The importance of human reproductive health and rights for cheetah conservation

Cheetah Conservation Fund

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Population & Sustainability Network

MARGARET PYKE TRUST
POPULATION & SUSTAINABILITY NETWORK

committed to advancing contraception

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Introduction

Since its founding in 1990, the Cheetah Conservation Fund (CCF) has been the global leader in the research and conservation of cheetahs. Over the past 28 years, it has become increasingly clear to CCF that wildlife conservation models in cheetah range countries that do not simultaneously address the health and well-being of local human populations are inadequate. CCF's guiding conservation strategy encompasses working with and empowering communities, so they are strong enough to steward wildlife and manage their local natural resources. As human populations in Africa are increasing and cheetah populations are on the decline, this holistic approach has never been more important than it is now.

Human population dynamics, including population growth, are key issues when considering cheetah conservation. More than 90% of Namibia's cheetahs, for instance, live outside protected areas, and are therefore even more susceptible to anthropogenic impacts such as human-wildlife conflict and habitat loss. These and other impacts intensify as human populations grow and land use becomes more intensive. Conserving cheetahs calls for innovative, cross-sectoral solutions promoting the sustainable co-existence of wildlife and humans. As part of CCF's commitment to implementing these cross-sectoral solutions, CCF has joined the Population & Sustainability Network, a global alliance promoting reproductive rights for sustainable development.

Population, Health and Environment conservation programmes that incorporate voluntary and rights-based family planning actions, with conservation-focused sustainable livelihood interventions, have been demonstrated to achieve greater conservation, health and gender outcomes than single sector programmes. In pursuit of CCF's mission to save the wild cheetah, CCF will explore the efficacy of the Population, Health and Environment approach in CCF's work.

Fragmentation and decline: the global cheetah population

Today cheetahs are known to occur in merely 9% of their past distributional range, and their current range is highly fragmented. This decline and fragmentation has been drastic and rapid. In Zimbabwe, for example, cheetahs were distributed across a contiguous population over 132,931 km^2 in 2007. By 2015 the population had become highly fragmented, occupying a mere 49,124 km^2.

Though it is not possible to determine exact numbers, recent estimates put the global cheetah population at around 7,100 adult and adolescent cheetah, distributed over 33 populations in 19 countries (18 in Africa and one in Asia).

More than half of the world's cheetahs are found in one single transboundary population across six countries in southern Africa (Angola, Botswana, Mozambique, Namibia, South Africa and Zambia). There is only one other population comprising more than 1,000 individuals (in Kenya and Tanzania), while the remaining populations are comprised of 200 cheetahs or fewer, with six populations being below 10 individuals. Out of the 18 populations where trend data is available, 14 are in decline.

A contrasting story: human population projections

While the African cheetah population faces decline and fragmentation, the human population shows the opposite trend. The United Nations projects the human population of Africa to quadruple from more than 1 billion today to around 4 billion in 2100. The graphs below show UN population projections in seven important cheetah range states, including the six range states where the majority of the world's cheetahs are found in the one primary transboundary population.

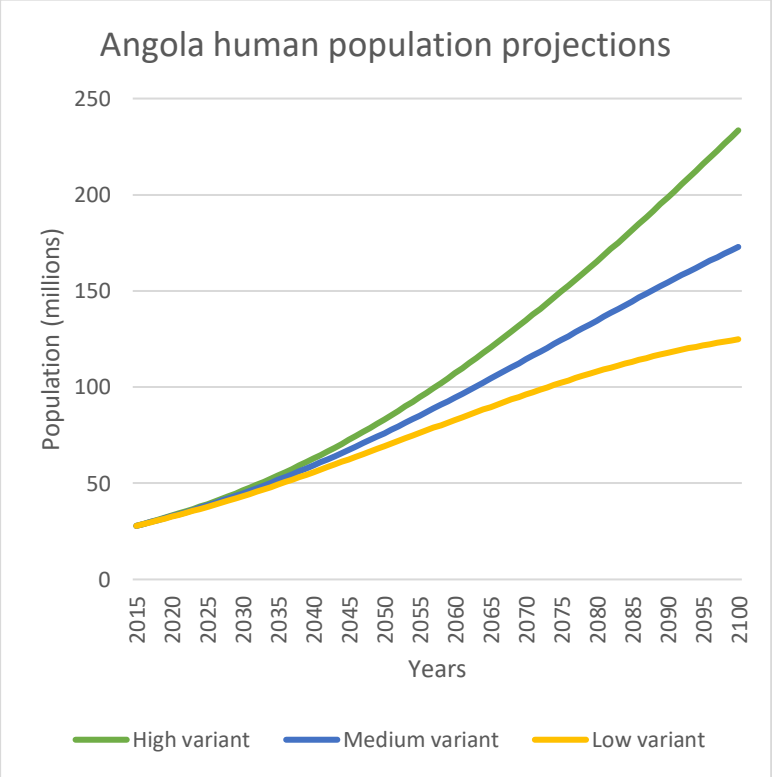
Human population projections are based on specific assumptions about future fertility, mortality, and migration: about how populations will grow or decline, and how slowly or quickly they will do so. The fertility rate is one of the most important considerations in making such projections. The fertility rate refers to the average number of children per woman.

Cheetah Range Country and Human Population Trends

Each graph below presents three different population scenarios: high variant projection, medium variant projection, and low variant projection. The United Nations Population Division publishes human population projections with these differing fertility assumptions to consider different possible outcomes. The most widely used projection is the United Nations' middle scenario, the medium variant. The low variant and high variant are like the medium variant, but the low variant assumes a fertility rate of one-half child fewer per mother than the medium variant, and the high variant assumes a fertility rate of one-half child more than the medium variant. These seemingly small changes in the fertility rate (i.e. just half a child on average) have very significant results on overall long-term population levels, as is demonstrated in the graphs below.

Angola

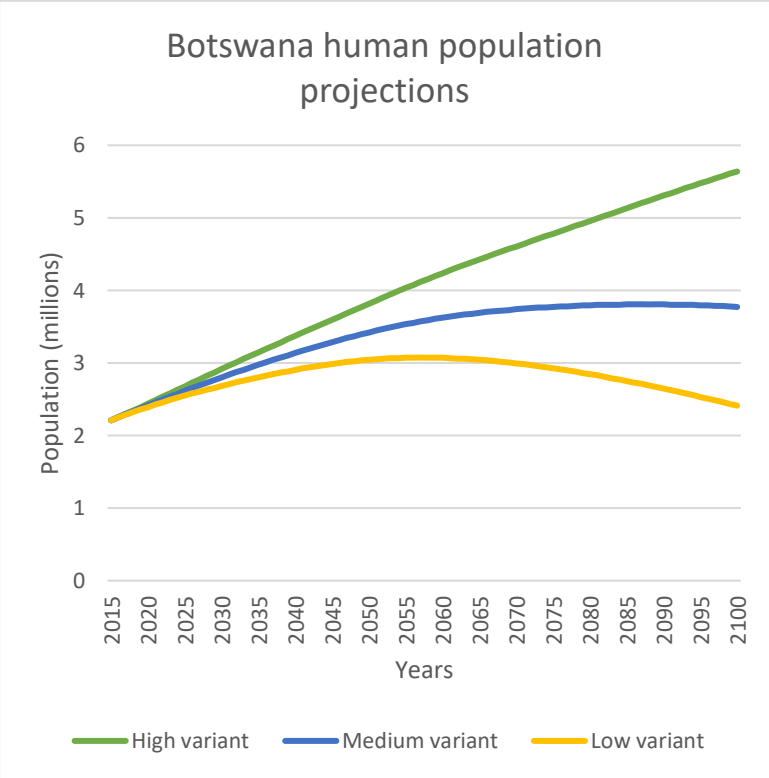
Cheetah used to live in Angola across 11 provinces, but after three decades of civil war, the status of cheetah across the country is unknown. Cheetah numbers in Angola are thought to be declining because of illegal hunting of prey species, consumption of cheetah meat, use of cheetah body parts for various purposes, and, in addition, expansion of human settlements and agriculture.



In 2010, CCF confirmed the existence of cheetah in the 1.6 million hectare Iona National Park in the Namibe province, bordering Namibia. This arid area in the extreme southwest region of the country was one of the former ranges of the cheetah. Although it is very dry, the area is perfect cheetah habitat with thousands of hectares of open savannah and a growing prey base.

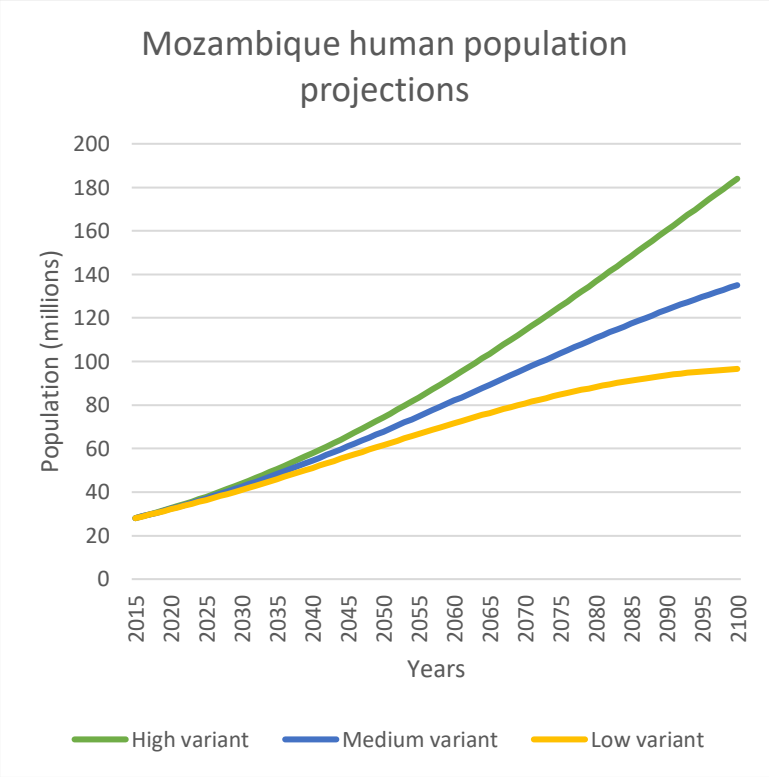
Botswana

Like in Namibia, some 90% of Botswana's cheetah live outside protected areas, and come into close contact with rural human populations. Due to Botswana's location in the centre of southern Africa, empowering people to manage their wildlife is crucial to facilitate connectivity and support the regional population that is found in the six-country polygon. Because of their wide-ranging nature, cheetah need large landscapes to survive. Thus, protected areas cannot be relied upon to maintain cheetah populations and coexistence must be encouraged.



Mozambique

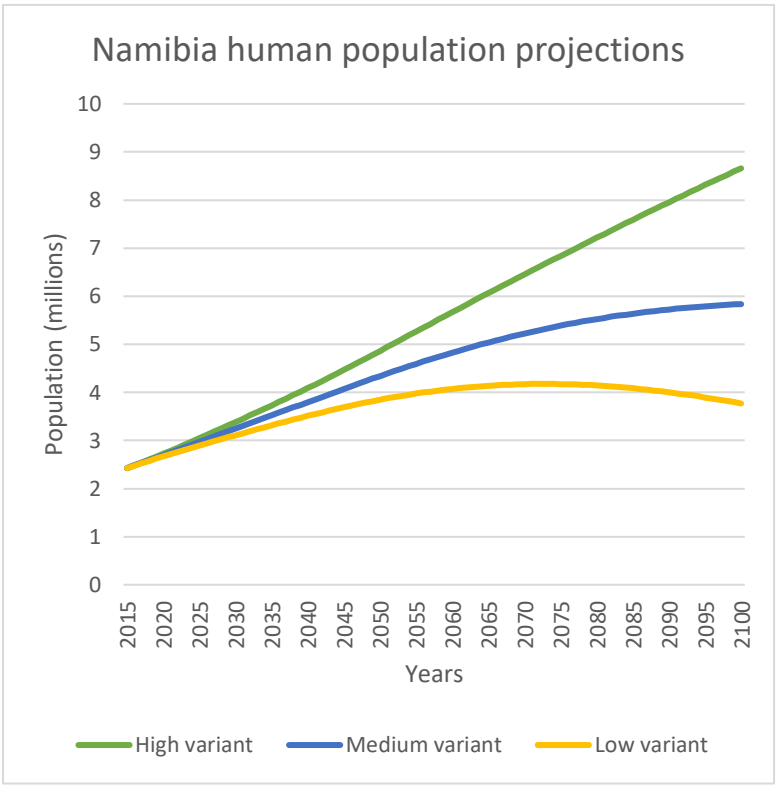
Cheetahs were historically widespread in Mozambique, but today they persist mostly in a small number of protected areas, with few observations on unprotected land. A large part of Mozambique has not been surveyed for cheetah presence. However, cheetah populations in the country are thought to have experienced a substantial decline mainly due to habitat loss, decreasing prey populations and use of cheetah body parts.



Namibia

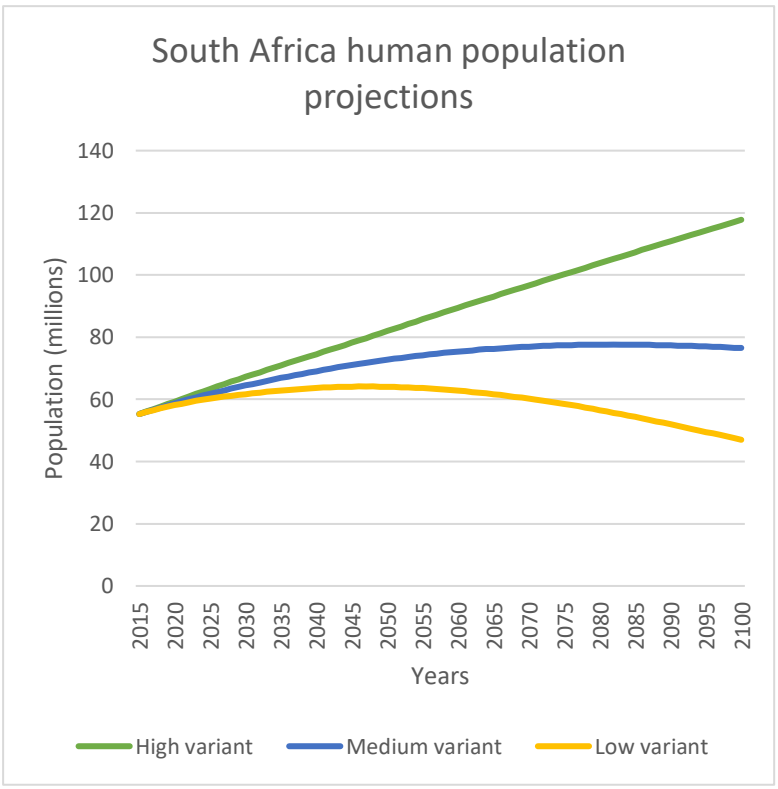
Namibia has achieved recognition across Africa for its conservancy approach, a community-based natural resource management system placing responsibility with a group of neighbouring land users and land owners.

More than 90% of Namibia's cheetahs live on commercial and communal farmlands in the north-central and north-west region of the country. Otjiwarongo, the town where CCF is located, is known as "The Cheetah Capital of the World". In addition to cheetahs, this rural area is home to Oryx, kudu, red hartebeest, eland, steenbok, duiker, giraffes, zebras, warthogs, jackals, and baboons, as well as many birds. Conservancies are credited with encouraging the proliferation of healthy wildlife populations in this region.



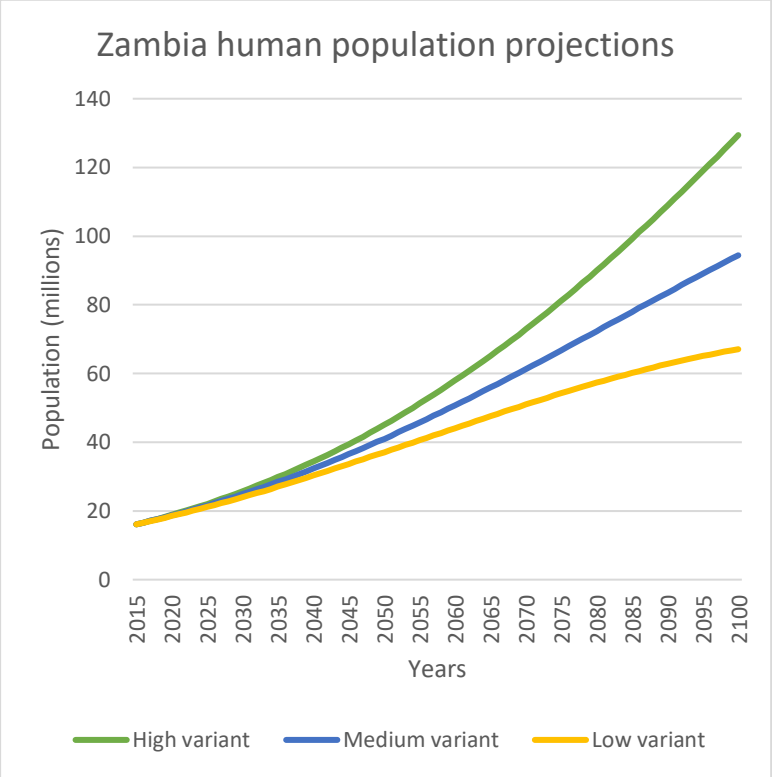
South Africa

Cheetah in South Africa are found in Kruger National Park, a few other National Parks, certain provincial reserves and some private game reserves. Kruger National Park is home to the largest number of cheetahs in the country. Unlike cheetahs in Namibia and Botswana, cheetahs in South Africa rarely occur outside protected areas.



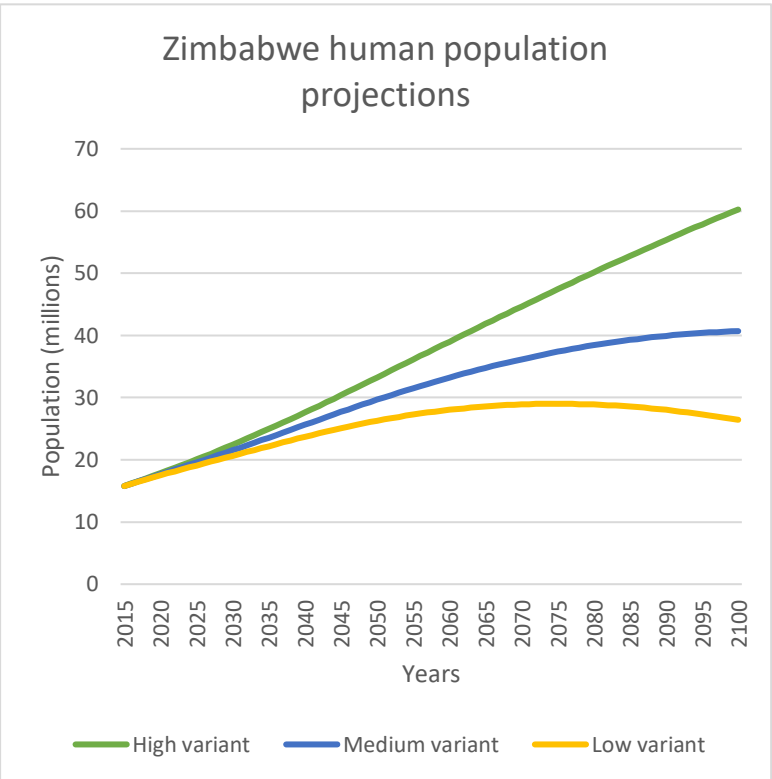
Zambia

Cheetah in Zambia are considered to be in major decline. Very few remain in the country. The last remaining cats are known to be in two National Parks: Kafue National Park, which covers a massive area in western Zambia, and Liuwa Plain National Park in Western Province, west of the Barotse Floodplain of the Zambezi River and near the border with Angola. Both have populations estimated to be fewer than 100 individuals.



Zimbabwe

At one time Zimbabwe's cheetah population was estimated to be between 400 to 1,500, but cheetah numbers have plummeted by more than 80% over the past two decades, and a mere 150 to 170 individuals remain. The steep decline can be attributed to drastic changes in land use where cheetahs once lived in great numbers. Near the turn of the century, the government reformed land use policy in Zimbabwe and replaced large commercial farms with smaller subsistence farms. Whilst land reform in Zimbabwe is essential, an unintended impact of this reform was to leave little cheetah rangeland intact. Thus, cheetahs in Zimbabwe are threatened by loss of habitat and prey and a lack of connectivity between wildlife protected areas.



Cheetah conservation: What's family planning got to do with it?

There are a multitude of factors to consider when designing conservation programmes, from the onset of local climate change impacts, to human land use and human population densities in areas of cheetah conservation significance. Increased human populations mean there is an increased need for more farmland for agriculture, more land for ranching, more infrastructure and roads, and hence, more vehicles. Almost inevitably, this results in more instances of human-wildlife conflict, an increase in demand for bush-meat, and increasing habitat encroachment. Human population size is only one of many relevant issues, but an especially relevant one.

In many cheetah range states a significant proportion of women have an "unmet need" for modern contraception. The World Health Organization defines women as having an "unmet need" for family planning if they are of reproductive age and sexually active, and want to stop or delay childbearing but are not using any method of modern contraception. In the cheetah range state of Angola, for instance, 36.7% of women have an unmet need. The unmet need is one of the primary causes of Angolan population growth.

When women and girls have an unmet need, it means they do not have access to sexual and reproductive health information and services. We believe access to reproductive health services is a fundamental right, and has a direct and measurable positive impact on the health of people and local ecosystems. Everyone should be able to determine freely whether and when to have children, and how many. Unmet need is almost invariably greater in rural areas, where healthcare services are generally less well developed. These are the same areas of greatest conservation significance and where conservation organisations like CCF often have existing community relationships.

The importance of providing reproductive health services that respond to the unmet need are critical development aims for organisations like the authors, which are passionate about the empowerment of girls and women. Meeting this need would result in their improved health, reducing unintended pregnancies, and by reducing the fertility rate, would slow population growth. Small changes in fertility can generate significant results on overall long term population levels, as shown in the graphs above.

Avoiding unintended pregnancy can also empower women to become more economically and politically active, enabling the possibility they and their families will become more supportive of conservation, with wisdom and resources to pursue it. Through both demographic and social paths, reproductive health can reduce pressures on both families and the environment. While reproductive health is primarily an issue for the health and gender sectors, it is also relevant to organisations like CCF.

Photo credit: Cheetah Conservation Fund/Eli Walker

Thinking beyond pure conservation

Namibia, one of the countries comprising the six-country polygon containing the largest transboundary cheetah population (estimated at 4,021), is already suffering from the effects of climate change. The National Climate Change Policy affirms that it is the poor rural populations who are most at risk. Namibians understand the need to adapt quickly, partly due to the rapidly declining quantity and quality of drinking water.

Namibia has a relatively small human population of approximately 2.5 million people. The United Nations' medium variant projection is that by the end of the current century this will increase to around 5.8 million. Difficult geographical access and socio-cultural norms have been highlighted as significant barriers to family planning and as determinants of poor reproductive health and rights. The Namibian communities which rely most directly on their surrounding ecosystems for their livelihoods and food security are the same communities with which CCF already works and where cheetah conservation is focused. The relevance of family planning to strengthening conservation and addressing climate change is clear. In particular, climate change is placing cheetahs' habitat at risk; a warming climate increases the risk of bush encroachment, a form of desertification which affects grazing lands for wildlife and livestock. Furthermore, since 90% of cheetahs live alongside humans, they are affected by the expansion of human settlements, and the health of humans is increasingly intertwined with their own.

It is clear that there will be significantly greater detrimental effects on the cheetah population as climate change takes an ever stronger hold on the region and human health is increasingly at risk. To ensure a viable wild cheetah population, conservation programmes and policy must be informed by this knowledge and address these linkages. The United Nations Framework Convention on Climate Change, the global authority on climate change, has identified voluntary, rights-based family planning as a climate change adaptation strategy, to be included as part of a comprehensive response, and therefore eligible for adaptation funding. Identifying and eliminating barriers to reproductive health services will empower women and girls to make their own choices regarding reproduction, improve infant and maternal health, and help keep girls in school to complete their education. In all cheetah range countries, lack of access to reproductive health services is one of the key factors leading to population growth, and is therefore an important consideration when determining conservation policy.

Consumption: A compounding problem

Consumption, in addition to population growth, has serious consequences for sustainable development. High levels of consumption in developed countries, and more modest levels increasing rapidly in newly emerging developing countries, are largely responsible for many environmental challenges, including climate change. Developed nations have very high levels of carbon emissions, while per-capita levels of emissions in emerging developing countries are rising rapidly. Developing nations (including many cheetah range states) will undoubtedly need to increase various categories of their consumption, including in all probability carbon emission levels, in order to develop. Unfortunately and unjustly, it is the least developed nations that are already experiencing the greatest climate change impacts. The authors acknowledge the importance of both consumption and population growth in climate change, the loss of biodiversity and other environmental problems. Both factors need to be addressed, applying strategies based on human rights and human development.

Family Planning 2020 – FP2020

Cheetah range states overlap with countries with relatively high fertility rates and poor family planning provision. A global partnership on family planning known as Family Planning 2020, or FP2020, was formed following a landmark global summit on family planning in 2012. This partnership aims to empower women, girls and communities through the provision of family planning information, services and supplies in the 69 countries around the world that have the highest levels of unmet need, also known as FP2020 Focus Countries. Fourteen out of the 18 cheetah range states are FP2020 Focus Countries. In some of these countries such as South Sudan and Chad only 6.8% and 6.2% of women, respectively, are using contraception, with levels of unmet need equal to 30.4% and 23.3%. Out of the 18 countries, only Zimbabwe and South Africa have over 60% of women who are using contraception.

Fertility rates, contraceptive use and unmet need in seven cheetah range countries

Cheetah range state	Fertility Rate	% of women using contraception	% unmet need
Angola	5.95	18.6	36.7
Botswana	2.88	56.3	14.1
Mozambique	5.45	17.5	26.9
Namibia	3.60	57.4	16.2
South Africa	2.55	64.8	11.3
Zambia	5.20	51.2	19.0
Zimbabwe	4.00	66.0	10.3

A potential multi-sectoral approach to cheetah conservation: PHE

Complex and integrated development challenges require integrated solutions, such as Population, Health, and Environment (PHE) programmes. These programmes integrate community-based reproductive health education and services with conservation and sustainable livelihood initiatives. CCF already has great expertise of working to empower communities with sustainable livelihoods and is joining the Population & Sustainability Network to seek to implement a PHE programme. Together with Population & Sustainability Network coordinator, the Margaret Pyke Trust, CCF seeks funding to implement improvements in reproductive health and integrate such actions with CCF's conservation work.

A USAID report reviewing over 10 years of PHE programme implementation found that PHE programmes often yield greater improvements in environmental indicators than single-sector programmes. The unique nature of these projects generates greater conservation outcomes, as well as health and gender benefits, when compared to single sector programmes. Thanks to integrated messages and project activities, PHE leads to increased access to and involvement of men in family planning (a common barrier to women using contraception), as well as increased access to and involvement of women in conservation and natural resource management activities. These integrated projects also generate greater buy-in from communities and more rapid mobilisation of community efforts, leading to quicker short-term results in the first one to two years of projects. As an evidence-based conservation organisation that also seeks to promote human rights and the well-being of the communities with which CCF works, PHE is an approach which fits within CCF's organisational strategy and ethos.

Conclusion

It is becoming increasingly clear to CCF, as a conservation organisation, that in order to achieve the greatest conservation results CCF must also consider human health challenges in the communities of conservation importance. CCF are committed to tackling this challenge in order to ensure the survival of the cheetah while at the same time promoting improved human and environmental health. Increased reproductive health and rights are critical for women's and girls' health, education and empowerment. These issues are also relevant when determining conservation programme design. CCF supports actions which improve voluntary and rights-based family planning in all cheetah range states and beyond, and will work to do so with the Margaret Pyke Trust, and as a member of the Population & Sustainability Network.

Photo credit: Cheetah Conservation Fund/Karl-Heinz Wollert

About the Cheetah Conservation Fund

Cheetah Conservation Fund is the world's leading organisation dedicated to saving the wild cheetah. CCF maintains a research programme studying the biology, ecology and genetics of the cheetah and operates the only fully-equipped genetics lab at an *in-situ* conservation site in Africa. CCF has created a set of integrated programmes based on this research that address threats to the cheetah and its entire ecosystem, including human populations. CCF operates from the principle that only by securing the future of the communities that live alongside the cheetah can a secure future for the species be achieved.

For more information, please visit www.cheetah.org

About the Population & Sustainability Network

The Population & Sustainability Network is a global alliance, promoting sexual and reproductive health and rights as a critical element of sustainable development. The Network is coordinated by the Margaret Pyke Trust. Through joint advocacy, project design and implementation, Network members work together to address human and planetary health needs in communities with poor healthcare provision and high unmet need for family planning.

For more information, please visit www.populationandsustainability.org

About the Margaret Pyke Trust

The Margaret Pyke Trust is a UK registered NGO which has been championing family planning, and sexual and reproductive health and rights, for 50 years. In addition to coordinating the Population & Sustainability Network, the Trust is the UK body providing the greatest range of sexual and reproductive health training courses for clinicians. When Trust courses generate a surplus, the Trust uses those funds to strengthen its international programmes.

For more information, please visit www.margaretpyke.org

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