	Introduction/Context	
	In mitigation section	
	In adaptation section	
	In cross-section strategy	
	In budgeting section	
Health	Introduction/Context	
	In mitigation section	
	In adaptation section	
	In cross-section strategy	
	In budgeting section	

Gender	Introduction/Context	
	In mitigation section	
	In adaptation section	
	In cross-section strategy	
	In budgeting section	
Population Dynamics	Introduction/Context	
	In mitigation section	
	In adaptation section	
	In cross-section strategy	
	In budgeting section	
Human Rights, Participation and Vulnerable Groups	Introduction/Context	
	In mitigation section	
	In adaptation section	
	In cross-section strategy	
	In budgeting section	

Appendix 3. Overlapping themes by country and region

UNFPA Regional Office	Country	SRHR	Gender	Health	Population dynamics	Vulnerable groups	Participation	Human rights
East and Southern Africa	Angola		●	●		●	●	
	Botswana			●				
	Burundi		●	●		●		
	Comoros		●	●		●	●	
	Congo		●	●	●	●	●	
	Eritrea		●	●	●	●	●	●
	Eswatini	●	●	●		●		
	Ethiopia		●	●		●	●	
	Kenya		●	●		●	●	●
	Lesotho		●	●	●	●	●	●
	Madagascar			●			●	
	Malawi			●	●	●	●	●

UNFPA Regional Office	Country	SRHR	Gender	Health	Population dynamics	Vulnerable groups	Participation	Human rights
East and Southern Africa	Mauritius		●	●	●		●	
	Mozambique			●			●	
	Namibia			●	●		●	
	Rwanda		●	●	●	●	●	
	Seychelles		●	●	●		●	
	South Africa		●	●				●
	South Sudan		●	●	●	●	●	●
	Tanzania			●		●	●	
	Uganda		●	●		●	●	●
	Zambia	●	●	●		●	●	
	Zimbabwe		●	●		●	●	●
Arab States	Egypt			●	●	●	●	
	Lebanon			●	●	●	●	
	Morocco		●	●	●	●		●
	Somalia		●	●	●	●	●	
	Sudan		●	●	●	●	●	
	Yemen	●	●	●	●	●		
Asia and Pacific	Bangladesh			●				
	Fiji			●		●	●	
	India		●	●	●	●	●	
	Indonesia		●	●	●	●	●	●
	Kiribati	●	●	●	●	●	●	
	Malaysia			●	●	●	●	
	Maldives			●	●	●		
	Philippines		●	●		●	●	
	Samoa			●				
	Solomon Islands	●	●	●	●	●	●	
	Tuvalu			●	●	●	●	

UNFPA Regional Office	Country	SRHR	Gender	Health	Population dynamics	Vulnerable groups	Participation	Human rights
West and Central Africa	Burkina Faso		●	●		●	●	
	Chad		●	●		●	●	●
	Mali		●	●	●		●	
	Niger		●	●	●	●	●	
	Nigeria		●	●	●	●	●	
	Sierra Leone		●	●		●	●	
Latin America and the Caribbean	Colombia			●	●	●	●	
	Dominican Rep.		●	●				
	Ecuador	●	●	●	●	●	●	●
	Haiti		●	●			●	
	Total	6	36	50	25	38	40	12

* Population dynamics as counted in this table refers to mentions of aspects of population dynamics that were directly related to climate change and not broad descriptions of national population dynamics.



Appendix 4. Gender references by countries

UNFPA Regional Office	Country	In regards to gender mainstreaming/sensitivity	In relation to vulnerability/vulnerable group/disproportionate impact	In relation to rights/human rights	In relation to women's participation/involvement and decision-making	In relation to capacity building/empowerment	In relation to health	In relation to energy	In relation to agriculture	In relation to water and food security	Other	References/page
East and Southern Africa	Angola		●		●			●	●			Includes cross-cutting issues which are gender-sensitive, p.20 Women as important decision-makers regarding energy consumption in particular, p.20 Disproportionate adverse effects based solely on gender, in particular in the agriculture, water resources and biomass energy sectors, p.20
	Botswana											
	Burundi	●	●			●			●			Strengthen the aptitudes of actors (especially women and farmers) in new technical processes, p.4 Gender as vulnerable group, p.12 Cross-cutting issues, p.12
	Comoros				●	●						Decision-making and participation, p.11
	Congo		●								●	Gender as vulnerable group, p.7 [OTHER: In regards to adaptation specifically, p.7]
	Eritrea			●		●	●	●			●	Cookstoves securing the health and well-being of women and children, p.21 Technology transfer needs: technical support/capacity building, p.25 Narrowing the gaps between women and men's rights, p.24 [OTHER: Capacity building in technology transfer, p.25]
	Eswatini										●	[OTHER: Broad reference to gender equality, p.1]
	Ethiopia										●	[OTHER: improve the status of women and the welfare of children, p.4]

UNFPA Regional Office	Country	In regards to gender mainstreaming/sensitivity	In relation to vulnerability/vulnerable group/disproportionate impact	In relation to rights/human rights	In relation to women's participation/involvement and decision-making	In relation to capacity building/empowerment	In relation to health	In relation to energy	In relation to agriculture	In relation to water and food security	Other	References/page
East and Southern Africa	Kenya	●	●	●								Adaptive capacity of the most vulnerable groups, p.5 Gender mainstreaming in planning process in line with the Constitution and the Climate Change Bill (2014), p.7
	Lesotho	●	●	●	●	●		●			●	Cookstove to empower women, p.18 Promote gender mainstreaming in policies and projects, p.27 Gender as vulnerable group, p.27 Electrification as alleviating women's duties, p.8 Women's higher risks and greater burdens from the impacts of CC/women's unequal participation in decision-making processes and labour markets/prevent women from fully contributing to climate-related planning, policy-making and implementation, p.27 Equal engagement of women and men in all processes of the Convention as well as the need to develop and implement, p.27 Gender-responsive national climate change policies, p.27 Paris Agreement reference, p.27 Improve gender balance and increasing the participation of women, p.27 [OTHER: differentiated needs, p.27]
	Madagascar											
	Malawi	●	●	●						●		Gender as cross-cutting issue, p.12 Mainstreaming gender, p.12 Vulnerable groups, p.11 Basic commodities, water and firewood security, p.11

UNFPA Regional Office	Country	In regards to gender mainstreaming/sensitivity	In relation to vulnerability/vulnerablegroup/disproportionate impact	In relation to rights/human rights	In relation to women's participation/involvement and decision-making	In relation to capacity building/empowerment	In relation to health	In relation to energy	In relation to agriculture	In relation to water and food security	Other	References/page	
East and Southern Africa	Malawi <i>contd.</i>											Gender inclusiveness, p.11 Rights, p.12 Commitment to gender policy, p.12	
	Mauritius	●										Taking into account gender issues, p.6	
	Mozambique												
	Namibia												
	Rwanda	●									●	Gender mainstreaming, p.73, 62, 59 [OTHER: gender-disaggregated data, p.62, 49]	
	Seychelles	●				●						Gender-sensitive approach and capacities, p.4, p.5 Empowerment, p.5	
	South Africa											Gender considerations, p.2	
	South Sudan	●	●	●	●	●						Take into account gender equality, p.5 Ensure capacity building and participation of women, p.5 Incorporate a gender and human rights approach into capacity building to reduce social inequality, p. 8	
	Tanzania												Respect for human rights and gender-responsive CC actions, p.2 Vulnerable groups, including women, p.2 Women vulnerable in terms of food insecurity, water shortage and fuelwood scarcity, p.4 Mainstreaming of gender considerations in climate change issues, 15 Human rights, p.15
	Uganda	●	●	●							●		

UNFPA Regional Office	Country	In regards to gender mainstreaming/sensitivity	In relation to vulnerability/vulnerable group/disproportionate impact	In relation to rights/human rights	In relation to women's participation/involvement and decision-making	In relation to capacity building/empowerment	In relation to health	In relation to energy	In relation to agriculture	In relation to food and water security	Other	References/page
East and Southern Africa	Zambia	●					●	●		●	●	Improved food security due to increased agricultural production resulting from use of irrigation especially for women, p.4 Increased rural development impacts due to increased economic activities through SMEs, p.4 [OTHER: poverty reduction particularly among women and the youth in relation to conservation and smart agriculture, p.3]
	Zimbabwe	●	●									Mainstreaming gender-responsive climate policies, p.6 Vulnerable groups, p.6
	Egypt Lebanon											
Arab States	Morocco	●		●					●			Respect for human rights and gender equality, p.2 Gender mainstreaming/sensitivity in monitoring systems, p.28 Cactus planting to enhance women's cooperative income, p.28
	Somalia				●					●		Emphasis on involvement of women in pastoral communities for food security, p.15
	Sudan				●							Establishment of cooperative societies to empower women and increase their resilience, p.13 Enhancing the participation of women and youth in activities related to adaptation and environmental conservation to empower them and enhance their adaptive capacity, including through establishment of rural women development programme, p.13

UNFPA Regional Office	Country	In regards to gender mainstreaming/sensitivity	In relation to vulnerability/vulnerable group/disproportionate impact	In relation to rights/human rights	In relation to women's participation/involvement and decision-making	In relation to capacity/building/empowerment	In relation to health	In relation to energy	In relation to agriculture	In relation to water and food security	Other	References/page
Arab States	Yemen											Ranks lowest on global gender equality index with women disproportionately affected by poverty and high maternal mortality, p.2
	Bangladesh											
Asia and Pacific Asia and Pacific	Fiji											
	Indonesia											Women's participation and empowerment, rights and gender equality, p.2, p.6
	India											Gender equality and women's empowerment as competing demand with conservation of nature, p.4
	Kiribati											Women as vulnerable group, p.15 Gender-based violence, p.15 Gender mainstreaming/sensitivity, p.20
	Malaysia											
	Maldives											
	Philippines											Gender equality, women's participation and rights, p.2
	Samoa											
	Solomon Islands											In relation to education, maternal health and family planning, p.4
	Tuvalu											
West and Central Africa	Burkina Faso											In relation to health (cookstoves), p.28 In relation to decision-making, p.34

UNFPA Regional Office	Country	In regards to gender mainstreaming/sensitivity	In relation to vulnerability/vulnerable group/disproportionate impact	In relation to rights/human rights	In relation to women's participation/involvement and decision-making	In relation to capacity building/empowerment	In relation to health	In relation to energy	In relation to agriculture	In relation to water and food security	Other	References/page
West and Central Africa	Chad	●	●		●				●			Women as vulnerable group, p.8 Women's participation, p.10 In relation to agriculture, p.10 Gender-based inequality and mainstreaming, p.14
	Mali		●		●	●				●		Participation of women groups to improve resilience (p.5) Nation policy on gender: aim to improve participation of women in national management processes (p.23) Access to drinkable water for rural men and women as 2014 summit priority programme (p.23) Adaptation provisions and needs for 2020-2030: reinforcing CC capacities of all actors including all gender and youth (p.24) Ongoing projects to 2020: reinforcing CC resilience of producing women and vulnerable communities (p.24)
	Niger	●						●				In relation to energy, p.7, p.14 Gender sensitivity, p.17
	Nigeria	●	●		●	●	●	●	●			Gender sensitivity, p.11, p.16, p.19, p.22 Women's empowerment, p.14, p.16 In relation to energy and health (cookstoves), p.16 Access to finance, p.16 In relation to agriculture, p.16 Women's participation, p.22 Women as vulnerable group, p.6, p.8, p.16, p.22
Latin America and the Caribbean	Sierra Leone	●				●						Gender mainstreaming and women's empowerment, p.5
	Colombia											
	Dominican Republic		●		●							Women as vulnerable group and participation/agents of change, p.3

UNFPA Regional Office	Country	In regards to gender mainstreaming/sensitivity	In relation to vulnerability/vulnerable group/disproportionate impact	In relation to rights/human rights	In relation to women's participation/involvement and decision-making	In relation to capacity building/empowerment	In relation to health	In relation to energy	In relation to agriculture	In relation to water and food security	Other	References/page	
Latin America and the Caribbean	Ecuador	●		●	●		●	●			●	Percentage of women (p.6) Participative process as a way to mainstream (adequate, transversal) gender focus in all phases with the ambition to promote equality between women and men and fight discrimination (p.10) Equal participation (p.11) NDC axis: participation and focus on gender - to promote the involvement of women and men - to promote the rights and equality of opportunity for greenhouse effect gas reduction (OTHER) (p. 14) Energy: implement energy solutions reducing gender divide (p.20) NDC's transparent and participative focus accounts for: the need to reduce the gender divide, etc. (p.31) NAP for CC risk integration aim to: a) improve climate projections, risks, vulnerability and impact analyses in view of space, time with a gender perspective, b) improve institutional capacities through diverse tools to manage CC risk using a gender perspective, ... d) mediation, reporting mechanisms for adaptation projects with gender focus (p.31,32) Maternal mortality, p.42	
												CC committee including gender aspects in all implementation processes (p.9)	
		18	15	10	14	12	8	7	5	5	5	8	
	Haiti	●											
	Total												

Appendix 5. Health references by countries

UNFPA Regional Office	Country	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
		Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
East and Southern Africa	Angola	●							●	●	●	●	●				●	<ul style="list-style-type: none"> Extreme events/direct health risks and effects of food security, p.4, p.14 Food security as one of the main sectors affected by CC, p.5 Basic access/health monitoring, p.14 Strengthen food security and DRR of agro-pastoral communities, p.15, p.16 Food security labelled projects (budgeted): <ul style="list-style-type: none"> - Study impacts of climate on disease patterns, p. 16, 17 - Study the vulnerability of the fisheries sector to climate change, p. 15, 17 - Locally available adapted seed varieties, p.16 - Diversify crops to less climate-sensitive cultures - Promote SLM for increased agricultural yields - Implement water-harvesting systems in drought-prone areas Global warming as a threat to the stability of food security, p.19 	
	Botswana	●	●	●						●								<ul style="list-style-type: none"> Public education/malaria campaigns & strategy/diarrhoeal increasing food insecurity as witnessed impacts of climate change, p.4 Diseases control, p. 5 Extreme events affecting health, p. 4 	
	Burundi	●	●							●									<ul style="list-style-type: none"> Malaria, p.3 Information networks to identify areas ravaged by disease, p.5
	Comoros		●							●	●	●							<ul style="list-style-type: none"> Vector-borne disease/malaria, p.13 Early warning system, p.13 Technology transfer for health, p.17 Main activity aims to improve resilience and technology to guaranteee alimentation, p.6

UNFPA Regional Office	Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
			Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
East and Southern Africa	Congo	●	●									●						Water-related disease, p. 6 Loss of human life, p.6 Proportion of undernourished population and food insecurity, p.2		
	Eritrea		●				●		●						●			Ensure food security, p.11-2 The population remains food insecure as the result of CC, p.20 Malaria/dengue fever increases, p.21&22 Emerging climate diseases, p.21&22 Public health campaigns, p.21&22 Energy-saving stoves and health/well-being women and children, p.21 [OTHER: Renewable energy for health facilities, p. 6]		
	Eswatini							●	●									Food insecurity/population dependent on food aid, p.2 HIV/AIDS, p.2 CC impacting water sector, food security and human health, p.2 Health sector is a cross-cutting sector, p.2 Increase agriculture for food security/improve food and nutrition security, p.3, p.6		
	Ethiopia																	Improving crop and livestock production practices for greater food security, p.2 Minimize food insecurity/prevent deterioration of food and feed in storage facilities, p.5 Capacity to deal with diseases, p. 7 Make available medicines, p. 7 Strengthened rural development leading to greater food security, p.11-2 Public health, air and water quality, p.11-2 Health as vulnerable sectors to climate shocks, p.12		
	Kenya														●			[OTHER: Strengthen integration of climate change adaptation into the health sector, p.5]		

UNFPA Regional Office		East and Southern Africa																		
Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page	
		Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns				
Lesotho		●		●	●					●	●	●	●						Food insecurity, p.2, p.3 Lesotho Food Security Policy 2005, p.5 Diagnose, prevent and control climate-sensitive diseases such as diarrhoeal diseases and malnutrition/health surveillance/research and disease control, p.11-2 [OTHER: electrification programme improving health, p.8] Data collection, processing and provision in health, p.10 Improving crop and livestock production practices for food security as mitigation pillar, p.13, p.1 Improvement of Community Food Security Through the Promotion of Food Processing and Preservation Technologies	
Madagascar		●	●	●	●														Early warning systems and public health surveillance CC & migration links to vector-borne diseases, malaria, and others emerging diseases/ evolution of acute respiratory infections, p.7 early warning systems for food security, health and phytosanitary monitoring, p.8 (x2) [OTHER: Increasing mortality rate caused by fish consumption, p.6] Outbreaks of vector-borne diseases, particularly malaria, p.7 Medium to high index of direct fatalities associated with cyclone events, p.6 Highly increasing prevalence rate of acute respiratory infections, and widespread distributions of vector-borne diseases, p.7 People unaffected by hunger/Monitoring hunger, p.7 Reduction of the occurrence of hunger and food insecurity/population suffering from food insecurity	

UNFPA Regional Office		Country		Increase in mortality		Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other		Does the NDC contain any budget information related to health?		References/page											
UNFPA Regional Office		Malawi		Increase in mortality		Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other		Information related to health?		Human health vulnerable to the impacts of CC, p.1 Climate-related hazards/people displaced, killed or missing, p.1 Ensure household food security, p.4 Diagnose, prevent and control climate-sensitive diseases such as malaria, diarrhoeal diseases and malnutrition/ enhance sanitation and health surveillance/preventing and controlling climate-sensitive diseases more health centres to improve access to health facilities, p.10 Research and disease control targeting climate-sensitive diseases/capacity building, research, and consideration for disaster risk management, p.9 Climate-sensitive diseases (malaria and diarrhoea) increase linked to food production decline and malnutrition, p.9 Provide sustainable support to vulnerable groups in terms of disease monitoring, prevention and control. [LOTHER: vulnerable groups, p.9]	
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
		Mauritius		Increase in mortality		Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other		Information related to health?		Mainstream climate change adaptation in health sector, p.4 Population increase additional climate-related health burden. Improve surveillance of diseases, p.4 Communication, education and awareness with respect to CC risks and impacts on human health, p.4 Pest and Disease Management (IPDM), p.4 Impact of disasters on health, p.4			
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							
				Diseases - general		Vector-borne diseases		Diarrhoeal disease		Respiratory disease		Air pollution & quality		Pollution/waste and sanitation		SRHR related reference		Health Surveillance & Monitoring (including early warning systems)			Health as a vulnerable sector		Access to health services and supplies/Demand on health services		Malnutrition/hunger/food related diseases/food security		Water related health challenges or illnesses		Need for further climate and health related research		Health information and campaigns		Other							

UNFPA Regional Office		Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health	Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page	
UNFPA Regional Office		Mozambique	●	Diseases - general	●	Vector-borne diseases	●	Respiratory disease	●	Diarrhoeal disease	●	Respiratory disease	●	●	Malnutrition/hunger/food related diseases/food security	●	Water related health challenges or illnesses	●	Need for further climate and health related research	●	Loss of human lives, p.3 Reduce climate change-related vector-borne diseases or other diseases, p.6 Guarantee the adequate levels of food security and nutrition, p.6
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Guarantee food security, p.3, p. 12 Cleaner environment, better sanitation, with fewer risks for health problems, p.10 Water availability and lower water quality, impacting food security, health and sanitation, p.14 Increased occurrence of waterborne and vector-borne diseases, p.14 Impact of extreme events on health, p.13 Irrigation schemes for food security, p.15 Food shortages as a major problem in rural areas, p.16
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	CC related diseases, malaria, vector-borne disease, tuberculosis affected by environmental pollution and malnutrition which may indicate the persistence of food insecurity among the population, p.16 Respiratory infections, p.16 Compostable waste-related health risks such as dengue fever, p.40 Reduction of harmful pollutants from conventional diesel and gasoline vehicles, enhancing resilience of population to disease and adverse climate impacts, p.36 Improved health and reduction of harmful pollutants, enhancing resilience of population to disease and adverse climate impacts, p.36 Increased food security as energy mitigation measures benefits (budgeted), p.38
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
UNFPA Regional Office		Namibia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
UNFPA Regional Office		Rwanda	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

UNFPA Regional Office		Country	Increase in mortality	Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Pollution		SRHR/ Gender & Health	Health Systems, Infrastructures, Vulnerabilities	Malnutrition Water & Health		Health Research & Public Education	Other	Does the NDC contain any budget information related to health?	References/page				
UNFPA Regional Office		Rwanda <i>contd.</i>						Air pollution & quality		SRHR related reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns				
								Pollution/waste and sanitation	Gender and Health Reference	Health Systems, Infrastructures, Vulnerabilities											
East and Southern Africa		Seychelles																			

UNFPA Regional Office	Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
			Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
East and Southern Africa	Seychelles <i>contd.</i>																		More research needed, p.4 Addressing the burden placed on high-density populations in the coastal areas and general vulnerability to climate-sensitive diseases, p. 4 The health burden due to high-density populations in the coastal areas needs to be managed through improved research, response and planning. There are known challenges within the coastal zone related to chemical and solid waste, p.12 Clear linkages between water, food, ecosystem health and well-being of the people/improve food, water and nutrition security, p.12	
																			Overuse of a global commons' impact on food security, p.1 Access to food, p.2 CC impact on health, p.1 Improving health for addressing basic needs, p.2	
																			Famine, loss of life, deaths, malaria epidemic, p.2 Comprehensive CC and health vulnerability assessments, improve early warning systems, contingency plans, public health systems, structures, supply and capacity, p.4 Enhance food security, p.5	
																			CC impact on public health, p. 1 Promoting sustainable/climate-sensitive health and sanitation infrastructure, p.5 Conducting vulnerability assessment, p.5 Integrating CC adaptation action into health sector, p.5	
	South Africa																			
	South Sudan	●	●																	
	Tanzania																			

UNFPA Regional Office		Country	Increase in mortality	Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Pollution		SRHR/ Gender & Health	Health Systems, Infrastructures, Vulnerabilities	Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page																																																																																																																																																						
UNFPA Regional Office		Uganda	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Health affected by CC, p.4 Health as vulnerable sector, p.2 Women especially vulnerable in terms of food insecurity, p.3 Vulnerability assessments to climate change impacts on human health and well-being, p.6 Improving early warning systems for disease outbreaks, p.6 Develop climate change-resilient health systems, p.7 Strengthening public health systems by building health structures and capacity, p.7 Making provision for a safe water chain and sanitation facilities to limit outbreaks of waterborne diseases, p.7 Implement strong public awareness programmes to promote better hygiene, p.7 [OTHER: sustainable energy to improve health of population, p.14]																																																																																																																																																						
																			Zambia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	CC impact on health and food security, p.1-2 cost of treating climate related diseases such as malaria and malnutrition, p.1-2 Improved food security due to increased agriculture production, p.4 Improved health impacts due to child and maternal mortality and retention of medical personnel, p.4 Reduced indoor air pollution and improved air quality, p.4 Adaptation of strategic productive systems as main adaptation pillar to guarantee food security, p.7 mainstreaming climate change adaptation into health policies, p.9																																																																																																																																				
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UNFPA Regional Office	Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
			Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
UNFPA Regional Office	Zambia contd.																		early warning and long-term projections for public health, p.9 Improved health impacts from clean water, easy access and sanitation, p.10	
	Zimbabwe																		Ensure that food production is not threatened, p.1 enhancing national food security through climate change adaptation in the agricultural sector, p.2 Constitutions right to health and well-being, p.1 Prevent pollution, p.1	
East and Southern Africa	Egypt	●	●																Increase in mortality, p.6 New animal diseases, p.6 Malnutrition, p.6 Health as a vulnerable sector, p.9	
	Lebanon	●				●	●												Increase in heat-related mortality, p.5 Syrian refugee crisis resulting in increased air pollution (vehicles, generators) and stretching capacity of healthcare, water and sanitation, p.1 Water scarcity, p.5 Public health as vulnerable sector, p.6	
	Morocco	●	●	●										●	●	●			Increase in mortality, p.18 Endemic diseases (inc vector-borne and diarrhoeal) worsened by climate change, p.18, p.25 Health as a vulnerable sector, p.18 Malnutrition and food scarcity, p.18, p.20, p.25 Water pollution/sanitation and water scarcity, p. 16, p.20, p.22, p.25 Promoting scientific research as adaptation pillar, p.25	
Arab States																				

UNFPA Regional Office	Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
			Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
Arab States	Somalia	●										●							Natural disasters and mortality, p.4, p.5, p.17, p.23	
		●											●						Drought and increase in mortality, droughts and conflict, p.4, p.5, p.8, p.13, p.17, p.18, p.19, p.21, p.23	
																			Food security, p.14	
																			Introduction of health-beneficial plant species p.36, p.37	
	Sudan	●																	Achieve food security, p.8	
●																			Food security expected to drop, p.10	
																			Early disease diagnosis and treatment programmes for malaria, meningitis, and leishmaniasis, p.14	
																			Health awareness, p.14	
																			Building health capacities, p.14	
																			Supporting family's health programme, p.14	
																			Control of endemic and epidemic diseases/combating vector and insect borne diseases/ diseases shared between humans and animals, p.14	
																			Resilience to climate change-related diseases and reducing the associated mortality, p.14	
																			Improve community sanitation and medical services, p.14	
																			Overburdened health care systems, p.11	
																			Public health as vulnerable sector, p.15	
																			Malaria increase, p.11	
																			[OTHER: School health programme/Human and animal disease, p.14]	
	Yemen	●																	Food, water and medicine scarcity due to civil unrest and worsened by climate change, p.2, p.3, p.9, p.12	
		●																	Ranks lowest on global gender equality index with high maternal mortality, p.2	

UNFPA Regional Office	Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
			Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
Arab States	Yemen <i>contd.</i>																		Cyclones - increased mortality and droughts/floods, p.3, p.10 Diseases including dengue, p.15	
	Bangladesh																		Health as vulnerable sector and key adaptation pillar, p.10, p.11 Food and water security, p.10, p.14	
	Fiji																		Water and food security, p.2 Vector-borne diseases, p.2 Early-warning systems, p.8	
																			Food and water security, p.4, p.20, p.29 Pollution, waste management and sanitation, p.4, p.13, p.14	
	India																		Animal diseases, p. 5 Vector-borne disease and extreme temperatures, p.22 Natural disasters, p.23, p.24 Health as vulnerable sector, p.22, p.25, p.29 Budget of health adaptation, p.19 Early warning systems, p.24	
	Indonesia																		Food and water security, p.3, p.8, p.11, p.12 Health as vulnerable sector, p.4 Natural disasters, p.11 Public health awareness/campaigns, p.12	
	Kiribati																		Food and water security, p.3, p.5, p.14, p.15, p.16, p.20 Waterborne disease, p.5, p.14, p.15, p.16 Vector-borne disease, p.5, p.14, p.15, p.16 Gender-based violence, p.15 Heat stress, p.16 Early warning systems, p.20 Health as vulnerable sector, p.15, p.20 Table 6 - budget costs for health, p.26	

UNFPA Regional Office	Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
			Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
Asia and Pacific	Malaysia		●	●			●	●	●	●	●	●	●	●	●	●	●	●	Ensuring clean water supply and optimal sewerage services after disasters, p.6 Strengthening resilience against natural disasters, p.3, p. 5, p.6 Health as vulnerable sector, p.5 Vector-borne diseases (dengue, malaria), p.5 Food and water security, p.5, p.6 Waterborne diseases, p.6 Challenge to public disaster management systems, p.6	
	Maldives		●	●				●	●	●				●					Natural disasters and extreme weather events, p.1 Food security, p.6, p.7 Water security, p.8 Health as vulnerable sector, p.7 Waste, sanitation and water pollution, p.9 Vector-borne and waterborne diseases, p.7 Further research on climate and vector-borne diseases and surveillance system, p.7 Weather-related early warning system, p.10	
	Philippines																		Food and water security, p.2, p.3, p.5 Natural disasters and risk reduction, p.3, p.5 Health as vulnerable sector, p.5	
	Samoa																		Cyclones, p.6 Health as vulnerable sector, p.7 Water and food security, p.7	
	Solomon Islands		●																Mortality from natural disasters, p.3 Gender, maternal mortality, family planning, health, p.4 Health as vulnerable sector, p.13 Water and food security, p.13 Water pollution/sanitation, p.12, p.13 Health information, p.13 Budget line for health, p.13	
	Tuvalu																			Food security, p.5

UNFPA Regional Office	Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
			Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
West and Central Africa	Burkina Faso		●				●	●	●	●	●	●	●	●	●	●	●	●	Food and water security, p.10, p.28, p.35 Extreme weather, p.10, p.29 Diseases, p.10 Research climate impact on health, p.20 Budget line related to health, p.20 Air pollution, p.24 In relation to gender, p.28 Waste, p.28 Medicines as forestry products, p.28 Health surveillance/monitoring and access to health, p.29	
			●																Food security, p.6, p.9, p.15 Disease, p.11 Water security, p.11 Budget line for health, p.9	
												●							Food security (p.22,23)	
																			Food security, p.3, p.6, p.13, p.14, p.15 Waste management, p.6, p.14, p.16 Health as vulnerable sector, p.7, p.13, p.14 Water security, p.7, p.13, p.14 Budget line related to food security, p.13, p.14 Budget line related to water security, p.14	
																			Food security, p.9, p.11, p.14, p.15, p.16 Water security, p.1 p.4, p.5, p.16 Food security, p.1, p.4, p.12, p.13 Natural disasters, p.4 In relation to gender, p.16 Sanitation, p.20, p.21 Research climate impact on health, p.20 Health information campaigns, p.20, p.22 Early warning/health surveillance, p.20 Diseases increasing due to climate, p.21, p.22	

UNFPA Regional Office	Country	Increase in mortality	Climate & Disease References				Pollution		SRHR/ Gender & Health		Health Systems, Infrastructures, Vulnerabilities			Malnutrition Water & Health		Health Research & Public Education		Other	Does the NDC contain any budget information related to health?	References/page
			Diseases - general	Vector-borne diseases	Diarrhoeal disease	Respiratory disease	Air pollution & quality	Pollution/waste and sanitation	SRHR related reference	Gender and Health Reference	Health Surveillance & Monitoring (including early warning systems)	Health as a vulnerable sector	Access to health services and supplies/Demand on health services	Malnutrition/hunger/food related diseases/food security	Water related health challenges or illnesses	Need for further climate and health related research	Health information and campaigns			
UNFPA Regional Office	Sierra Leone																			Ebola, p.3 Waste management and pollution, p.8 Early warning systems, p.9 Health as vulnerable sector, p.9
	Colombia																			Health as vulnerable sector, p.5
	Dominican Republic																			Health as vulnerable sector, p.2, p.3 Food and water security, p.2, p.3 Early warning systems, p.2 Natural disasters, p.2, p.3 Sanitation, p.3
	Ecuador																			Prevention of CC induced illnesses and epidemics, through multiplied vectors,p.5 Reduced health-insured population,p.7 Infant mortality due to respiratory problems,p.7 Other: Right to health, food, healthy environment (free of any form of contamination) in constitution,p.7 Higher life loss in extreme weather disasters,p.8-9 Infant malnutrition, p.42
	Haiti																			Food security,p.3, 10 Loss of life,p.9 Disaster risk reduction for improved food security,p.13 Finance for disaster risk reductions (but not directly linked to health), p.15 Prevention of hydric illness through access to water,p.15 Improved access to health care,p.15 Monitoring of drilling zones,p.15 Other: mainstreaming CC assessment in national and local health plans,p.15
	Total	16	28	21	4	4	4	8	19	6	6	25	29	16	40	24	10	8	7	12

Appendix 6. Population references by countries

UNFPA Regional Office	Country	Includes a description of population dynamics (not necessarily linked to any climate related challenges)			Includes a description of population dynamics specifically as a climate change related challenge			References/page
		Includes a description of national or population or aspects of its dynamics	Describes migration, urbanization or human displacement	Describes population growth or density	Describes aspects of population dynamics as a challenge in (anywhere in NDC)	Describes population dynamics as a challenge in relation to health or public systems	How many countries contain a budget line related to population	
East and Southern Africa	Angola	●						80% of the population depend on biomass, p.12 Two-thirds of the population in Luanda are living in peri-urban areas, p.12
	Botswana							
	Burundi	●	●	●				Population description -urbanization/ density, p.2 urbanization rate, p.2
	Comoros	●						750,000 habitants, p.6
	Congo			●	●	●		Forste croissance démographique pesant sur la demande de services sociaux, p.2 chômage alimenté par la forte croissance démographique, p.2
	Eritrea	●	●	●	●			Population growth pressure on resources, p.8-9 Urbanization, rural – urban migrations, p.8
	Eswatini	●						Population size, population below the poverty line, p.1 Percentage of the population living with HIV and using food aid, p.2 Percentage of the population living on subsistence agriculture, p.2
	Ethiopia	●						76.7% of Ethiopia's population currently lacks access to modern energy sources, p.7-8 80% of the population depends on agriculture for their livelihoods, p.7-8
	Kenya	●	●					Urbanization, p.5 Urban development, p.1

	UNFPA Regional Office		Includes a description of population dynamics (not necessarily linked to any climate related challenges)	Includes a description of population dynamics specifically as a climate change related challenge			
	Country	Includes a description of national or population or aspects of its dynamics	Describes migration, urbanization or human displacement	Describes population growth or density	Describes aspects of population dynamics as a challenge in (anywhere in NDC)	Describes population dynamics as a challenge in relation to health or public systems	How many countries contain a budget line related to population
UNFPA Regional Office East and Southern Africa	Lesotho	●	●	●	●		References/page Population growth, dynamics, p1 High population densities ... characterized by high population pressure on arable land and natural resources, p.3 Restrictions on movement, p.2 Growing urbanization, p.20 Changes in population, p.16-6
	Madagascar	●					20% of households benefiting from electric lightning, p.1 91% of households are categorized as poor, p.5
	Malawi	●	●	●	●		Dense population, growth rate, p.1 Population displaced, p.1 Rate of urbanization, p.7 Rapid population growth and declining fish stocks, p.11
	Mauritius	●	●			●	Population migration propensity, p. 4 Population increase as climate-related health burden, p.4
	Mozambique	●	●				Population size, gender distribution, population projection, p.1
	Namibia	●	●	●	●		Pressure on cities following urbanization, p.14 Half of the population depends on subsistence agriculture, p.16
	Rwanda	●	●	●	●		Rapid socio-economic and demographic transformation since 2000, p.13 Urban/rural population forecast (table 2.1), p.13 Rapid urbanization and population growth, p.16, p.45, p.46 Population increases drive demand for services, p.16, p.28

	UNFPA Regional Office	Includes a description of population dynamics (not necessarily linked to any climate related challenges)	Includes a description of population dynamics specifically as a climate change related challenge		
	Country	Includes a description of national or population or aspects of its dynamics	Describes migration, urbanization or human displacement	Describes population growth or density	
		Describes aspects of population dynamics as a challenge (anywhere in NDC)	Describes population dynamics as a challenge in relation to health or public systems	How many countries contain a budget line related to population	
				References/page	
UNFPA Regional Office	Rwanda <i>contd.</i>				Population projection, p.28, p.13 High population density and natural resources pressure, p.45, p.46 Reference to population dynamics, p.76
	Seychelles	●	●	●	Population growth, p.9 Population increase as additional climate-related health burden, p.4-6, p.15-6-7 Population growth and water demand, p.13 High-density populations, p.13, p.4 (section 9.)
	South Africa				
East and Southern Africa	South Sudan	●	●	●	Population size, p. 1 War induced displacements, p.2 Flooding causing displacements, p. 2 95% of the population depend on climate-sensitive natural resources, p.1-2
	Tanzania				
	Uganda	●	●		Total fertility, population growth rate, p.1-2 Interactions between population dynamics, climate change and development, p.15 Migration/agriculture, p.14
	Zambia				
	Zimbabwe	●			Population size, urban/rural distribution, p.2
Arab States	Egypt	●	●	●	Population size, growth and density, p.2 Population growth/density as pressure on economic, social and

	UNFPA Regional Office	Includes a description of population dynamics (not necessarily linked to any climate related challenges)	Includes a description of population dynamics specifically as a climate change related challenge		References/page
	Country	Includes a description of national or population or aspects of its dynamics	Describes migration, urbanization or human displacement	Describes population growth or density	Describes aspects of population dynamics as a challenge in (anywhere in NDC)
UNFPA Regional Office	Egypt <i>contd.</i>				environmental aspects of sustainable development, p.5 Focus efforts on controlling population growth, p.7 Migration from areas affected by sea level rise or land use change affecting public services, p.6, p.9 'Optimal' regional distribution of population, p.9
	Lebanon	●	●	●	Syrian refugee crisis as a challenge for water, air quality, sanitation, education, energy, security, healthcare, p.1 Population density a challenge for water resources, p.5 Population growth and urbanization as climate-related challenge, p.5
Arab States	Morocco	●	●	●	Population as a climate-related challenge for water scarcity, p.16 Urbanization in relation to climate change, p.19
	Somalia	●	●	●	Majority of population is coastal, p.5 Urbanization in response to climate challenges, p.13, p.45 Coastal population growth as climate-related challenge, p.45
	Sudan	●	●	●	Urbanization, population growth, p.3 Population growth, p.10-11 Rural-urban migration patterns, p.8 Discourage communities' migration from vulnerable areas, p.14 Human displacement and suffering, p.11 Overburdened health care systems, p.10-11

		Includes a description of population dynamics (not necessarily linked to any climate related challenges)	Includes a description of population dynamics specifically as a climate change related challenge			References/page
	Country	Includes a description of national or population or aspects of its dynamics	Describes migration, urbanization or human displacement	Describes population growth or density	Describes aspects of population dynamics as a challenge (anywhere in NDC)	Describes population dynamics as a challenge in relation to health or public systems
		Includes a description of national or population or aspects of its dynamics	Describes migration, urbanization or human displacement	Describes population growth or density	Describes aspects of population dynamics as a challenge (anywhere in NDC)	Describes population dynamics as a challenge in relation to health or public systems
UNFPA Regional Office						
Arab States	Yemen	●		●	●	●
	Bangladesh	●				
	Indonesia	●	●	●	●	●
	Fiji	●	●	●		
Asia and Pacific	India	●	●		●	●
Asia and Pacific	Kiribati	●	●	●	●	●
	Malaysia				●	●
	Maldives	●		●	●	●

		Includes a description of population dynamics (not necessarily linked to any climate related challenges)	Includes a description of population dynamics specifically as a climate change related challenge			References/page	
	Country	Includes a description of national or population or aspects of its dynamics	Describes migration, urbanization or human displacement	Describes population growth or density	Describes aspects of population dynamics as a challenge (anywhere in NDC)	Describes population dynamics as a challenge in relation to health or public systems	
UNFPA Regional Office	Philippines	●		●			Population size, p.2 Population growth linked to emissions, p.4
	Samoa						
	Solomon Islands	●	●	●	●	●	Population size, growth, density, urbanization, as challenge to public systems, p.4, p.12
	Tuvalu	●	●		●		Small population size as limit to economic diversification, p.5 Emigration due to sea level rise, p.9
West and Central Africa	Burkina Faso						
	Chad	●	●	●			Population size, growth, p.6, p.9 Displaced persons and refugees, p.8
	Mali	●	●	●	●		Population growth and climate constraints leading to over-exploitation and degradation of natural resources,p.4,5 Population count, growth rate, urbanization and rural population rates,p.7 Droughts exacerbated by production systems, population growth needs and weak adaptation systems,p.22 National policy for population: aims to control and manage population growth,p.22
	Niger	●	●	●	●		Population size, growth, p.3, p.6 'Stabilising populations in order to contain rural exodus and check uncontrolled urbanization', p.7, p.14 Population growth as demand on food supply, p.8 Population growth as obstacle to iNDC implementation, p.16

		Includes a description of population dynamics (not necessarily linked to any climate related challenges)	Includes a description of population dynamics specifically as a climate change related challenge				
	Country	Includes a description of national or population or aspects of its dynamics	Describes migration, urbanization or human displacement	Describes population growth or density	Includes a description of population dynamics as a challenge (anywhere in NDC)		
		Includes a description of population dynamics as a challenge in relation to health or public systems	Describes population dynamics as a challenge in relation to health or public systems	How many countries contain a budget line related to population	References/page		
UNFPA Regional Office	Nigeria	●	●	●	●	Population growth linked with future emissions, demand on food security and link to malnutrition, p.9, p.12, p.17 Urbanization/migration, p.21, p.22	
	Sierra Leone						
Latin America and the Caribbean	Colombia		●			Migration as pressure on natural resources, p.9	
	Dominican Republic						
	Ecuador	●	●	●	●	Population counts,p.6 Projection of urban population,p.6 'Pressure' through deforestation and wood degradation,p.22 Development of policies and strategies to tackle temporary and permanent migrations linked to CC,p.35 All cited circumstances as limiting access to basic services and education, infant and maternal mortality, leading to hostile social circumstances of which overcrowding, infant malnutrition... ,p.42	
Latin America and the Caribbean						Population count and growth,p.8 Population projections used for mitigation projections,p.8 Migration as an accounted factor in DRR with resettlement as adaptation strategy, p.13 Migration as accounted for in urban planning and overcrowding management,p.13 Education to cover CC including migration issues,p.13	
	Haiti	●	●				
	Total	38	29	21	25	14	1

Appendix 7. Vulnerable groups, participation and human rights references by countries

UNFPA Regional Office	Country	Vulnerable groups:				Participation of the population in:			References/page
		Vulnerable groups as main climate change or adaptation strategy pillar	Communities depending on natural resources	In relation to health	In relation to gender	Climate change policy (including NDC)	Sustainable local resource management (forests, energy, agriculture)	In relation to gender	
East and Southern Africa	Angola	●	●		●	●	●		Benguela fisheries adaptive capacity/participatory and integrated adaptive strategies to ensure food and livelihood security, p.15 Support agropastoral communities to manage risks related to natural disasters at the level of communities and local institutions for improved agricultural and livestock production, p.15 Preparation of INDC through a participatory approach, p.2
	Botswana								
	Burundi	●			●				Gender, youth and vulnerable groups as cross-cutting issues described in country 'Vision 2025' to be incorporated into all development programmes, p.12 Vulnerable groups as cross-cutting pillar, p.12
	Comoros		●		●		●		Augmenter la résilience des populations les plus vulnérables, p.6 +12 Improve involvement and decision-making of women in environmental protection in view of the increasing role in the domestic economy, p.11 Communautés rurales et les agriculteurs pauvres les plus vulnérables, p.11
	Congo		●			●			Participative and multidisciplinary approach, p.6-7 Urban/rural populations, p.2+6+8 Coastal communities, p.11 NDC elaborated through a participative elaboration
									At the local level, direct community involvement participation in the mitigation and adaptation projects and programmes is very important, P.24 Energy saving cooking stoves for rural households securing the health and well-being of women and children, p.21
	Eritrea		●	●	●	●	●	●	Inclusion of civil society will expedite the implementation process and incorporate the most vulnerable sectors of the society, narrowing the gap between women and men's rights, p.24 Farmers as extremely vulnerable to climate change variability, p.15 Community participation section, p.24 Participatory afforestation programmes against deforestation, p.14

UNFPA Regional Office	Country	Vulnerable groups:				Participation of the population in:			References/page
		Vulnerable groups as main climate change mitigation or adaptation strategy pillar	Communities depending on natural resources	In relation to health	In relation to gender	Climate change policy development (including NDC)	Sustainable local resource management (forests, energy, agriculture)	In relation to gender	
East and Southern Africa	Eswatini	●	●	●					The country's rural poor are especially vulnerable to the degradation of healthy ecosystems through climate change, p.2 Households with members living with hiv expected to be particularly vulnerable, p.2
	Ethiopia	●	●	●	●	●			Improve the status of women and the welfare of children and address the well-being of the elderly, persons with disabilities and environmental refugees, p.4 CC solutions require the participation of the entire population, especially farmers and pastoralists, p.4 EINDC developed through a participatory process, p.3 Community participation to reduce incidence and impact of fire and pest epidemics, p. 7 on afforestation and reforestation, p.8
	Kenya	●		●	●	●		●	Gender, Vulnerable Groups and Youth as priority adaptation pillar, p.5 Reference to constitution (environmental rights) and the Climate Change Bill 2014, p.1 iNDC builds on the participatory multi-stakeholder and cross-sectoral consultative processes, p.1
	Lesotho	●		●	●	●	●	●	Paragraph 'Gender, Youth and Vulnerable Groups Imperatives of Climate Change', p.32 Women face higher risks and greater burdens from the impacts of climate change, p.32 Ensure equal engagement of women and men in all processes of the Convention, p.32 Endorse UNFCCC/Paris Agreement parties' obligations on human rights, p.32 Vulnerability of poor rural areas, with difficult provision of and access to social services, p.13 Policy developed through an inclusive and participatory process, p.27-8
	Madagascar					●			Participatory and inclusive process, p.5

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East and Southern Africa	Malawi	●	●	●	●	●	●	●	Women, girls as vulnerable, p.11 + key adaptation action with 'vulnerable groups', p.10 enhance the quality of life of vulnerable groups through improved access to fish resources, p.11 provide sustainable support to vulnerable groups in terms of disease monitoring, prevention and control, p.9 iNDC conducted with inclusive process, p.12 co-management of capture fisheries, p.11 Human rights and gender issues are enshrined in Constitution and critical in the design and implementation of mitigation and adaptation actions, p.12
	Mauritius				●				iNDC elaborated on the basis of participatory/consultative processes, p.1
	Mozambique				●	●			NDC elaborated through a participative process, p.2 Need to further public participation, p.8 Active participation as a mission, p.5
	Namibia				●				NDC elaborated through a participative elaboration, p.11-2
	Rwanda		●		●	●			Vulnerable farmers, p.50 stakeholder consultations, p.1+7+8+21+26+30+33+69
	Seychelles				●	●	●		A multi-stakeholder consultative process, p.3 civil society organizations will continue to contribute to adaptation efforts, p.5 the stakeholder workshop that improved gender-sensitive capacity building, research and education was needed to underpin all climate change adaptation efforts in order to make them effective and resilient, p.4
	South Africa							●	Environmental right set out in section 24 of the Constitution, p.2
	South Sudan		●			●	●	●	Enhancement of climate resilience in the agricultural sector by building upon traditional knowledge and supporting community-based adaptation strategies + community-based watershed management p.4 forest governance with alternative income-generating activities, planting of tree, and equitable sharing of forest resources benefits, p.6

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East and Southern Africa	South Sudan <i>contd.</i>									iNDC based on cross-sectoral consultative process, p.1+9 Ensure capacity building and participation of the society, local communities, indigenous peoples, women, men, youth, civil organizations + private sector, p.5 Inclusive mechanisms of social participation in the implementation of adaptation interventions + adaptation interventions designed with a gender and human rights approach, p.5 Incorporate a gender and human rights approach into capacity building, prioritizing the most vulnerable groups, p.8 Reduce vulnerability of population by integrating climate change considerations into land use planning + buffer zones and relocate vulnerable communities away from flood-prone areas, p.5
	Tanzania		●			●				Detailed consultations with sectoral experts and other stakeholders, p.1 Encouraging community involvement in waste to energy management approaches, p. 6 INDCs were prepared in a consultative and inclusive manner + consultative workshops, p.2 INDCs will be reviewed in a participatory manner, p.8
	Uganda	●	●	●	●	●	●	●		Respect for human rights and gender-responsive climate change actions, p.2 Protection of vulnerable groups including women as cross-cutting priority, p.2 Women vulnerable in terms of food insecurity, water shortage and fuelwood scarcity. Children, the elderly, persons with disabilities or sick vulnerable, p. 3+4 Rural poor and those living in slums are especially vulnerable, p.3 Revision of the climate change policy to be informed by a thorough public consultation process, p.5 Prioritization of policies undergone extensive consultation with stakeholders, p.12 Observance of human rights in all climate change adaptation and mitigation actions, p.15 Respect for human rights and gender-responsive climate change actions, p.2

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UNFPA Regional Office	Uganda <i>contd.</i>								Ugandan communities to contribute to these CC-related activities, for instance, through payment for ecosystem services schemes, p.15
	Zambia	●	●	●	●	●			Health impacts due to child and maternal mortality, p.4 Improved food security due to increased agriculture production resulting from use of irrigation especially for women, p. 4 Participatory forest management, p.3 Ensure national wildlife adaptation strategy implementation through local community, civil society + promote community/public/private partnerships in the sustainable management of wildlife resources, p.8 Enhance multi-stakeholder participation in the implementation of the iNDC, p.11 Monitoring and evaluation consultative and participatory, p.11
	Zimbabwe	●	●	●	●	●		●	Rural population's livelihoods are dependent on rain fed agriculture making them highly vulnerable to climate change, p.2 Vulnerable groups (women, youth and children), p.6 Constitution of Zimbabwe (2013) environmental rights and "the right to an environment that is not harmful to their health or well-being", p.1 Consultation process, p.5+12
Arab States	Egypt	●	●				●		Focus on marginalized social groups including farmers and low-income groups as adaptation pillar, p.4, p.6 Sustainable tourism and local community capacity building, p.9
	Lebanon	●					●		Extensive stakeholder involvement in iNDC development, p.1 Stakeholder collaboration in addressing climate-related challenges, p.5 Rural areas as vulnerable group and key adaptation pillar, p.7 Tree planting for forestry sustainable resource management, p.7
	Morocco	●						●	Human rights/constitution, p.2 Rural areas and agricultural sector as vulnerable group and key adaptation pillar, p.11, p.16, p.17, p.18, p.19 Coastal areas and fisheries vulnerable group and key adaptation pillar p.17, p.25

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Arab States	Somalia	●	●	●		●	●	●	<p>Communities dependent on fishing and agriculture are key adaptation pillar, p.6, p.8, p.13, p.18, p.22, p.25, p.27, p.37, p.45</p> <p>Solar power for cooking and off-grid energy including health centres p.9, p.43</p> <p>Stakeholder involvement, p.11, p.14, p.16, p.20, p.24, p.38, p.45</p> <p>Women's participation in adaptation programme, p.15</p> <p>Water scarcity as conflict trigger for nomadic peoples, p.19, p.21</p> <p>Sustainable coastal management by communities, p.46</p>	
	Sudan		●				●	●	<p>Agriculture: establishment of women cooperative societies toward empowerment and increased resilience + participation of women and youth in activities related to adaptation and environmental conservation, p.13</p> <p>Vulnerable farmers' communities, p.13</p> <p>Agroforestry: empower vulnerable communities through their involvement in community forests activities/products, p.13</p> <p>Joint management of the natural resources for comprehensive consideration of climate change impacts, p.13</p> <p>NAPA (National Adaptation Programme of Action) developed through stakeholder engagement, p.15</p> <p>Bottom-up approach + stakeholder consultations, p.10</p>	
	Yemen	●	●	●					<p>Women as a group are vulnerable to food insecurity, p.2</p> <p>Rural groups vulnerable to food/water scarcity, worsened by climate change and civil unrest, p.3, p.11</p> <p>Conflict over natural resources, p.3</p> <p>Coastal groups vulnerable to food/water scarcity as key adaptation pillar, p.3, p.12, p.13, p.14</p> <p>Rural renewable electricity as mitigation pillar, p.7</p>	
Asia and Pacific	Bangladesh									
	Fiji	●				●			<p>Stakeholder involvement in climate policy, p.10</p> <p>Rural and squatter settlements as vulnerable and key to adaptation, p.10</p>	

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Asia and Pacific	India	●			●	●				Poor and rural groups vulnerable to disasters and key to adaptation, p. 4, p.5, p.19, p.20, p.25, p.35 Climate justice and social justice, p.4, p.7 Stakeholders in climate policy, p.7, p.18, p.35 Coastal groups as vulnerable, p.23
	Indonesia	●			●	●	●	●	●	Participation in sustainable resource management, including women, p.2, p.5 Participation in climate change policy, p.5 Human rights including in reference to gender equality and women's empowerment, p.6 Stakeholder consultation for NDC, p.6 Poorest most vulnerable and key to adaptation, p.12
	Kiribati	●	●	●	●	●		●		Rural groups and outer islands as vulnerable and key to adaptation, p.8. P.10, p.14, p.15, p.16, p.20, p.25 Communities dependent on natural resources, p.15 Vulnerable groups in relation to health, p.15, p.16, p.20 Stakeholder participation in climate policy, p.18, p.20, p.25 Vulnerable groups and participation in relation to gender, p.20 Budget line for vulnerable groups - table 6, p.26
	Malaysia	●				●				Participatory process/stakeholder consultation for climate policy, p.1, p.4 Coastal groups as vulnerable and key to adaptation, p.5
	Maldives	●								Lowest lying islands as vulnerable groups key to adaptation, p.2, p.6, p.8, p.11
	Philippines	●				●	●			Sustainable natural resource management, p.2 Stakeholder involvement in climate policy, p.3, p.6 Vulnerable groups key adaptation pillar, p.5
	Samoa									
	Solomon Islands	●				●				Rural groups vulnerable and key to mitigation/adaptation, p.13, p.14 Community involvement in adaptation planning, p.13
	Tuvalu	●				●		●		Stakeholder involvement in climate policy, p.3 Energy efficiency: public education on sustainable resource management, p.8 Vulnerable groups as key adaptation pillar, p.9

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West and Central Africa	Burkina Faso	●	●	●	●	●	●	●	●	Sustainable local resource management, p.3, p.10, p.28 Rural sector vulnerable and key to adaptation, p.3, p.28 Stakeholder involvement in policy, p.10, p.34 Women as vulnerable group and in relation to health, p.28 Women's participation, p.34
	Chad				●	●	●	●	●	Stakeholder involvement in policy, p.8, p.10 Women as vulnerable group, p.8, Women's participation, p.10 Human rights, p.14
	Mali					●		●		National policy on gender: aim to improve participation of women in national management processes, p.23 Mali will assume responsibilities through a participatory approach to climate change, p.27
	Niger	●				●				Stakeholder involvement in policy, p.4, p.7, p.14, p.17 Rural groups as vulnerable and key to mitigation/adaptation, p.10, p.16
	Nigeria	●				●		●		Vulnerable groups as key adaptation pillar, p.8, p.12, p.22 Vulnerable groups in relation to gender, p.8, p.22 Women's participation, p.22 Stakeholder involvement in policy, p.7, p.8, p.20, p.22
	Sierra Leone	●	●			●				Dependence on natural resources, p.2 Stakeholder involvement in policy, p.2 Rural areas vulnerable and as mitigation/adaptation strategy, p.7, p.9
	Colombia	●				●				Stakeholder involvement in policy, p.4, p.5, p.8 Conflict groups/peace-building as adaptation pillar, p.5, p.9 Rural communities vulnerable/as adaptation pillar, p.9
	Dominican Republic									
Latin America and the Caribbean	Ecuador		●	●			●	●	●	The Constitution includes the right to protection of the natural heritage, right to live in a healthy environment, ecologically balanced, free of contamination and in harmony with nature, guaranteeing sustainability... Environment protection declared to be in the public interest. Climate change mitigation and Disaster Risk reduction seen as national duties, p7-8

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Latin America and the Caribbean	Ecuador <i>contd.</i>									<p>Referencias/page</p> <p>Código Orgánico Ambiental (2017) complete the constitution and promote CC adaptation in local policies, p.11</p> <p>Código Orgánico de Planificación y Finanzas Públicas 2010) promotes CC mitigation and adaptation, and disaster risk management, p.8</p> <p>One Of the NDC principles is participation of all actors as agents of change,p.10</p> <p>Participative process with a focus on CC and gender with use of didactic resources, to strengthen capacity of the actors involved, p.10</p> <p>Involvement of governmental, non-governmental actors, academics, the private sector, p.11</p> <p>Participation as one of NDC transversal axis with focus on gender, to promote reflection, development of propositions to involve women and men from civil society - to promote the rights and equality of opportunity for greenhouse effect gas reduction,p. 14</p> <p>2020-2025 will see the implementation of the NDC ambitions designed through a participative process,p.16</p> <p>Environment ministry led the participative process,p.23</p> <p>NDC to be implemented with a focus on participation and with attention to the impact of adaptation on 'priority attention groups' and considering traditional/ancestral knowledge of local actors,p.31</p> <p>National strategy of water 'culture' will include practice and knowledge of ancestral people, as mechanism that contributes to local sensibilisation to CC impact,p.33</p> <p>Promote the participation of civil society in disaster risk management in shantytowns,p.35</p> <p>Rural communities as vulnerable (access to water) ,p.29</p> <p>Urban centres and shantytowns as vulnerable, and needing risk assessment,p.30, p.35</p> <p>Risk management dealt with identification of priority groups,p.31</p>
	Haiti					●				<p>Climate policy as consensus between public powers, civil society and private sector,p.3</p> <p>Participatory approach enabling consulting stakeholders,p.5</p>
	Total	24	20	10	16	39	16	14	12	



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