

AFRICA LEADS THE WAY:

HARNESSING MULTI-SECTORAL COLLABORATION TO ACHIEVE UHC



A REPORT FROM THE



UHC HIGH LEVEL
CONFERENCE
UNGA 2019

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EXECUTIVE SUMMARY

This Report has been developed by The Access Challenge and Harvard Global Health Institute. It has been informed by a set of diverse partners who participated in the 2019 One by One UHC Conference, “Achieving UHC: A Sustainable Future for Africa.”

The **2019 One By One UHC Conference** showcased how Africans are leading the way to envisioning a sustainable path to Universal Health Coverage (UHC) by 2030. In response to realities on the ground, African leaders are beginning to shift UHC policy discussions from an emphasis on how to prevent and cure particular diseases to a focus on the entire health system, including all sectors of national economies that need to be harnessed in order to create the conditions necessary for sustainable health. Leaders are directing attention to the need for access to nutritious food, safe water, and clean air as well as the need for community-based access to quality health services. As national policy focus shifts, so does the need to incorporate input and guidance from leaders across sectors including: water, agriculture, energy, education, environment, and finance.

This Report is intended to continue the discussions from the One by One UHC Conference on the role multi-sectoral cooperation can play in creating healthy societies, preventing disease and ensuring access to quality maternal health services. The Report focuses specifically on access to nutritious food, clean water, and safe air as the building blocks of a healthy society. It examines the relationship between

diseases prevalent in Africa and the underlying causes, including lack of access to one or more of these fundamental building blocks. The Report will also show how, if left unmitigated, climate change will undermine these critical multi-sectoral efforts to improve health. The Report concludes by focusing on the critical importance of resilient communities and quality access to health services as means of achieving financially sustainable UHC.

Through this framing, the Report will demonstrate that ultimately it is less expensive and more sustainable to achieve UHC by harnessing multiple sectors to promote the conditions for human health rather than focusing resources solely on treating otherwise preventable diseases. To support this, the Report introduces a **Multi-Sectoral UHC Services Framework**, which is intended to start a conversation about the various activities, services, and sectors that are needed to support human health.

Central to this Report is the understanding that the eventual success of UHC in Africa will derive from African leadership and the effective interplay of interventions across all sectors and between communities and health systems. This intersectoral cooperation will ultimately lead to **Health For All**.



MESSAGE FROM

H.E. Dr. Jakaya Mrisho Kikwetex

Former President of the United Republic of Tanzania

Ensuring that every African receives essential health services without financial hardship contributes to social cohesion and stability, ensures a healthier and more productive workforce, and furthers all 17 Sustainable Development Goals.

The inclusion of UHC in the UN's Agenda 2030 Sustainable Development Goals was a milestone in recognizing health as a human right and represented a commitment to addressing inequalities and exclusion. UHC is not just a call for the health sector but across the SDGs and across ministries to support a common vision for everyone to have the resources they need to thrive. Simply put, we cannot eradicate poverty, protect people from pandemics, advance gender equality, or achieve any of the other 2030 Sustainable Development Goals without accelerating progress toward Universal Health Coverage.

“Simply put, we cannot eradicate poverty, protect people from pandemics, advance gender equality, or achieve any of the other 2030 Sustainable Development Goals without accelerating progress toward Universal Health Coverage.”

H.E. DR. JAKAYA MRISHO KIKWETE, FORMER PRESIDENT
OF THE UNITED REPUBLIC OF TANZANIA

With the rise of COVID-19 across continents and borders, there has never been a better time to realize the value of investing in UHC. Citizens still lack access to basic services such as access to clean water and hygiene services, making it extremely hard for people to practice prevention. Lack of prevention rapidly accelerates the spread of the virus.

Investing in strong health systems and UHC is the most important thing that will make a difference in slowing the spread of COVID-19 and address other challenges, such as malaria, pneumonia, and malnutrition, that have been placed on the backburner, while all efforts and resources are focused on COVID-19. The One by One: Target 2030 Campaign calls on countries and governments to use this opportunity to invest in strong health systems through UHC. Through such investments, countries will be able to not only respond to pandemics such as COVID-19, but also address other leading causes of death in Africa. UHC is the only true solution to ensure #HealthForAll.



- 1. NO POVERTY | 2. ZERO HUNGER | 3. GOOD HEALTH AND WELL-BEING | 4. QUALITY EDUCATION | 5. GENDER EQUALITY |
- 6. CLEAN WATER, AND SANITATION | 7. AFFORDABLE AND CLEAN ENERGY | 8. DECENT WORK AND ECONOMIC GROWTH |
- 9. INDUSTRY, INNOVATION AND INFRASTRUCTURE | 10. REDUCED INEQUALITY | 11. SUSTAINABLE CITIES AND COMMUNITIES |
- 12. RESPONSIBLE CONSUMPTION AND PRODUCTION | 13. CLIMATE ACTION | 14. LIFE BELOW WATER | 15. LIFE ON LAND |
- 16. PEACE AND JUSTICE STRONG INSTITUTIONS | 17. PARTNERSHIPS TO ACHIEVE THE GOAL



MESSAGE FROM

Kate Campana

Founder and CEO of The Access Challenge

We have learned a lot from COVID-19. The notion that it is even possible to take care of some part of the global population without simultaneously caring for the entire global population is obviously flawed.

We have learned that no one—not even the most privileged and sequestered—can protect herself, her family or her livelihood without ensuring the health of people on the furthest part of the globe. Anything short of universal access to all health services is by definition insufficient.

The silver lining of this pandemic is the dawning realization among policy makers of the need for universal access to health. At the same time, there is growing awareness of the interconnectedness between climate mitigation, water resource management, food systems, and human health, and thus the importance of sustained investment in each. Clean water, clean air, nutritious food, sanitation, and primary health services are the pillars of health.

As citizens, it is incumbent upon us to demand that our governments invest in these pillars of global health. It is also incumbent upon us to call for investment in universal access to vaccines, in primary health services, and in pandemic preparedness, diagnostics and testing.

To ensure that every individual has access to the building blocks of health despite massive foreseeable challenges will require an all of society approach. Every sector of society will need to collaborate as never before. This means building new public, private, and civil society alliances that focus on changing cultural norms and financing around social protection, testing, and vaccines. And most importantly, the decisions about how we achieve universal access to health and protection from future pandemics must reflect input from all of us—especially from the most vulnerable among us.

“To ensure that every individual has access to the building blocks of health despite massive foreseeable challenges will require an all of society approach. Every sector of society will need to collaborate as never before.”

KATE CAMPANA, PRESIDENT AND CEO, THE ACCESS CHALLENGE

INTRODUCTION

The world is in turmoil. We face numerous compounding challenges, including COVID-19, the Ebola crisis, climate-related natural disasters, and the mounting threat of runaway ecosystem collapse. Instead of feeling overwhelmed by all these issues, what if, instead, we saw our global challenges as a call for international and cross sectoral collaboration and transformation?

None of the challenges listed above can be effectively addressed if sectors work alone. How about a new approach? Our generation cannot afford to be passive. The physical environment determines the very conditions that support human health. Informed and effective policy change must follow.

In the past, global advocates have successfully galvanized action on specific health challenges, by tackling particular diseases and developing solutions to global shortages. Advocates and policy makers have always faced challenges in prioritizing resources to accommodate various agendas. These competing priorities require trade offs. The prior leading causes of disease in Africa have declined, while others have emerged. Narrow attention on malaria, tuberculosis, and HIV/AIDS-related deaths has moved funding away from other preventable threats to health like unsafe childbirth, pneumonia, and diarrhea. These siloed investment decisions have meant commensurate disinvestment in health systems. With each person who suffers from a

“When we make investments, we have always looked for short cuts and panaceas and we have not been willing to make the big bold step to recognize fundamental investments.”

DR. VANESSA KERRY, SEED GLOBAL HEALTH



preventable disease, there is an increased burden on the health system. When the underlying causes of these preventable diseases are addressed, the disease burden lowers, and so too does this financial burden posed on health systems.

Policy makers must also take into account how health is connected to changing underlying environmental conditions. In the next ten years, we will likely see an increase in health challenges from emerging diseases, steep population growth, and climate change. As the recent COVID-19 pandemic demonstrates, we are far from prepared.

Dr. Tedros Adhanom Ghebreyesus, Director General of the World Health Organization, has said that to achieve UHC, we need three things: Prevention, Prevention, Prevention. Effective UHC policy change includes building strong health systems, but also ensuring that each person—even the most

vulnerable—has access to the tools they need to support their health and wellbeing. This holistic approach includes addressing the contextual and systemic challenges that impact populations, including the threat of climate change, biodiversity loss, land use change, and the need for sustainable access to essential ingredients for human health: nutritious food, safe water, and clean air.

A multi-sectoral approach to UHC places the person at the center of the health system and focuses on the development of policies related to health, water, food, energy policies, and environment to ensure that human health is the primary collective goal.

The world has agreed that our collective deadline to achieve UHC is 2030. In order to meet this deadline, we must work proactively and across sectors to anticipate and plan for global emergencies. Delay will only exacerbate these challenges, detract political momentum from achieving UHC, and perpetuate economic imbalance, social inequality, and civic instability. We can achieve UHC in the next ten years if, and only if, we take a multi-sectoral systems approach to health that reflects the current environmental reality and brings a whole of government approach to the drive for UHC.

CLIMATE CHANGE'S THREAT TO PUBLIC HEALTH AND UHC

The African continent is highly vulnerable to the impacts of climate change. The continent faces direct negative effects from a warming planet. These include: hotter heatwaves, longer and more frequent droughts, and higher sea levels. These effects are further exacerbated by stressed ecosystems and resource constraints, and can have added downstream consequences on human health, development, the economy, and political stability. Among these impacts are heat-related illness; injuries and losses due to flooding; exacerbation of asthma, respiratory and cardiovascular conditions from air pollution; growing risks of vector-borne diseases like malaria and dengue; water-borne diseases like cholera; undernutrition; and forced population migration.

“I’m wondering whether or not we need to have a mechanism designed to encourage a conversation with all of the community across all of these issues. So it’s not just health stakeholders, but people who are mindful of agricultural, food and nutrition, and climate issues. Or do we have some sort of cross-sector Parliamentary process where we can speak across each other’s issues to develop a joint policy? What does that look like on the ground? Or does that need to be established for us to work in this way?”

DR. MICHAEL BUKENYA, PARLIAMENT OF UGANDA

Climate change is the result of net increases in greenhouse gases (GHG) and pollution being released into the air, primarily from the burning of fossil fuels like coal, oil, and natural gas. Gases and pollutants in the atmosphere trap and reflect the heat from the sun, causing global temperatures to significantly rise. If the world continues with “business as usual,” meaning without significant intervention to curb emissions, it’s predicted that the world’s temperature will rise as much as 2°C. This temperature change will result in a world different than today, as even a slight increase can disrupt ecosystems that millions of people rely on for their livelihoods. Though Africa is the region in the world most impacted by climate change, it accounts for the smallest share of global GHG emissions (3.8%), compared to countries like China (23%), the United States (19%), and the European Union (13%).¹

Public planning and policy-making for addressing climate change have appropriately focused on reducing these GHG emissions. However, there is comparatively little attention paid to the impact of climate change on public health. Public health leaders are natural partners for designing climate adaptation and resilience programs in order to

protect human well-being at the local level. Public health leaders have begun to assume higher visibility in climate change policy. WHO described the Paris Agreement as “a fundamental health agreement”, and major reports such as *The Lancet Countdown: Tracking Progress on Health and Climate Change* have made clear the central role of health leaders in both identifying and communicating economic health “co-benefits” from mitigating GHGs, and contributing to the widespread need to target vulnerability and build local resilience. This linkage between UHC and climate change is critical to making the most compelling policy case for investment in climate change adaptation.

“Health needs to be seen not as something just for the Ministry of Health, but seen as something for various ministries, especially the Ministry of Finance.”

GREG PERRY, INTERNATIONAL FEDERATION OF PHARMACEUTICAL MANUFACTURERS AND ASSOCIATIONS

BACKGROUND

On September 23, 2019, the second annual One by One UHC Conference, “Achieving UHC: A Sustainable Future for Africa,” took place following the United Nations High-level Meeting on Universal Health Coverage and the Climate Action Summit. Since the success of the UHC Agenda and climate action are irrevocably interlinked, The Access Challenge and the One by One: Target 2030 Campaign decided to convene leaders from both meetings in a focused dialogue on how best to translate the dual calls of Africa Agenda 2063 and SDG 2030 into sustainable and achievable action for UHC across Africa.

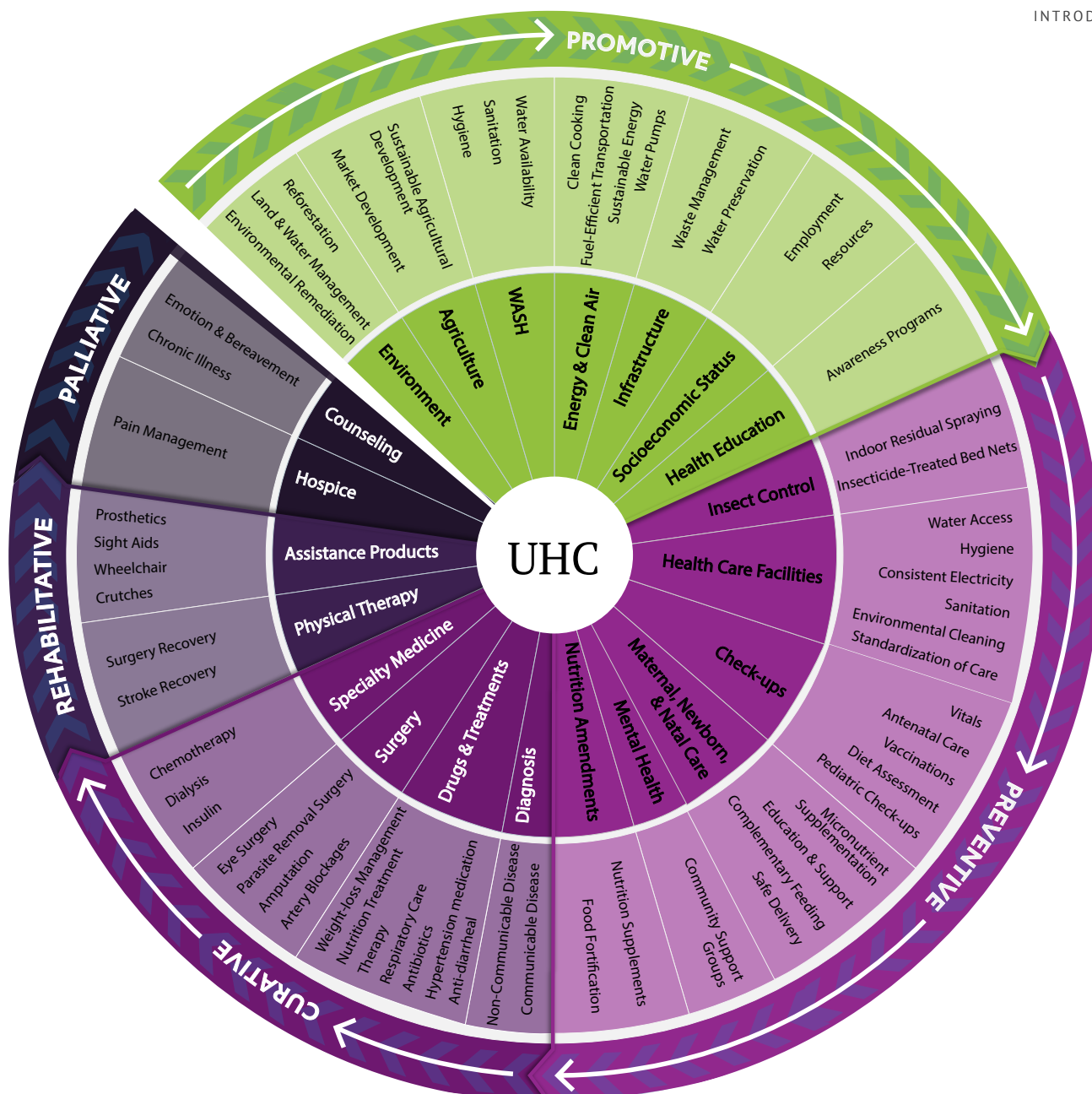
Hosted by the Jakaya Mrisho Kikwete Foundation, The Access Challenge, and the African Union, the Conference invited experts from across the health, nutrition, water, sanitation, hygiene, food, energy,

community development, and finance sectors to define and contextualize the meaning of UHC in a world where climate change makes access to basic resources increasingly difficult. There were panels on: *Clean Water Access and Sanitation*; *Clean Air and Health*; *Nutrition, Agriculture, and Health*; *Responsive and Resilient Communities and Health Care Systems*; and *Financing for UHC*. Panelists recognized that as climate change threatens global capacity to provide humans with nutritious food, safe water, and clean air, health systems will be overloaded by patients seeking care for ever more and varied diseases. In such an environment, the financial cost of achieving UHC—providing health services for all without risk of financial hardship—will become increasingly unattainable.

The Harvard Global Health Institute partnered with the Jakaya Mrisho Kikwete Foundation and The Access Challenge to produce a Report that will bring clarity to the specific ways multi-sectoral action can improve the basic building blocks for human health even in a climate stressed world. The intent of this Report is to tie insights from the 2019 One by One UHC Conference, with new and emerging climate change evidence to demonstrate how the ability to achieve equitable access to Health for All is inextricably linked to addressing a whole government approach to health and simultaneously addressing the global challenge of climate change.

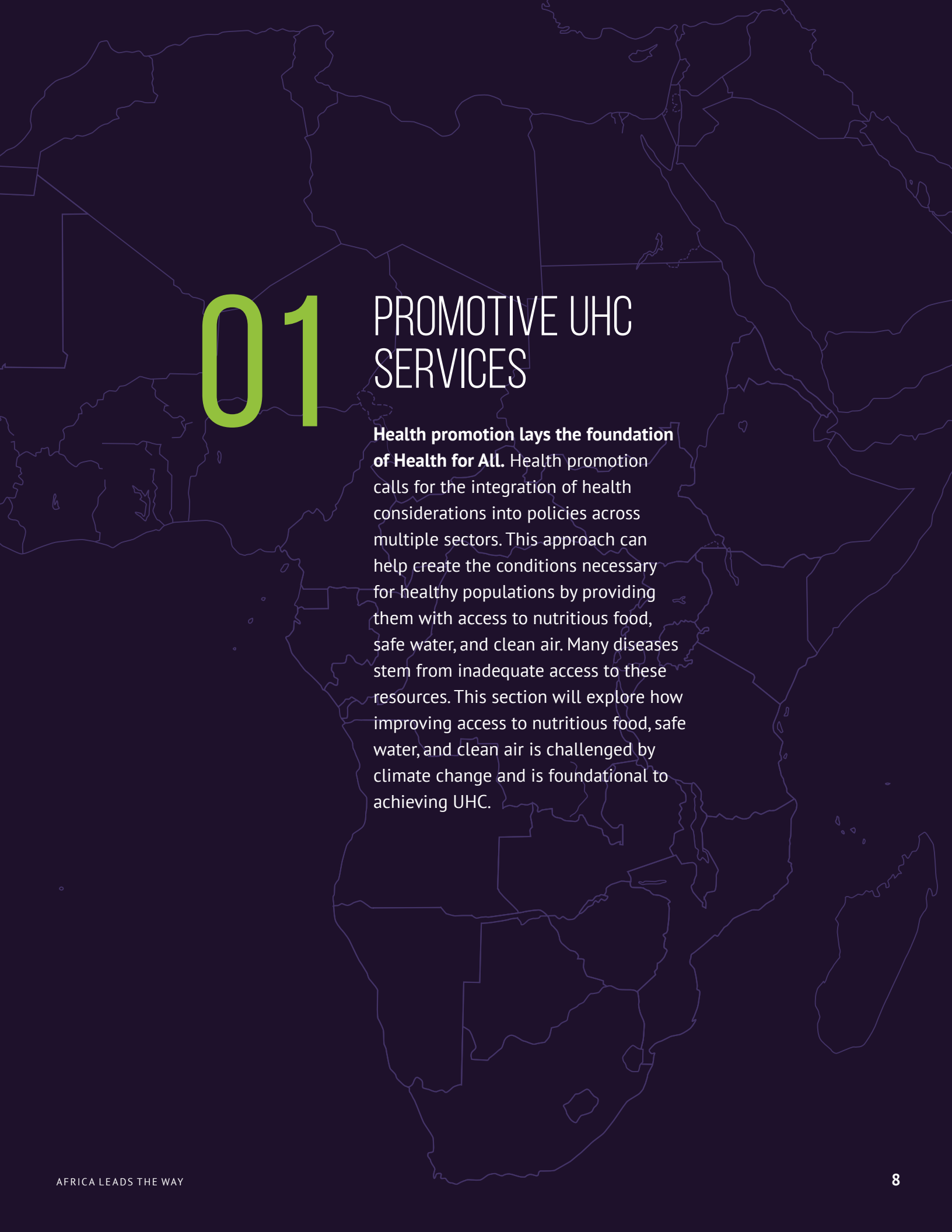
“We can achieve a lot more by using our current resources better. There’s a lot of emphasis on finding more health financing. But overall, resources and financing need to be used better, targeting those in need. If governments choose to be transparent with their financing, it helps us all learn how to use resources better to achieve better results.”

DR. MONIQUE VLEDDER, GLOBAL FINANCING FACILITY



MULTI-SECTORAL UHC SERVICES FRAMEWORK

UHC requires the coordination of multiple sectors to ensure that people have access to the resources and infrastructure they need to maintain a healthy life. This Framework contextualizes the various activities and sectors a community needs to maintain good health. Each service is a point of intervention at which communities and their health system may promote health and prevent, diagnose or treat disease. Promotive Care includes the infrastructures and services necessary to foster living conditions that support human health: including access to nutritious food, safe water, and clean air. Meanwhile, Preventive, Curative, Rehabilitative, and Palliative Care includes the medical supplies and services needed to support a person at various stages of preventing, diagnosing and curing illnesses, and providing safe maternal health services. This Framework demonstrates how sectors outside of health can support the health sector in UHC development. It also shows how, through this collaboration, investment in promotion and prevention can minimize the prevalence of disease, the financial burden of disease treatment on health systems, and ultimately the cost of Universal Health Coverage.



01

PROMOTIVE UHC SERVICES

Health promotion lays the foundation of Health for All. Health promotion calls for the integration of health considerations into policies across multiple sectors. This approach can help create the conditions necessary for healthy populations by providing them with access to nutritious food, safe water, and clean air. Many diseases stem from inadequate access to these resources. This section will explore how improving access to nutritious food, safe water, and clean air is challenged by climate change and is foundational to achieving UHC.

NUTRITIOUS FOOD

Nutritious food is a fundamental necessity to sustain people, reduce disease, and prevent early mortality. Illnesses caused by nutritional imbalance add an unnecessary burden to African health systems, which are already burdened with morbidity and mortality from undernutrition and overnutrition. Undernutrition and overnutrition are together known as the ‘double burden of malnutrition,’ and signal a failure of policy to intervene effectively in the food system.

UNDERNUTRITION & MICRONUTRIENT DEFICIENCIES

Access to adequate, quality nutrition is of fundamental importance during the early stages of life. A focus on sufficient food to meet nutritional needs of individuals is key. An overemphasis on calorie sufficiency alone, though, can be detrimental. Quality of food consumed is as important as sufficiency of calories consumed. Government policy can take both caloric quality and sufficiency into account when designing policy. Good nutrition is especially critical for preventing pregnancy-related deaths of mothers and providing an optimum start in life.²

“The foundation of healthy societies is laid within the first 1000 days of the individual’s life: from conception to 2 years of age. A focus on a mother’s nutrition during pregnancy and through breastfeeding is imperative, as well as the child’s consumption of nutritional complementary foods from 6 months of age and beyond. Without essential nutritional programming, by the time children are 3 years old, the next generation is already set on a path of lower human capital potential and higher disease burden, including non-communicable diseases.”

DR. KATHARINA LICHTNER, FAMILY LARSSON-ROSENQUIST FOUNDATION



Two of the four leading causes of maternal death (hypertensive disorders and postpartum-hemorrhage) are caused by micronutrient deficiencies.² Iron deficiency can lead to severe anemia attributing to 6.37% of maternal mortality in Africa.³ From pregnancy to breastfeeding, a mother’s micronutrient intake impacts the health of her children. The first 1,000 days of a child’s life lays the health foundation for proper cognitive and physical development and therefore a person’s productivity later in life.⁴ An inappropriate nutrient balance can cause stunting and wasting, which affects 58.7 million African children, costing countries between 1.9 to 16.5% of GDP.⁵ While these relationships reveal the extreme burden of malnutrition on a

health system, they also highlight an opportunity to harness an estimated 11% boost in GDP from sufficient nutrition and a 20% increase in each child's future earnings.⁶ Adequate childhood nutrition supports immune system development and reduces the risk of developing diet-related non-communicable diseases later in life. Well-nourished children are better capable of combating tuberculosis, pneumonia and malaria.⁷ At all stages of a person's life, adequate nutrition lays the foundation for development, and prevents disease.

“We know that food environments, access to healthy foods, and a knowledge of good nutrition are all factors that influence health behaviors and outcomes. Obesity needs to be considered a public health issue rather than an individual problem so we can focus more on promoting healthy eating, physical activity and nutritious food environments throughout all of the life stages in order to decrease the risk for diabetes.”

GILLIAN GIBBS, LIONS CLUBS INTERNATIONAL FOUNDATION

OVERNUTRITION

At the other end of the nutritional spectrum is overnutrition, which is the overconsumption of certain foods. Overnutrition is linked to health issues like obesity, diabetes and cardiovascular disease. Often attributed to increasing urbanization and sedentary lifestyles, overnutrition is also due to increasing population preference for access to energy-dense foods—those foods which are high in fat, sodium, and sugar and low in micronutrients.⁸⁻⁹ In Burkina Faso, the prevalence of adult obesity in the past 36 years has jumped nearly 1,400%, while in Ghana, Togo, Ethiopia, and Benin it has increased by 500%.¹⁰ Adults with diabetes have a two-to-threefold

increased risk of suffering from a heart attack or stroke as well as an increased susceptibility to blindness and kidney failure.¹¹ These preventable diseases have costly impacts on both a country's workforce and health system. Current health systems are not adequately equipped to handle the growing epidemic of these overnutrition-related diseases.¹⁰

FOOD SYSTEMS PERSPECTIVE

While it is critical to immediately ensure the prevention, treatment, and care for those suffering from nutrition-related health conditions, a Food System's Perspective can provide a comprehensive and sustainable approach to improving nutrition and thereby supporting the goal of achieving Health For All. From a Food System's Perspective, health conditions are recognized as interconnected by looking at the food system as a whole—from soil health and agricultural practices to food access and consumption patterns. As countries develop and begin to recognize the growing double-burden of malnutrition, they can intervene with policies developed from a Food System's Perspective. These policies can improve health outcomes in both the short and long term. For example, using a Food System's Perspective, widespread hunger would not necessarily call for increased productivity or food aid. Instead, it would encourage a shift in agricultural practices to diversify crops to increase resilience, a restructuring of production incentives away from “empty calorie” staples to more nutrition-rich crops, and a solution to address the 30-50% of food lost post-harvest.¹²

“We cannot fix any health system without fixing nutrition. And we cannot fix nutrition without addressing how we grow more healthy food that is safe for the environment and also culturally appropriate.”

DR. MILLION BELAY, ALLIANCE FOR FOOD SOVEREIGNTY IN AFRICA

NUTRITION AND CLIMATE CHANGE

Climate change is causing more frequent and severe weather events, like storms, droughts, floods, and heatwaves. These severe weather events directly impact nutrition and health.^{13,14} In Ethiopia and Kenya, children under 5 are 36% and 50% more likely to be malnourished when born during a drought. In Niger, droughts cause infants to be 72% more likely to suffer from stunting.¹⁵ Increasing rainfall attributed to climate change is linked to this year's desert locust outbreak, which is threatening families with hunger and causing economic loss.¹⁶⁻¹⁷ Extreme weather can also jeopardize food security and food access by damaging fields or roads used to transport food. It is estimated that changes to temperature and rainfall due to climate change could reduce global agricultural productivity by 17% by 2050.¹⁸ In addition, climate-induced threats can also create conditions for conflict, political instability, and population migration as competition for resources becomes more pronounced. There is also growing evidence that the increasing concentration of carbon dioxide in the planet's atmosphere, a major driver

“Crop diversity helps farmers be more resilient to sudden changes in climate. If there is a drought or a pest infestation, some crops will be devastated more than others. By having an assortment of different crops, farmers will lose less in their annual yield. It also means that their diet will be more diverse, allowing for a more complete intake of needed minerals, fiber, and different vitamins.”

DR. MARGARITA ASTRALAGA, INTERNATIONAL FUND
FOR AGRICULTURAL DEVELOPMENT

of climate change, actually reduces the amount of nutrients, such as zinc and iron, in staple crops.¹⁹

At multiple levels, climate change is poised, and has already begun, to drastically threaten the nutrition, health, and security of populations.



NUTRITION POLICY DIRECTION

By coordinating across all government agencies responsible for safeguarding resilient food systems, African leaders are building national resilience in the face of foreseeable negative impacts of climate change. These leaders are also reducing the health system costs associated with treating preventable diseases caused by poor nutrition. International development partners can bolster these leaders' efforts by providing financial or other interventions that support a Food System's Perspective. From this perspective, good health outcomes are dependent upon the entire food and agriculture system, starting as far back as the health of the soil.

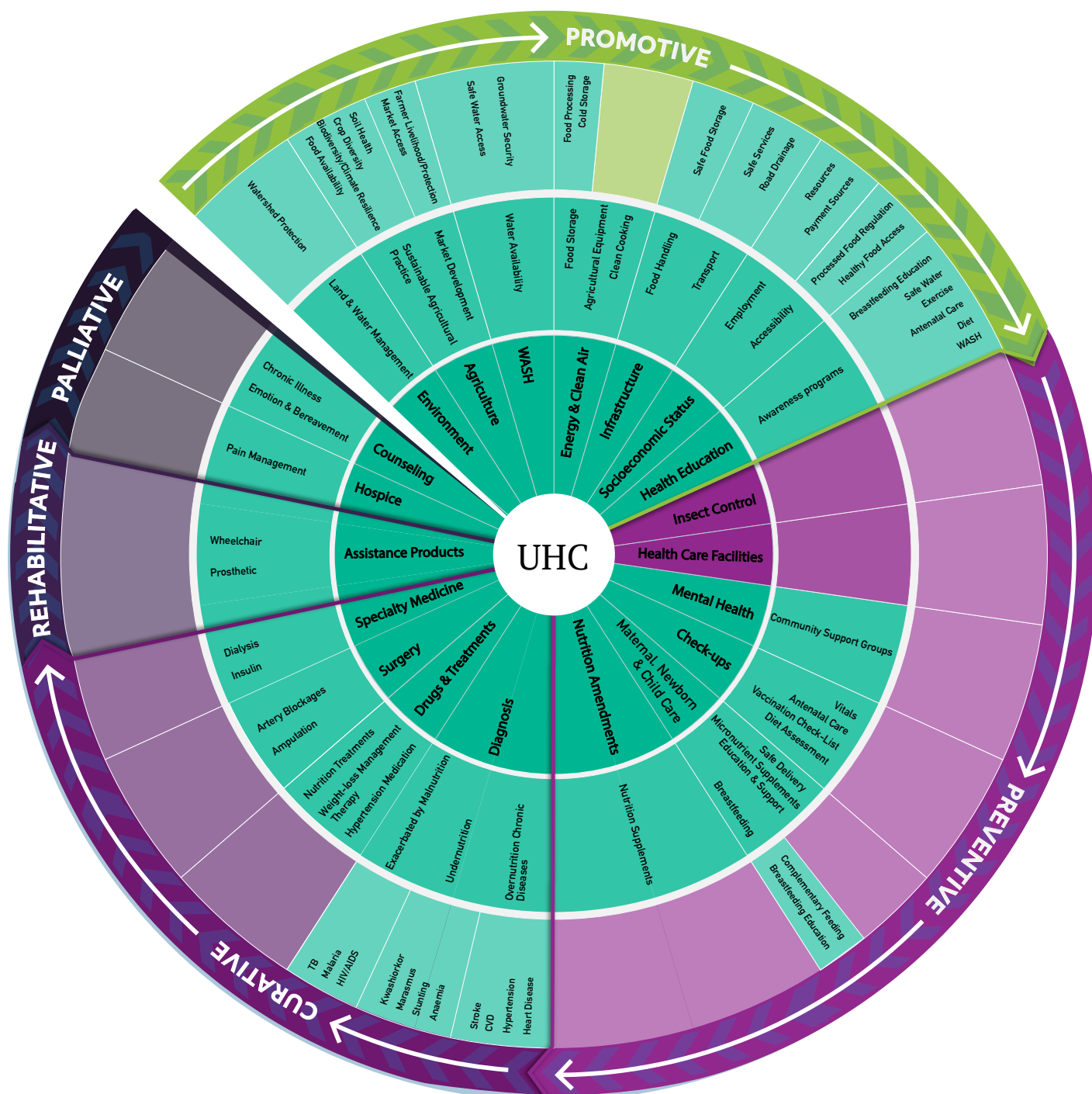
A Food System's Perspective is the key to integrating healthy agriculture and nutrition services through the entirety of the health system and thereby reducing subsequent costs of treating nutrition-related diseases. Interministerial and governmental collaboration guided by strong leadership can design policies that intervene at different points in the food system. Agriculture and development policies can ensure the availability of diverse, locally appropriate, nutritious food staples in lieu of monoculture cash crops designed for export. Leaders can encourage their citizens to take an active

role in their own health and nutritional needs by encouraging breastfeeding and the consumption of diverse and nutritious diets. Leaders can also create disincentives for the production and consumption of highly processed foods by subsidizing or otherwise supporting nutrition food. Proactive policy changes like these will set African nations apart in the years to come, ensuring sustainable nutritious food systems, which promote healthy outcomes and contribute to the achievement of UHC.

“Nutrition is the connective tissue for most of the SDGs. Without progress on nutrition, a lot of other pieces will slow down... Dialogue is often too polar. It's ‘This is the only important thing’ vs. ‘No, this is the only important thing.’ Ultimately, each piece is important, and we need to figure out how they fit together.”

JOEL SPICER, NUTRITION INTERNATIONAL





MULTI-SECTORAL UHC SERVICES FRAMEWORK

NUTRITIOUS FOOD

Multi-sectoral collaboration is needed to provide basic quality nutrition to support human health thereby reducing the cost of providing UHC. This diagram shows how and where nutrition plays a role in the Multi-Sectoral UHC Services Framework. It highlights services and activities outside of the health system (such as agriculture, road infrastructure, and water security) that contribute to the sustainable accessibility of nutritious food. It also highlights the health services and supplies needed within the formal health system to support maternal health and treat diseases that result from the lack of nutritious food.

ACTION AREAS & CASE STUDIES FOR

Nutritious Food

1 Investing in 'Climate-Resilient' Agriculture

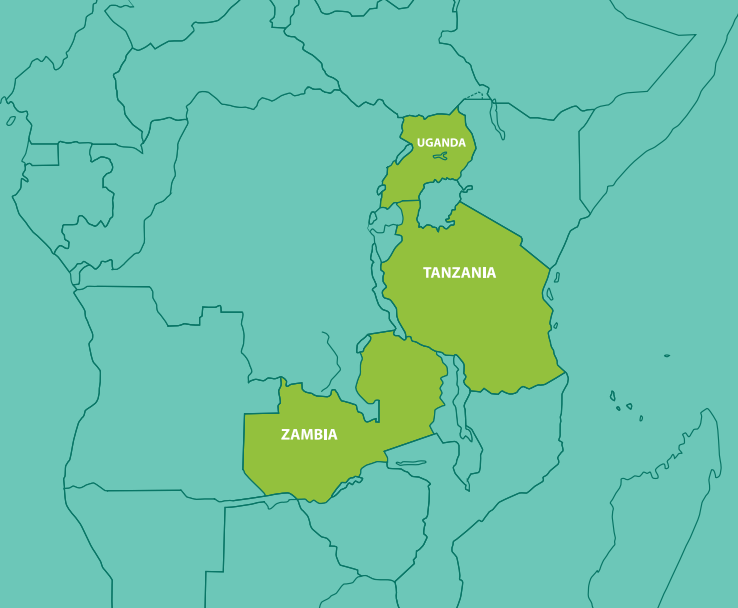
The Food and Agriculture Organization highlights crop diversification as an example of preferred agricultural practice. Crop diversification offers benefits in supporting development and in ensuring food security in a changing climate.²⁰ Crop diversification can produce nutrient-rich and diverse crops that support health objectives while making farms more resilient to climate change-related disasters. Effective implementation of resilient farming practices requires multi-sectoral planning and action to put in place policies and investments in land, infrastructure, finance, and skill-building.

CASE EXAMPLE

Zambia has included in its **National Climate Change Response Strategy**, a specific goal to encourage crop diversification through cultivating indigenous and drought tolerant crops such as cassava, millet, sorghum, and sweet potatoes.²¹

2 Reduce Food Waste

Basic infrastructure such as roads and safe food storage can prevent a large amount of food waste pre- and post-harvest. Through targeted investments in this infrastructure, governments and partners can prioritize sustainable post-harvest food supply chains to reduce the burden of hunger and food insecurity as well to reduce greenhouse gas emissions linked to food production and prevent economic losses.



3 Improve Farming Resources and Weather Forecasting

Reliable, accessible weather information is vital for successful decision-making in agriculture, fishing, disaster management and response, and in health. Weather not only affects how crops grow but also the logistics around planting, harvesting, and transportation. In much of Africa, meteorological observation and forecasting systems are outdated and inadequate. These systems undermine the credibility of the very information they provide. Developing robust, low-cost means of gathering weather data will allow African leaders to access more accurate and fine-grained data about current and historic weather. This will enable more effective policy making.

CASE EXAMPLE

The **WIMEA-ICT project** is a collaboration between Makerere University in Uganda, the Dar Es Salaam Institute of Technology in Tanzania, the University of Juba in South Sudan and the University of Bergen in Norway. The WIMEA-ICT team has developed a prototype of an Automatic Weather Station in order to gather weather data at higher spatial resolution than is currently available in most African countries. Improving weather monitoring will help the region improve agricultural planning and food supply.²²

4 Maternal Education to Promote Childhood Nutrition

Building quality maternal education programs can support mothers during pregnancy, educate them about breastfeeding, and provide supportive services during all stages of pregnancy. These maternal programs can provide women with the necessary resources to influence the beginning stages of a child's mental and physical development. Supporting new mothers is essential for ensuring a continuum of care for children and society at large.

5 Coordinate Nutrition Goals Across Sectors for UHC

Nutrition is a health issue that affects every aspect of human development and requires coherent action and policies across all sectors including agriculture, infrastructure, family planning, WASH, education, and finance.

CASE EXAMPLE

In 2001, the government of Senegal issued a **new nutrition policy**, supporting a 10-year goal to improve nutrition through a community-based, multi-sectoral approach.²³ The policy was translated into the 10-year Nutrition Enhancement Program composed of four main pillars including: 1) multi-sectoral coordination for nutrition activities, 2) the development of a national coordinating division for nutrition, 3) nutrition-sensitive national agricultural policies, and 4) coordinated communication tools across sectors. Since the NEP's creation, Senegal has made successful gains in reducing undernutrition by 56% and decreasing stunting among young children from 33% to 19%.^{24, 25}



WATER, SANITATION, AND HYGIENE

Clean water, adequate sanitation, and safe hygiene practices, known collectively as WASH, are essential for good health. Without access to these most basic resources, entire populations can become exposed to a wide range of disease and quickly overburden health systems. WASH infrastructure. Prioritizing WASH is especially critical now as climate change continues to disrupt water patterns and facilitate the spread of disease. Multi-sectoral collaboration can support efforts for achieving UHC by ensuring people, infrastructure, and health care systems have clean and secure water, proper sanitation, and the resources needed to practice good hygiene.

WATER ACCESS

Water is becoming increasingly scarce and a source of political conflict. In Africa, an estimated 435 million people lack access to basic drinking water.²⁶ The water that is available is threatened by human-caused chemical contamination and the spread of microbial pathogens. Human-caused water pollution is primarily caused by agricultural runoff, mining, poor or nonexistent waste management systems, and untreated wastewater.

Agriculture is both a top consumer of water for crop irrigation as well as a contributor of water pollution caused by runoff from fertilizer, animal waste, and agrochemicals.²⁷ Mining, especially coal mining, pollutes both surface, and groundwater with acids, inorganic salts, and heavy metals.²⁸

Exported wastes, such as electronics, from developed countries into Africa contribute to surface and groundwater pollution.²⁹

In developing countries, approximately 80% of illnesses are linked to poor water and sanitation.³⁰ Many water-borne diseases cause diarrhea, which often leads to death due to dehydration, loss of nutrients, and increased susceptibility to infectious disease. Around 180,000 children under 5 years old (roughly 500 a day) die every year in sub-Saharan Africa due to diarrheal diseases.³¹ Additionally, parasites, found in water contaminated by fecal matter, often affect low-income families, who have little choice but to risk drinking and using infected water due to poor water access.

Water insecurity can force people (most often women and girls) to walk considerable distances to find water. These trips can increase risk of sexual assault, snakebites, disability, injuries, and theft.³²⁻³⁴ The time spent retrieving water reduces the ability for women to generate income and for girls to attend school. Lack of easy access to water places people in situations in which they have to choose between retrieving potentially infected water under dangerous, life-threatening conditions or foregoing water and risking dehydration and poor hygiene. Infected water often contains parasites that cause debilitating diseases, such as soil-transmitted helminthiases, schistosomiasis, and Guinea worm disease; a health burden that can keep people



in unending cycles of poverty.³⁵ Disease-carrying vectors, like mosquitoes, breed in stagnant water and are responsible for more prevalent diseases such as malaria and dengue.

Government action to prevent and reduce the levels of water pollution resulting from poor management of agricultural, industrial, and urban waste could lead directly to an increase in the availability of safe water.^{27, 36}

SANITATION ACCESS

Proper sanitation infrastructure and associated behaviors, such as the construction of latrines, the safe management and disposal of excreta, and the ending of open defecation and urination, drastically reduce the spread of water-borne illnesses and diseases specific to fecal matter exposure. Open defecation is a practice that spreads water-borne illnesses and diseases through fecal-oral transmission and that precipitates a large number of premature deaths. An estimated 432,000 diarrheal deaths annually are caused by inadequate sanitation worldwide.³⁷ Soil-transmitted helminth infections can cause chronic malnutrition and stunting which can lead to cognitive developmental damage. This can occur when fecal matter containing parasitic eggs are ingested through contaminated soil and foods. Countries where open defecation is



most prevalent have the highest levels of deaths of children under the age of five.³⁷ Water-borne diseases can be transmitted when human feces containing these pathogens come into contact with drinking water, food, or an individual's hands or face. Microorganisms and pathogens can quickly spread through runoff and floods from heavy rainfall.

“An investment in sufficient WASH infrastructure would require trillions [of dollars] and would definitely take us past the 2030 goal. We need to think differently, beyond thinking that we need the infrastructure. How can we start to look at fecal sludge as an asset? Recycling sludge into industrial water, fertilizer, for cooking. Waste as a resource, that is a part of the solution.”

MALCOLM QUIGLEY, POPULATION SERVICES INTERNATIONAL (PSI)

Ending open defecation requires both improved infrastructure and behavioral change. While some governments and health systems currently provide the resources to prevent and treat people with water-borne diseases, action to prevent the practice of open defecation, and simultaneously provide sanitation infrastructure, can support health systems by reducing the population's exposure to disease. Several African leaders are already addressing this issue. President Muhammadu Buhari of Nigeria declared a state of emergency on Nigeria's water supply, sanitation, and hygiene sector in 2018, rallying multiple Nigerian states to take action to change population sanitation behavior, while investing in complementary infrastructure.

HYGIENE ACCESS

Access to safe, running water and soap, along with behavioral change interventions like hygiene education, reduces disease. Running water and access to soap enable citizens to practice basic hygiene. This practice can prevent the transmission of pathogens that can cause a range of diseases including trachoma—the leading cause of infectious blindness in the world. Health systems can prevent trachoma in the early stages through antibiotics, treat trachoma in the chronic stages with surgery, and can provide blindness aids after trachoma causes irreversible blindness. But, its costs to the health system can be prevented by providing access to clean water and sanitation and promoting safe hygiene practices.

“If you do not have clean water and soap to wash your hands, you cannot avoid sepsis, you cannot prevent infection, and you will certainly not be able to control infection. I realized that without water, sanitation, and hygiene, without WASH, we cannot achieve any of the sustainable development goals.”

H.E. TOYIN OJARA SARAKI, THE WELLBEING FOUNDATION AFRICA

Communities that are unable to practice safe hygiene are the most vulnerable to the spread of disease, including COVID-19. Proper handwashing with soap can reduce diarrhea amongst children under the age of five by approximately 50% and respiratory infections by 25%.³⁷ Availability of soap and knowledge of the importance of this behavior could build community resilience and help to mitigate the threats of existing and emerging diseases.

INSTITUTIONAL WATER, SANITATION, AND HYGIENE

Ideally, water, sanitation, and hygiene infrastructure (WASH) should be available within all public and private facilities such as schools, food markets, government buildings, and health care facilities. This access is critical for encouraging citizen participation in maintaining health and reducing disease transmission. In sub-Saharan Africa, one half of all schools lack both drinking water and sanitation services.³⁸

The absence of adequate WASH facilities, particularly in schools, disproportionately impacts adolescent girls and children with disabilities. Adolescent girls (when menstruating) face social stigma, have difficulty participating in school and work, and are subjected to harassment.³⁹⁻⁴⁰ In Africa, fewer than 10% of children with disabilities attend school due to barriers such as stigma and inaccessible sanitation and water facilities.⁴¹

In health care facilities, the absence of adequate WASH services can increase the spread of health care-associated infectious diseases as well as diseases like West African Ebola and COVID-19. Women are especially vulnerable during childbirth, where they can be exposed to infection leading

“The Global What Women Want survey led by White Ribbon Alliance asked over 1.2 women and girls their definition of quality health care. Access to WASH was cited as the absolute most important element of quality health care. Among other issues, women and girls said they would avoid going to any health facility where there was no running water, dirty toilets or dirty linens. And yet, we keep telling them to go and deliver their babies in these health facilities. We will not change their minds unless we address WASH.”

ANGELA NGUKU, WHITE RIBBON ALLIANCE KENYA

to sepsis. It is estimated that 15% of maternal deaths in developing countries are directly linked to unhygienic conditions during childbirth that could have been prevented if adequate WASH were available.⁴² By increasing attendant handwashing and clean surfaces, health officials can reduce the risk of infections, sepsis and death for infants and mothers by up to 25%.⁴³ WASH access within health care facilities is critical for keeping both health workers and patients safe. As COVID-19 is demonstrating, the lack of this infrastructure can quickly devastate populations and the health workforce. Access to basic WASH services within health care facilities would reduce the spread of infection and disease, help lower the high mortality rate amongst mothers, and lower the prevalence of antimicrobial resistance.



WATER AND CLIMATE CHANGE

Climate change is predicted to disrupt natural and reliable water cycles, causing different regions to experience more extreme weather conditions such as droughts, floods, cyclones, hurricanes, and rise in sea levels. Droughts due to unpredictable or changing rainfall patterns are reducing water availability, jeopardizing crop yields, and disrupting economic livelihoods.⁴⁴⁻⁴⁶ This “deadly duo” of water scarcity and food insecurity can lead to violence,

“SDG 6 is a bit overwhelming. 6.1 and 6.2 call for universal access to safe water and sanitation, meaning water and sanitation in communities and in health care facilities and schools. It also means having access to menstrual hygiene and handwashing education. Then SDG 6.3 is about water quality, meaning more than just access, but addressing E.coli, other bacteria, nitrates, and pollution. We must then address this in all types of countries: rich, poor, small, big, dry, or wet. Put on top of that, the effects of climate change and how it expresses itself through limited WASH access—more floods, droughts, and pollution—and now we face an even bigger challenge.”

JENNIFER SARA, WORLD BANK GROUP

political instability, and migration.⁴⁷ Changes to rainfall patterns also present challenges in water planning, particularly in urban areas. In Cape Town, South Africa, the municipal water supply was almost completely depleted in 2018. This “Day Zero” event was brought on by three consecutive years of anemic rainfall. Historically, extreme droughts such as “Day Zero” would have occurred only once every 300 years. Now, with the world 1°C warmer, such events are three times more likely and can be expected to occur once every 100 years.⁴⁸

Climate change is also causing an increase in frequency and severity of flooding which, when combined with inadequate sewage systems, can lead to the spreading of diseases such as cholera in Kenya, and Chikungunya in Ethiopia and Sudan.⁴⁹⁻⁵⁴ Furthermore, the aftermath of a flood can leave pools of stagnant water and spur the breeding of disease-carrying insects like mosquitoes⁵² that cause

malaria in countries like Mozambique. The need to store water creates breeding sites for mosquitoes that spread dengue resulting in the increase of dengue outbreaks all over the world.

As sea levels rise and underground freshwater aquifers become depleted, salt water can contaminate freshwater sources used for drinking and agriculture. In Northern and sub-Saharan Africa, ground water is essential for supporting livelihoods and vital ecosystems, yet groundwater systems are being severely stressed by climate change and the mismanagement of water resources.⁵⁵⁻⁵⁶



WASH POLICY DIRECTION

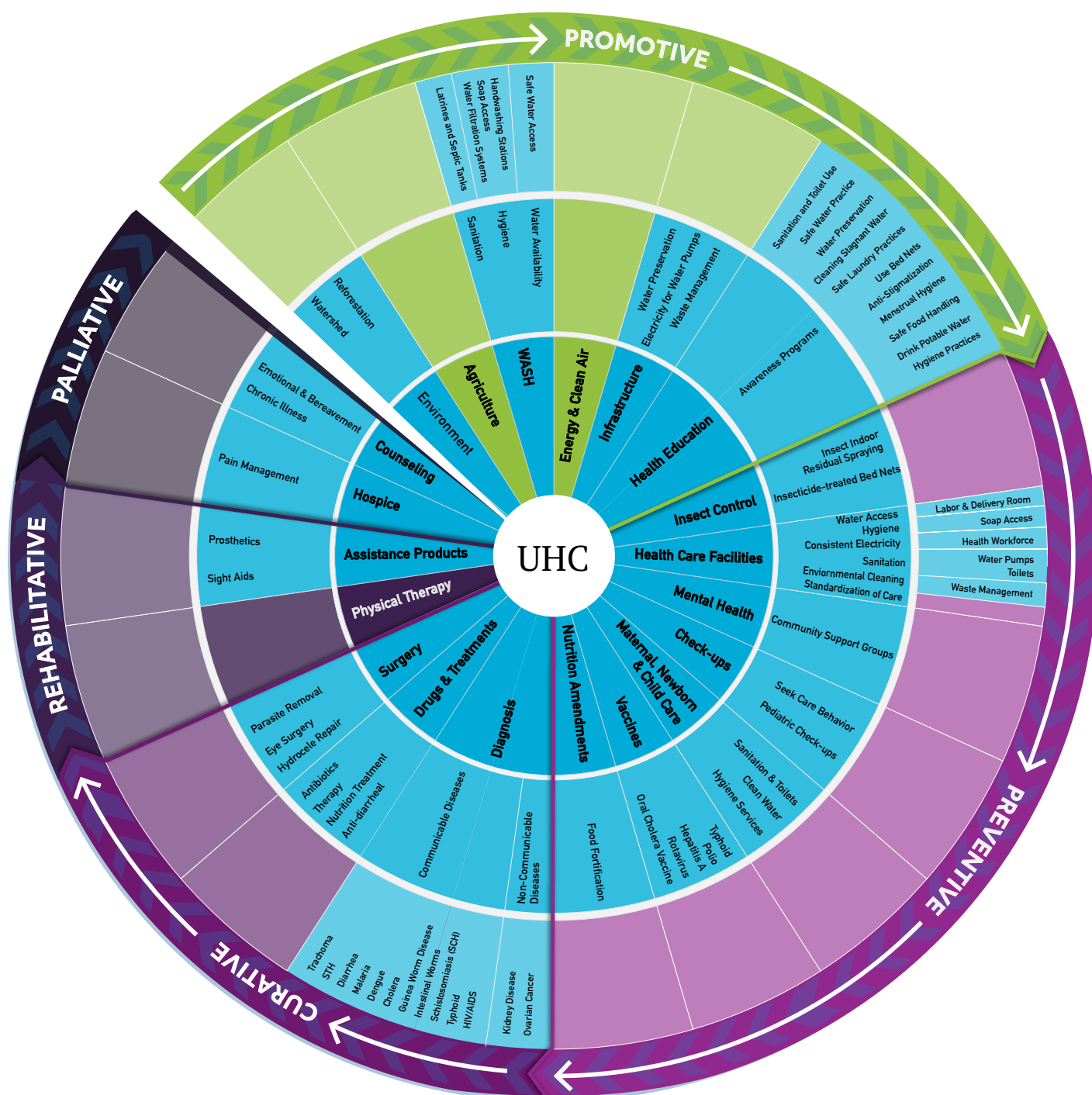
In order to reduce the health costs and community mortality associated with inadequate WASH, African leaders are focusing on safe water access, sanitary conditions, and best hygiene practices. Sustainable WASH systems and the utilities to manage them must continue being prioritized by governments. In order to husband scarce resources, leaders can create enabling policy environments to encourage the private sector to develop innovative solutions to issues around WASH access. Multiple neglected

tropical diseases, affecting the most vulnerable populations, are linked to a lack of WASH access. Encouraging the availability of WASH services is one critical way to reduce the incidence of NTDs and other diseases of poverty, and ensure Health for All.

To achieve equitable access to WASH, African leaders can coordinate across ministries related to water resources, health, education, finance, infrastructure, and rural development. These efforts can extend across all geographies and be complemented by necessary behavior change communications to promote health and reduce the enormous burden on the health system caused by treating each WASH-related disease. Public infrastructure must be included in these comprehensive population-focused initiatives, especially within health facilities. Leadership from the very top will ensure effective coordination and oversight. These coordinated efforts will both mitigate and prevent suffering from water-related diseases. They will also increase the quality of health systems by improving patient outcomes, experience, and trust.

“The experience of people on the margins, like those with disabilities, continues to show that we must integrate access for services like WASH to achieve health for all. If the leaders do not integrate WASH access into their health programs then we can never expect equity of health access for an entire community.”

DAVID EVANGELISTA, SPECIAL OLYMPICS EUROPE EURASIA



MULTI-SECTORAL UHC SERVICES FRAMEWORK

WATER, SANITATION, AND HYGIENE

Multi-sectoral collaboration is needed to provide WASH access to support human health thereby reducing the cost of achieving UHC. This diagram shows how and where WASH plays a role in the Multi-Sectoral UHC Services Framework. It highlights services and activities outside of health system such as (such as environmental and water policy, energy, and waste management) that play a critical role in promoting WASH access thereby preventing disease and promoting health. It also highlights the health services and supplies needed within the formal health system to support maternal health and treat diseases that result from the lack of adequate WASH.

Water, Sanitation, and Hygiene

1 Coordinate WASH Goals Across Sectors for UHC

Achieving UHC requires solutions, such as WASH interventions, that address issues beyond the health sector but are nonetheless linked to health. Expanding access to WASH requires coordination among ministries of water, environment, infrastructure, health, and education.

CASE EXAMPLE

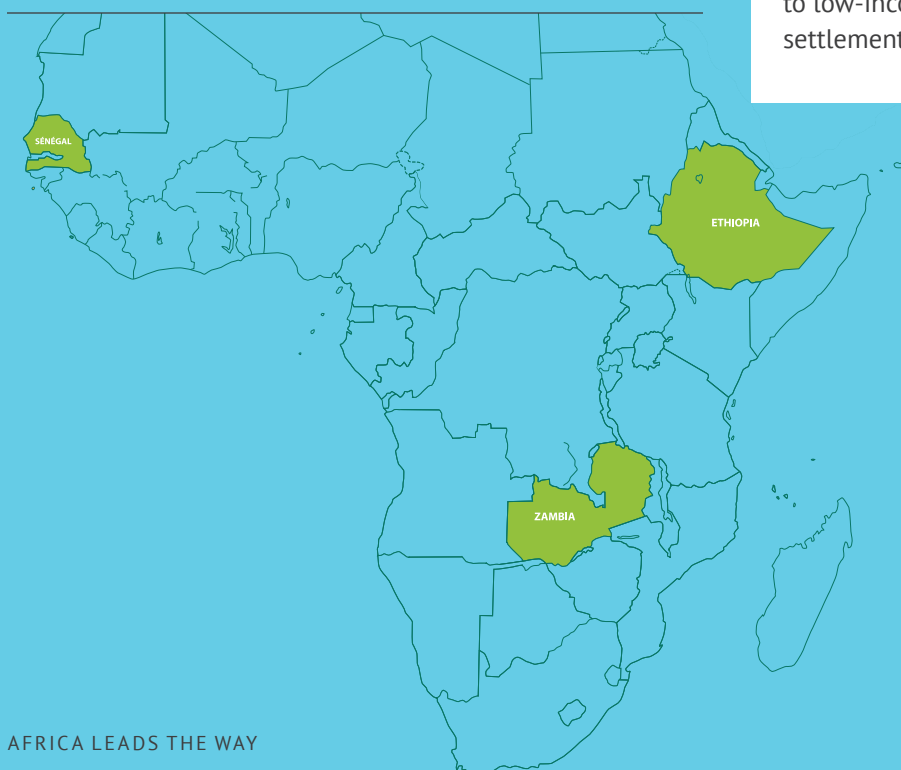
Many countries in Africa have implemented **nationally-led WASH programs** that target both the prevention and treatment of WASH-related diseases. In Ethiopia, there is the One WASH National Program which aims to increase access to safe WASH services and strengthen national capacity for water resource management. The program brings together multiple government ministries that extend from the federal to community-level.⁵⁷

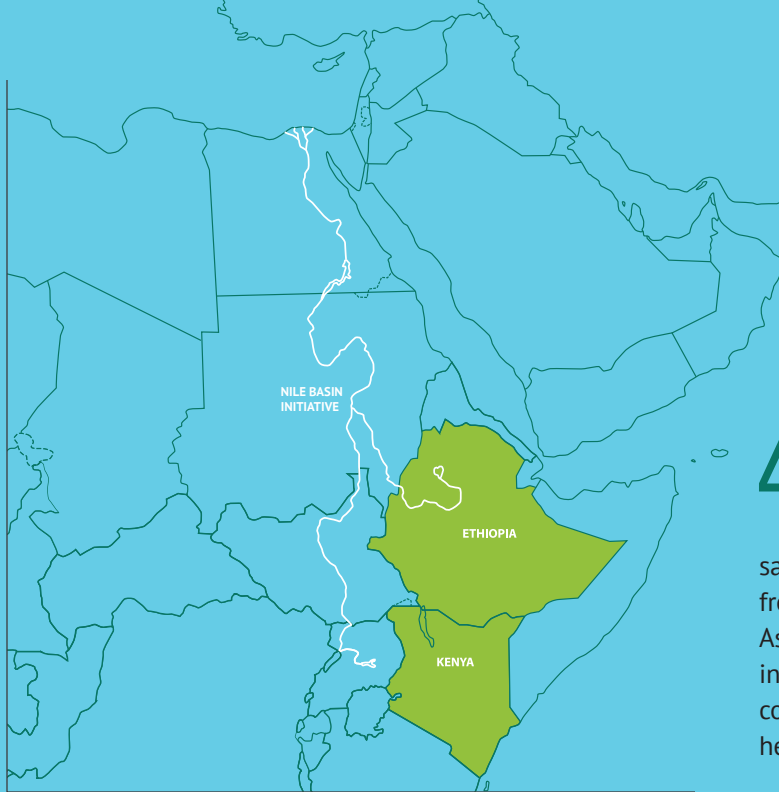
2 Securing Water Access, Availability, and Affordability

Plans for promoting clean water access need to address three critical factors: accessibility, availability, and affordability. In order to ensure equitable access to water, policy makers should focus on supporting low-income households and reducing inequality in access through practices such as cost-sharing and subsidies for businesses and individuals to invest in better infrastructure and access.

CASE EXAMPLE

In Senegal's **Action Plan for the Implementation of the National Policy for Rural Sanitation** by 2025, pro-poor policies are outlined which subsidize the construction of sewer connections as cost is the most significant barrier for the poor in accessing services.⁵⁸ In Zambia, the government established the **Devolution Trust Fund** to support the provision of public utilities to low-income communities and informal settlements.⁵⁹





4 Addressing Sea Level Rise and Depleted Aquifers

As sea levels rise and underground freshwater aquifers become depleted, salt water intrusion can contaminate existing freshwater used for drinking and agriculture. Assessing this vulnerability is an urgent concern in dense, urban populations as well as in African coastal areas, particularly where groundwater is heavily depleted by intensive agriculture.

3 Ensuring WASH Services in Health Care Facilities

Basic WASH services in health care facilities are fundamental to providing quality of care, equally and with dignity. In 2018, the Secretary-General of the United Nations issued a Global Call to Action to prioritize action on WASH in all health care facilities, including primary, secondary, and tertiary facilities in both the public and private sectors.

CASE EXAMPLE

Clean and Timely Care in Hospital For Institutional Transformation (CATCH-IT) is an Ethiopian initiative that is designed to reduce health care-associated infection by using a multifaceted approach that focuses on high-level leadership and commitment, safe practices, clean environments, and well-designed processes and systems. The initiative builds on existing health reforms in Ethiopia and is based on two key principles where “clean care is safer care” and “timeliness is at the heart of everything in health care settings.”⁶⁰

CASE EXAMPLE

The **Upper Tana-Nairobi Water Fund** was established in 2015 to protect and restore the quality and supply of water in a region that is home to 5.3 million people. The Water Fund was founded on the principle that the cost to prevent water problems is cheaper than the price tag to fix them further downstream. The Fund’s investment in water-conservancy programs has resulted in a 15% increase in annual water yields during dry seasons, a cost savings of USD \$250K from other water filtrations systems, and an estimated increase of USD \$3 million per year in increased agricultural yields.⁶¹

The **Nile Basin Initiative** is an intergovernmental partnership of 10 Nile Basin countries under its ‘One River, One People, One Vision’ initiative. This initiative coordinates the sustainable management and development of the shared Nile Basin water and related resources for win-win benefits for all.⁶¹

CLEAN AIR & SUSTAINABLE ENERGY

Air pollution is caused by both natural sources, such as desert dust, and human sources, such as industrial and transportation emissions, incineration, and basic household activities.⁶³ Collectively, these sources have far reaching impacts on human health, jeopardizing early development, contributing to the leading causes of death in children and adding to the rising burden of non-communicable diseases. Air pollution both causes and is exacerbated by climate change.

OUTDOOR AIR POLLUTION

Outdoor air pollution is one of the leading contributors of preventable death in Africa. Air pollution is responsible for 780,000 premature African deaths annually, including 400,000 infant deaths.⁶³⁻⁶⁴ These deaths are mainly due to non-communicable diseases caused by air pollution, including, cardiovascular disease and lung cancer. These non-communicable diseases often require visits with medical specialists and expensive treatments, such as chemotherapy. They therefore cause formidable strain on families and health systems.

The causes of outdoor air pollution include natural sources, industrial and vehicular emissions, and incineration. The leading natural source of air pollution is desert dust. Africa is the world's largest

“When we look at the health implications and the diseases that come from air pollution, we look at how we can cure them and how we can treat them. We are not looking at how we can prevent them. If we are going to look at universal health coverage from a perspective of health and finance, we need to go first where we can get the most impact with minimum cost.”

PHANGISILE MTSHALI, BRISTOL-MYERS SQUIBB FOUNDATION

source of desert dust emissions. Desert dust emission contributes annually to an estimated 556,000 premature deaths in Africa, including a 22% increase in infant deaths.⁶⁵ Industrial and vehicular emissions can primarily be linked to a lack of restrictions on industrial practices, the use of fossil fuel powered energy sources and unsustainable urbanization, such as a lack of urban traffic design and fuel-inefficient vehicles.⁶⁶⁻⁶⁷

Without waste management infrastructure, open burning sites can lead to air pollution from the incineration of everything from plastics to electronics. The practice of burning agricultural and biomass waste for pest management and field clearing leads to an estimated 43,000 premature deaths per year.⁶⁵ This crop burning practice is unsustainable as it reduces soil fertility and results in emissions of black carbon.⁶⁸



Though the causes of outdoor air pollution are diverse, they can be addressed and reduced through policy action, strategic infrastructure investment and collective behavior change.

HOUSEHOLD AND INDOOR AIR POLLUTION

Basic household activities such as lighting, heating, and cooking contribute to the high levels of indoor air pollution-related diseases in Africa. Exposure to household air pollution from open fires and inefficient stoves is a leading risk factor for diseases, including childhood pneumonia, ischemic heart disease, chronic obstructive pulmonary disease, stroke, and lung cancer.⁶⁹ Indoor air pollution leads to a higher risk of developing non-communicable diseases. And due to traditional gender roles, women are more likely than men to suffer from these air pollution induced non-communicable diseases. Unborn fetuses can be affected by air pollutants crossing the placental barrier, impacting development and contributing to low birth weight or stillbirths.⁷⁰ Without safe energy sources, families will often use pollutant producing sources like kerosene lamps, diesel generators, and unclean cookstoves and fuels. Kerosene lamps alone can cause an 81% increase in exposure to air pollutant particles.⁷¹ Diesel generators, typically used in regions with constant power outages, increasingly pose a greater health threat due to the incomplete combustion of diesel particulate matter which releases soot and small particles into the air to be breathed in.⁷² In Africa, only 17% of the population has clean cooking access, meaning the majority of the population still cooks with biomass or open fires and is exposed to indoor air pollution.⁷³

“Air pollution cuts across different sectors: the health sector, the energy sector, women’s empowerment, and sustainable development.”

SHEILA OPARAOCHA, ENERGIA

“You will never reduce maternal mortality or child mortality unless you do something about access to clean energy.”

DR. MARIA NEIRA, WORLD HEALTH ORGANIZATION

The health implications of indoor air pollution can be addressed with access to sustainable energy sources. The pollution that comes with using kerosene for lamps, running diesel generators for energy and cooking over open fires can be addressed with access to sustainable energy.⁷⁴⁻⁷⁵ Efforts to achieve sustainable energy for all is integral for UHC.

The lack of sustainable energy also contributes to a lack of quality care within health facilities. In sub-Saharan Africa, only 28% of health care facilities have access to reliable electricity.⁷⁶ Lack of energy access can mean vaccine spoilage, interrupted surgeries, equipment failure, lack of access to electrically-pumped water, and unsafe birth practices. It is for these reasons that unreliable access to electricity drastically reduces the quality of the health care services delivered in facilities.

AIR QUALITY AND CLIMATE CHANGE

Air pollution and climate change share the same negative impacts from the burning of fossil fuels such as coal, oil, and natural gas. These energy sources release air pollutants and greenhouse gases precipitating acid rain, smog, and contributing to global warming. Air pollution and climate change are seen as two sides of the same coin where both phenomena can exacerbate and contribute to the other while they both pose dangerous health risks to the population.⁷⁷ For example, the levels of desert dust is increasing due to the rise in arable land becoming desert. This rate of desertification is increasing faster due to climate change.⁷⁸

CLEAN AIR POLICY DIRECTION

While there are multiple causes of air pollution, collaborative efforts to ensure sustainable energy production could not only mitigate the rising health costs but reduce greenhouse gas emissions. Air pollution (both outdoor and indoor) will require improving sustainable energy access in addition to policy regulation, infrastructure investment, and population behavior change. By coordinating across sectors to ensure sustainable energy development and lowering the leading causes of air pollution, African leaders can ensure people have access to clean air. This action would mitigate the health costs associated with air pollution, including birth complications, pneumonia, and

non-communicable diseases, such as cancer and cardiovascular disease. A multi-sectoral approach would improve health outcomes and reduce the costs necessary to achieve UHC.

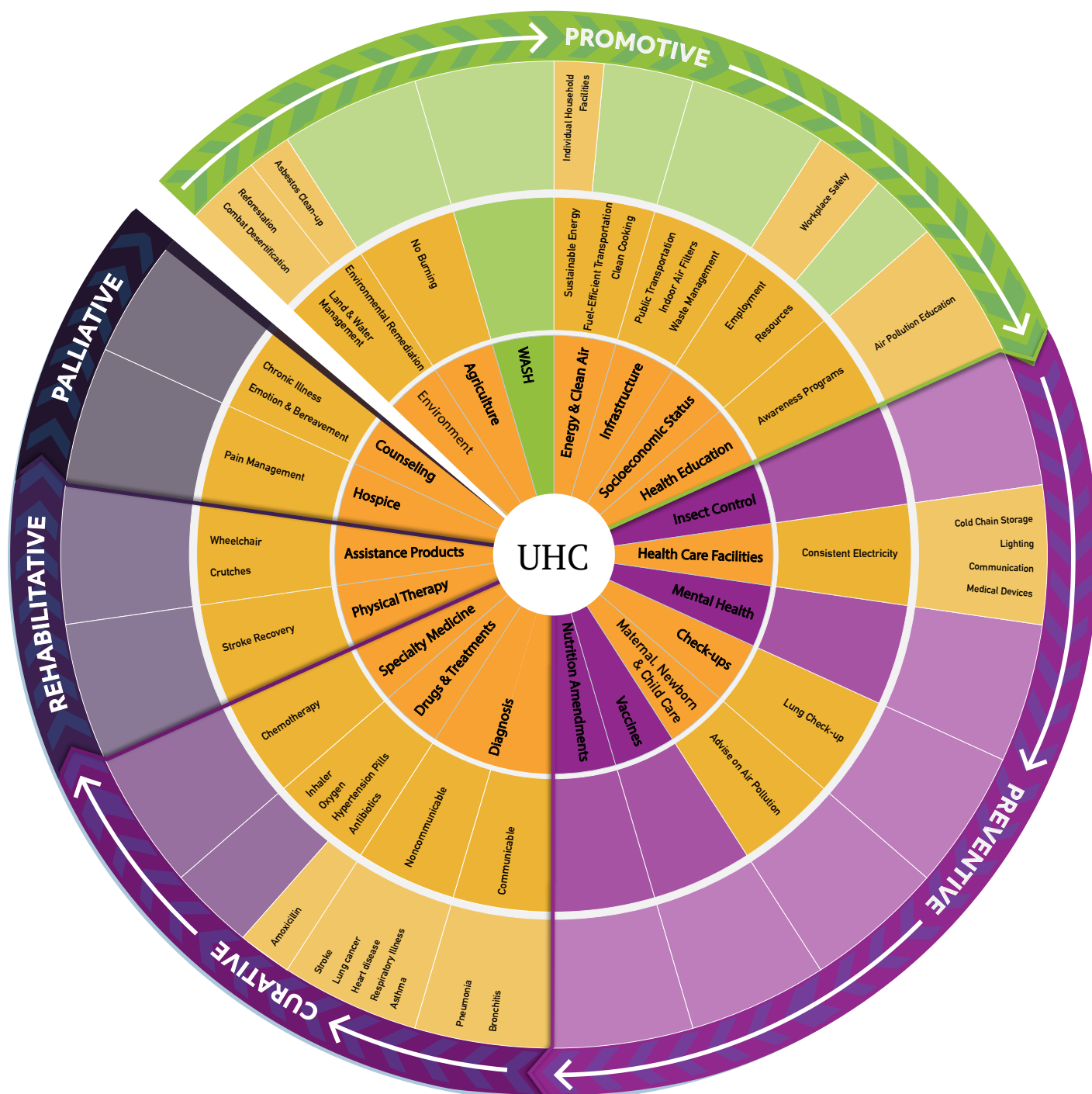
“In fact, in sub-Saharan Africa, there are an estimated 6 million diesel generators. When you aggregate the emissions from all of these, you begin to see that air pollution is a silent tsunami. This is an issue that is not talked about enough and has huge implications on public health—particularly women and children’s health. This issue also overlaps with climate change because many of the pollutants that we’re talking about within indoor air pollution also cause climate change.”

JEM PORCARO, SUSTAINABLE ENERGY FOR ALL

“Prevention is cheaper and more clever than treatment. We need to address air pollution because it is a common thread between many development issues. Whoever you are, whatever you’re interested in, air pollution affects you: negating whatever efforts and money you’re putting into the cause you care about.”

H.E. HAJIA SAMIRA BAWUMIA, SECOND LADY OF GHANA





MULTI-SECTORAL UHC SERVICES FRAMEWORK

CLEAN AIR AND SUSTAINABLE ENERGY

Multi-sectoral collaboration is needed to achieve clean air and sustainable energy access. Clean air supports human health thereby reducing the cost of achieving UHC. This diagram shows how and where clean air plays a role in the Multi-Sectoral UHC Services Framework. It highlights areas outside of health (such as energy, agriculture, public transportation, and waste management) that play a critical role in reducing air pollution and promoting health. It also highlights the health services and supplies needed within the formal health system to support maternal health and treat diseases that result from air pollution.

Clean Air & Sustainable Energy

1 Improve Monitoring of Air Pollution

Real-time monitoring of air quality is essential to shaping public health policy, improving public awareness, and informing community level action and interventions that target the most vulnerable. Investing in innovative and more cost-effective sensors will help to reduce the barriers in monitoring ground-level air quality.

CASE EXAMPLE

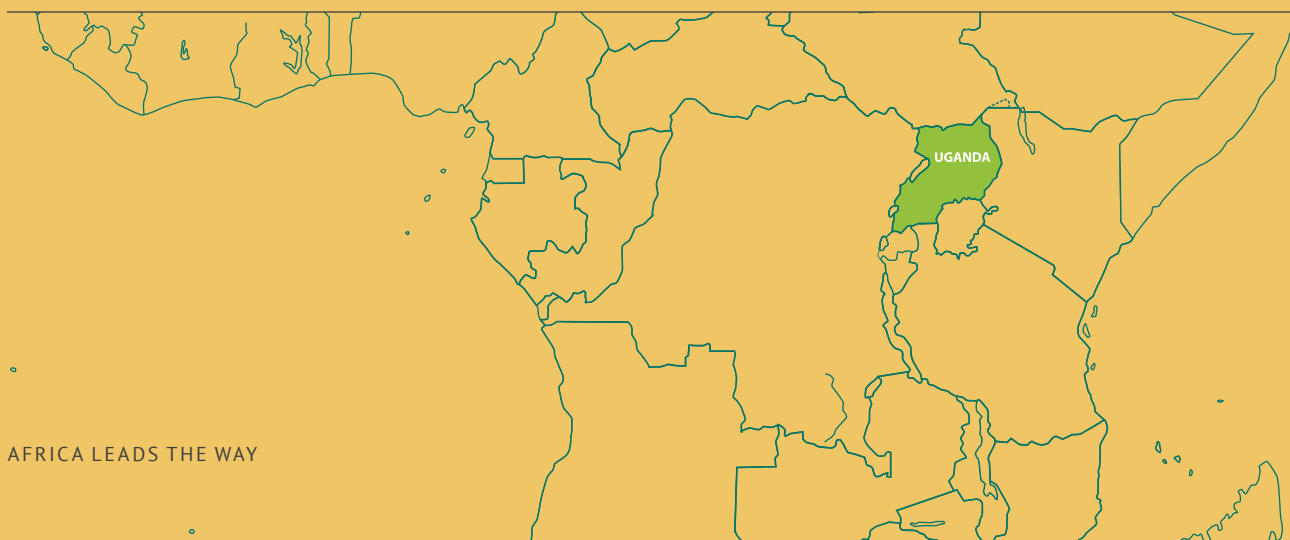
AirQo, a Ugandan startup based in Makerere University, aims to address a crucial information deficit by designing low-cost air quality monitors and artificial intelligence software to analyze air quality in Kampala and elsewhere. Accurate air quality data provided by AirQo will be essential to inform policy solutions and government planning, such as reducing traffic congestion, paving dirt roads, and scheduling of large events. AirQo also offers guidance to urban residents around hospitals and schools on the issues of air pollution. In 2019, the project was named by Google.org as one of the 20 best Artificial Intelligence projects and awarded grant funding to bring the project to scale.⁷⁹⁻⁸⁰

2 Promote the Use of Clean Cooking Technologies

Of the 25 countries in the world where more than 90% of the population cooks with solid biomass, 20 are in sub-Saharan Africa.⁸¹ To decrease the reliance of fuels attributed to toxic indoor pollution, governments can invest in the development of alternative cooking fuels and affordable technology. Large scale awareness programs along with collaboration across government, private sector, and global development partners can promote the use of clean cooking and thereby protect the health of families.

3 Reduce Industrial and Transportation Emissions

The rise of outdoor pollution, which accompanies urbanization, is primarily caused by industrial and vehicular emissions. This outdoor air pollution can result in preventable diseases which strain the health system. To avoid this negative impact on the health system, policy makers, including the mayors and ministries overseeing environment, energy, transport, health, infrastructure, and finance, can promote policies that encourage pedestrian friendly urbanization, limit the importation of fuel efficient vehicles, and limit industrial emissions.

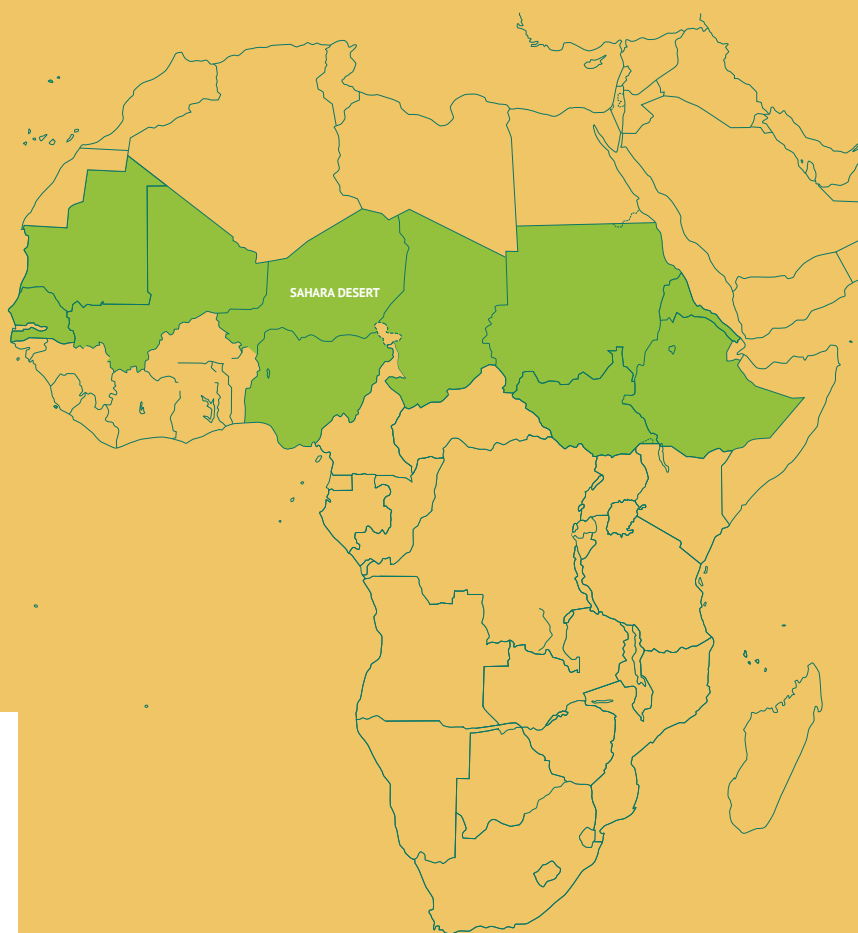


4 Slowing Desertification

Desertification, a natural phenomenon that leads to deadly sand and dust storms, is increasing exponentially in Africa due to climate change, land mismanagement, and unsustainable freshwater use.⁸² Desertification causes severe health impacts, such as damage to lungs, and worsen existing respiratory diseases like asthma and bronchitis. Careful soil stewardship, particularly at the edges of deserts, can help to slow or prevent desert expansion.

CASE EXAMPLE

Recognizing desertification as a major challenge, nations in Africa and across the globe signed **The United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification** and have committed to counteracting the harmful effects of land degradation. The **Great Green Wall Initiative** is an example of a pan-African effort where more than 20 African countries from across the Sahel region have come together to support forestation. Launched in September 2012 by the **African Ministerial Conference on Environment (AMCEN)**, this initiative is directed by the African Union and has already planted 15% of the target area.⁸³⁻⁸⁴



5 Ensure Sustainable Energy Access for Health Care Facilities

The lack of affordable and reliable access to electricity dramatically impacts the ability of health facility staff to provide safe and high quality care for patients, leading to poor patient outcomes and wasting scarce health care resources. Achieving access to sustainable energy can be met by a combination of government regulation, development partner investment, and private sector innovation. Policy makers can coordinate to ensure this basic access does not fall between ministers, especially between those related to energy, natural resources, infrastructure, rural development, health, and finance.



02

HEALTH SYSTEM UHC SERVICES

Preventative, Curative, Rehabilitative, and Palliative services are all provided by the health system and must be available in order to make health accessible to all. Similar to health promotion, disease prevention activities also reduce the costs and burden placed on the health system. Shifting the focus from curative interventions to promotive and preventive interventions is less expensive and ultimately more sustainable. This section will explore the relationship and need for trust between communities and the development and delivery of quality health services.

COMMUNITIES AND THEIR HEALTH SYSTEMS

Communities must have trust in the health system. This trust determines the effectiveness of preventative services. To optimize prevention services, it is imperative that people seek care prior to signs of ill-health.

Vaccinations, screenings, and routine check-ups can prevent mortality and reduce costs associated with disease treatment and pregnancy complications that occur when people do not seek early care. In order to cultivate community trust, health systems must first provide for the needs of the community they are serving and generate culturally-competent, demand-driven, health services. These demand-driven services should reflect the on-going needs of a specific community, including locally sourced maternal and child services, family planning, eye and dental care, and NTD care.

One strategy to ensure community buy-in is to seek community input in the development of the health workforce and the design of quality health programs, services, and systems. This includes the development of monitoring and evaluation systems as well as data collection, both of which are instrumental in the ongoing betterment of health systems, locally and nationally. Community involvement in this process builds trust between community members and the health system which is essential during a crisis.

“When a patient holds out their arm to draw blood, or brings you their child for an immunization, they are giving you a tremendous amount of trust. If we want to improve health, people need to have faith that the health system is there to serve them. Trust must be the foundation of any strong health system.”

SYLVANA SINHA, PRAAVA HEALTH

“The first person a mother meets to save her life is not a health professional, it is a community health worker. We need to make sure community health workers are trained, are supervised and are part of the health system. We talk about them as if they are just there, equipped and knowledgeable, but we need task shifting to have a strong system.”

DR. AGNES BINAGWAHO, UNIVERSITY OF GLOBAL HEALTH EQUITY

Community Health Care Workers provide a crucial link between the health system and the community. It is imperative that Community Health Care Workers be trained, fairly compensated, and respected as critical extensions of the health system. Community Health Care Workers can help bridge communication divides by maintaining touchpoints between the community and the health system. Similarly, they can help re-establish trust between communities and a health system if and when there is political instability beyond the community sector.



Maintaining community trust is fundamentally connected to maintaining the quality and accessibility of context-specific health service delivery. Strong relations between communities and the health system can help provide health leaders with critical early warnings of impending epidemics and health crises. Strong community relations can be relied upon to help address health crises as they arise. Communities will not trust health workers in a crisis if they do not have a history of relying on them through the normal interactions of primary care, check-ups, and family planning. Community distrust in the health system can quickly undermine the ability of health systems to deliver effective care and can therefore put the entire population's health at risk.

“Building a resilient health system starts at the community level. Strong community health systems must deliver an integrated package of services rather than only disease-specific treatment.”

DR. ABDOURAHMANE DIALLO, RBM PARTNERSHIP TO END MALARIA

As the West African Ebola crisis demonstrated, a lack of community trust in the health system enabled the spread of misinformation, which further increased the spread of the deadly disease.⁸⁵ Health care workers responding to the Ebola crisis were not welcome in community homes and were not trusted to deliver life saving information. The lives of not only community members, but the health workers themselves, were put at risk due to this distrust—some killed on the suspicion that they were sent by hostile foreign political agents to spread the virus.⁸⁶

QUALITY AND TRUSTWORTHY HEALTH SYSTEMS

Four critical areas define the effective delivery of quality health services: ① the physical standard of the facilities, ② the training and capacity of health personnel, including Community Health Care Workers, ③ the availability and effectiveness of health supplies and tools, and ④ the timely monitoring, oversight, and accountability of services. If health facilities lack basic essentials such as stable energy supplies, clean water, soap, or sanitation, then there is a disincentive for people to continue to seek care. Unreliable access to these essentials also jeopardizes the safety and motivation of health care workers. Similarly, if health personnel are overworked or under-skilled, they are more likely to misdiagnose or to inaccurately treat and care patients, decreasing the quality of the health services and reducing community trust in the overall system. Piecemeal availability of health supplies can compound these factors and undermine the ability of even the most highly trained health personnel to provide quality care. Health equipment designed in high resource settings can be ineffective in low-resource areas (inappropriate electricity demand, unmet training requirements, specialized parts to repair). Any of these issues can render equipment obsolete for use in a health center.



Health systems can increase and appropriately ensure the delivery of quality services through feedback mechanisms such as timely monitoring, oversight, and accountability. If health systems deliberately design and incorporate such feedback mechanisms, then they will be equipped and capable of evolving with the needs of both the community

and the health personnel and will, over time, ensure the delivery of quality care and sustainable working conditions for the health workforce.

COMMUNITY AND HEALTH SYSTEM POLICY

The ability to provide quality care within a health system that places the needs of the person—particularly those of women and girls—at the center requires an agreed upon national vision to harness multi-sectoral collaboration as well as coordination across areas of disease expertise and the public and private sectors. This requires leaders to bring together diverse sectors to ensure that communities and health systems are supplied, supported, and supervised. Leaders can continue to ensure community faith in the health system by ensuring the delivery of accessible, quality, and culturally-competent care. Health care facilities require particular multi-sectoral oversight to ensure WASH, consistent electricity supply, and to meet agreed standards of quality care. Updating health personnel training and education to support this multi-sectoral approach can ensure that health personnel are equipped to care for the needs of the whole person, including all appropriate prevention and health promotion services. Task-shifting can extend the capacity and skills of health care personnel. Digital technology and data can also serve as important supportive tools—particularly for health planning.

“The litmus of UHC is whether people get the services or not. Even with financing, if you raise the money, it’s going to be sitting somewhere until you fix the delivery system. We, as the private sector, have to think about end-to-end solutions, because if you are the government it is not good enough to say ‘I have a medicine’ and you plunk it into a system that does not work. We can work with governments to really look at the patient journey, look at all the barriers, and say ‘how do we collaborate with you?’”

SARBANI CHAKRABORTY, ROCHE

Leaders can increase the capacity of the health system by engaging with the private sector. In order to do so, leaders must provide an enabling regulatory environment. The development of supply chains should utilize a multi-sectoral perspective, rather than developing separate supply chains for each disease or disease cluster. This regulatory perspective extends into the manufacturing of health care equipment to ensure that equipment is appropriate for the needs of the health workforce, which might require manufacturing innovations to meet the needs of a low-resource settings. Health system transparency, accountability, and opportunity for feedback at all levels from community to leadership not only quickly builds trust, but spurs the evolution and development of a resilient and responsive health system. When viewed together, the success of a quality health care system serving the needs of the community demands both leadership and this multi-sectoral approach.



CASE STUDIES FOR

Health System UHC Services

Mali's National Health Care Reforms

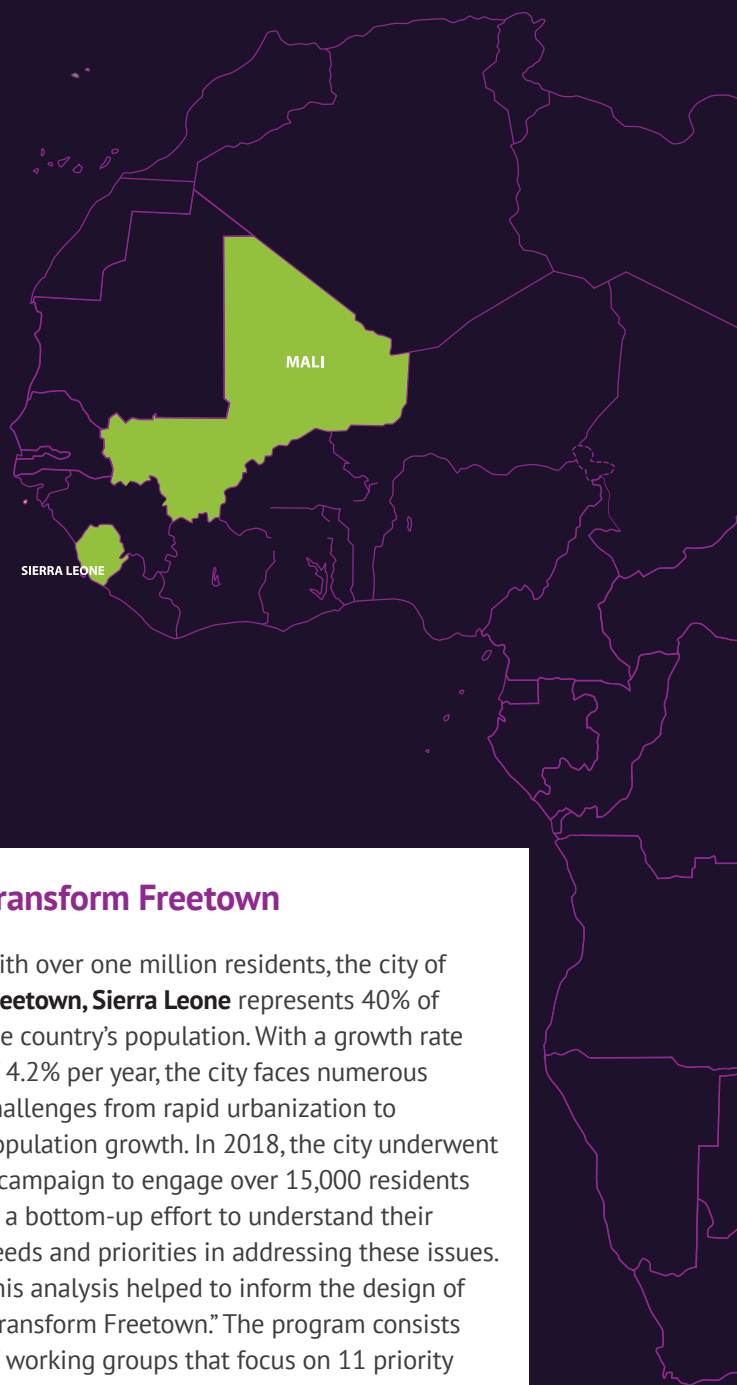
In 2019, the **Government of Mali** announced a series of ground-breaking reforms aimed at reviving its country's health system and bringing health care to millions of its citizens. Mali is among the five countries in the world with the largest burden of disease, where on average about 160,000 women and children under the age of five die every year. With these reforms, the government will provide select health services to all pregnant women and children under the age of five free health services. Other reforms include a national distribution of free contraceptives, establishment of a rural network of paid, professionalized community health workers, and increases to the national budget for health.⁸⁷⁻⁸⁸

The Hunger Project Epicenter Strategy

The **Hunger Project's Epicenter Strategy** unites 5,000 to 15,000 people in a cluster of villages throughout sub-Saharan Africa to create an "epicenter," or a dynamic center where communities are mobilized for action to meet their basic needs. The Project achieves synergy among programs in health, education, adult literacy, nutrition, improved farming and food security, microfinance, water and sanitation, and community spirit with a momentum of accomplishment involving the entire population. This holistic strategy builds a path to sustainable self-reliance through four phases over eight years. Hunger Project Epicenter sites can be found throughout Benin, Burkina Faso, Ethiopia, Zambia, Ghana, Malawi, Mozambique, Senegal, and Uganda.⁸⁹

Transform Freetown

With over one million residents, the city of **Freetown, Sierra Leone** represents 40% of the country's population. With a growth rate of 4.2% per year, the city faces numerous challenges from rapid urbanization to population growth. In 2018, the city underwent a campaign to engage over 15,000 residents in a bottom-up effort to understand their needs and priorities in addressing these issues. This analysis helped to inform the design of "Transform Freetown." The program consists of working groups that focus on 11 priority sectors across 4 clusters (Resilience, Human Development, Healthy City, and Urban Mobility) to help set the city's targets for development.⁹⁰



CONCLUSION

A comprehensive health care system is critical for providing stability in an increasingly challenging world. In the context of environmental degradation, climate change, and population growth, comprehensive health system development provides a policy framework that equips policy leaders with the tools needed to prepare for all eventualities, including unanticipated epidemics. COVID-19 is a stark example of an unanticipated eventuality.

Emergencies and crises are opportunities to identify systemic flaws. The COVID-19 emergency has highlighted worldwide inequality in access to the fundamental resources people need: the basic building blocks of life, adequate hygiene services, and quality health services. A crisis can catalyze new funding which, when channeled effectively, can address immediate needs while bolstering the services and systems necessary to prepare for the future.

“At the end of the day, we’re talking about multi-sectoral collaborations for primary care. We can’t do that without the user, the community member, being part of the collaboration.”

ANGELA NGUKU, WHITE RIBBON ALLIANCE

This Report has touched on many of the preventable causes of mortality in Africa and has traced these back to their underlying cause: inadequate access to basic human needs, including nutritious food, safe water, and clean air. Examined in the context

of climate change, it is clear that scarce resources are going to become even more scarce, which will contribute to ever greater disease and mortality.

Achieving UHC will ultimately require collaboration across multiple sectors and the coordination of policies and investments to create the conditions necessary for human health. UHC, from promotive to preventive through palliative health, requires human-centered and multi-sectoral collaboration. This comprehensive and multi-sectoral approach to UHC is the compass by which African leaders can guide their countries on a pathway to sustainable development. This holistic approach must ultimately be implemented through a complex interplay between communities and quality health systems. Every community is less able to meet their own needs without nutrition education, WASH, reliable energy, and trained Community Health Workers who offer health education and basic health care. Paired together, a resilient community and a trustworthy health system can offer promotive and preventive services, and thereby reduce disease and its associated costs. UHC is achievable by 2030, but it will require a common vision, a shift in funding prioritization, multi-sectoral coordination, and prioritization from African leaders. One by One let's achieve UHC.

NEXT STEPS

The African Union, The Jakaya Mrisho Kikwete Foundation, and The Access Challenge invite you to join the One By One: Target 2030 Campaign to help drive an integrated action plan for Universal Health Coverage. Following the collective insights from the leaders at the 2019 One by One UHC Conference, we are working with the African Union who will host the first ever African Interministerial meeting on Universal Health Coverage. We call on all of you to participate.

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