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# Young People and Drivers and Barriers to Climate Adaptation Action



**A technical paper on past  
experiences, current drivers  
of engagement, and pathways  
to resilience**

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# FOREWORD

## Starting a youth adaptation revolution

*Young people are going to bear the brunt of climate change, so we must involve them—now—as we draw up solutions*

As we head toward COP26 in November, we can take some comfort that awareness of the climate crisis and related biodiversity loss, and the urgent need to tackle them, are at an all-time high.

This is particularly so among young people, who must live in a world shaped by the policy decisions we make today. But as the worldwide Fridays for Future movement showed, young people can be an important part in driving the change required, too.

They have a critical role to play in transforming our societies to a climate-resilient and low-carbon future. And that's not only desirable, but essential.

The number of people aged between 15 and 24 years is currently 1.2 billion, or 16 percent of the global population, and will rise to 1.34 billion by 2050. Yet these young people—tomorrow's stewards of planet Earth—have too little say in policy processes, including in the crucial task of scaling up and properly financing climate adaptation action.

Effectively engaging them is critical, not simply because youth, with their social media skills, ability to connect across boundaries, and fresh thinking, bring distinct strengths to current adaptation action. It is also because young people will bear the brunt of adverse climate change impacts, though they have contributed so very little to its causes. That is especially the case in Africa and Asia, where young people disproportionately experience extreme

climate events. Shockingly, children and youth globally are estimated to suffer more than 80 percent of the illnesses, injuries, and deaths attributable to climate change. We owe them the chance to shape future solutions.

This is why GCA prioritizes youth leadership in climate adaptation action and is working with our partners, primarily young people themselves, in the opportunities for enhancing, widening, and accelerating it. We were proud to have consulted hundreds of young people around the world and supported them as they presented a Youth Call to Action to world leaders at the Climate Adaptation Summit in January 2021. And it is why we are now delivering on this promise through our programs, including a dedicated youth leadership pillar of our \$25 billion Africa Adaptation Acceleration Program.

One of the big takeaways of this report is that, when young people are given the opportunity to understand climate adaptation, they get it. They grasp the cost of inaction, they see the positive payoffs from taking adaptation action—and they engage. It is vital, therefore, to draw their voices into the discussion and empower them to lead the solutions. We must support them and their actions, particularly in regions where youth participation in political processes may be constrained.

Youth must not be reduced to passive victims of a climate meltdown. They have a crucial role to play by becoming champions of a low-carbon, climate-resilient future. The sooner we make them an integral part of the decision-making and solutions that will shape the future of our world, the better.

**Patrick Verkooijen**

Chief Executive Officer

Global Center on Adaptation



## YOUTH FOR ADAPTATION ACTION

A technical paper on past experiences, current drivers of engagement, and pathways to resilience

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Thank you to all for partnering with us in this journey.

# GLOSSARY

Term/acronym	Definition
<b>Adaptation</b>	The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects
<b>Climate change</b>	Identifiable change in climate over time, whether due to natural variability or as a result of human activity
<b>Disaster</b>	A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic, and environmental losses and impacts.
<b>GCA</b>	Global Center on Adaptation
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>MGCY</b>	The United Nations Major Group for Children and Youth
<b>Mitigation</b>	A human intervention to reduce the sources or enhance the sinks of greenhouse gases (GHGs).
<b>RCRC</b>	Red Cross and Red Crescent
<b>Resilience</b>	The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.
<b>SEAYN</b>	Southeast Asia Youth Network
<b>UN</b>	The United Nations
<b>UNEP</b>	The United Nations Environment Programme
<b>UNGA</b>	The United Nations General Assembly
<b>UNDP</b>	The United Nations Development Programme
<b>UNDRR</b>	The United Nations Office for Disaster Risk Reduction
<b>UNFCCC</b>	The United Nations Framework Convention on Climate Change
<b>WCED</b>	World Commission on Environment and Development
<b>WMO</b>	World Meteorological Organization
<b>YOUNGO</b>	Official Youth Constituency to the United Nations Framework Convention for Climate Change (UNFCCC)

Note: The United Nations defines Youth as persons between the ages of 15 to 24 years. For the purpose of our study and to cover a wider base of young people we consider young people as persons between 13 to 35 years of age (based on YOUNGO's definition of youth as persons under 35 years of age). When we refer to external publications that assume different age categories, we specify relevant ages.



# EXECUTIVE SUMMARY

**Y**oung people are key stakeholders in climate change adaptation as well as current and future decision-makers. Their engagement locally, nationally, and internationally are vital for building resilience and for developing effective adaptation policies.

Young people comprise almost a quarter of the world population, of which an overwhelming majority live in developing countries. Climate change affects children and young people today, and as impacts intensify, they will face the consequences of today's actions and inactions. Young people from developing countries often already grapple with access to basic services, low incomes, dependency on scarce natural resources, and insufficient risk management. Successful adaptation measures are vital for preventing climate-related loss and damage and for generating desired socio-economic impacts such as access to education, livelihoods, and nutritional, physical and mental health.

Current studies on youth leadership and participation suggest that climate change curricula in formal education and dedicated financing for youth actions play a key role in driving youth engagement. Youth engagement in adaptation action requires capacity building and access to information to understand the complexity of climate change impacts, and to act on them.

Mobilization for climate action disproportionately focuses on mitigation as compared to adaptation which can be due to the complex and multi-dimensional character of adaptation actions requiring a more nuanced approach. The current study aims to understand factors that enhance engagement of young people in

adaptation action worldwide, drawing on surveys and interviews. Specifically, the study intends to answer four questions:

1. What are the perceptions about climate impacts and successful adaptation methods?
2. What are the factors that contribute (or inhibit) engagement of young people across various levels?
3. Are young people willing to make lifestyle changes for effective climate action?
4. How have extreme weather events impacted or led to engagement at local level?

The study finds that increased exposure to extreme events and personal experience of climate change impacts are major drivers of youth engagement across different levels of governance. Results also show that young people are willing to make lifestyle changes when it comes to adapting to dangerous impacts of climate change. Young people associate successful adaptation with good governance practices, participatory approaches, and effective collaboration between communities, civil society and governments. Young people participation at the national level is strongly related to climate change knowledge and level of education, while regional and gender differences also play a part. Scarce involvement of young people in policy development emerges as one of the most important factors inhibiting engagement.

The study highlights perspectives from young people in Africa who were affected by cyclones and floods, to understand the impacts of extreme weather events as well as their contributions

towards building resilience. Young people consider better agricultural practices, food security and resilient infrastructure as particularly helpful in dealing with the uncertain nature of climate-induced disasters. Interviews also illustrate how young people are activated after disasters. For instance, they help in the relocation of affected communities, they build awareness and facilitate charitable campaigns, while using social media engagement, and leveraging cross-institutional collaborations.

The study concludes that globally young people are already stepping up with adaptation responses and community efforts, while engaging pro-actively with local and national policymakers. Inclusive national policies as well as investments in local youth-led initiatives could further increase participation of young people and accelerate climate adaptation action. Education, skills development and access to climate information are vital for empowering young people, enabling vulnerable groups to become leaders of change who effectively tackle the global climate emergency.



# KEY MESSAGES

- Increased exposure to extreme events and personal experience of climate change impacts are major drivers of youth engagement across different levels of governance.
- The failure to include young people in policy processes remains the most important hurdle for youth engagement in policymaking. When given the opportunity, young people actively contribute to decision-making, creating their own avenues and promoting value of intergenerational justice and equity.
- Young people have demonstrable strengths, for instance social media savviness, the ability to connect across generations and countries, and a strong willingness to step up and act when facing extreme weather events. These characteristics have enormous potential to strengthen and reinvigorate adaptation policies and strengthen climate resilience.
- Perceived urgency of climate change impacts and understandings of what constitutes successful adaptation to climate change vary by region. However, young people have a reasonable understanding of key climate change impacts to be informed actors in resilience building and are already engaged in various climate change and adaptation activities.
- Higher community-level engagement was found in Asia and Africa, while policy engagement was more common across developed countries, particularly among men though this varies with general education levels. Equal opportunities and inclusion strategies are extremely important for all young people in their diversity to become valuable contributors in the climate adaptation efforts.
- Young people are willing to make compromises to effectively respond to climate change impacts. When confronted with urgent climate impacts and the need to make difficult choices, they are often willing to pay higher taxes, and some would even accept a lower level of well-being compared to their parents' generation.
- Willingness to engage in climate adaptation may further increase when young people better understand the potential scale of damages due to inaction and possible pay-offs of resilient and sustainable development.
- More research is needed to understand engagement of young people at all levels; to investigate social media as a space where young people confront climate adaptation; to understand cultural, economic and historical limits to adaptation; and to investigate ways to overcome political and financial impediments to engage in adaptation action.



# INTRODUCTION

**C**limate change impacts affect all geographies and generations; however, young people are a particularly affected group of the population. Young people currently experience or are going to experience the brunt of climate change impacts such as loss of employment, and negative impacts on education and health.

As climate change impacts worsen, growing numbers of young people around the world demand accelerated climate action and highlight the urgency of a changing climate. Their unprecedented global youth-led mobilization has been critical in climate action. Realizing intra- and intergenerational justice requires the inclusion of young people in decision making processes as they ensure the acknowledgement and inclusion of goals and aspirations of different generations in decision-making that often takes place behind closed doors<sup>1</sup>.

Young people (those aged 15-24 years) currently account for 1.21 billion of the global population. This number is projected to increase to 1.29 billion

by 2030 and 1.34 billion by 2050<sup>2</sup>. Demographic growth is highest in developing countries which are already disproportionately affected by adverse climate impacts and underdevelopment. Population growth remains high in 47 least-developed countries, of which 32 countries are in Sub-Saharan Africa and have the youngest age distribution globally. For this group of countries, youth between 15 and 24 years of age are expected to increase from 207 million in 2019 to 336 million in 2050<sup>3</sup>. Two-thirds of the global poor are children and youth (0-24 years), much higher than their cumulative population share globally (40 percent)<sup>4</sup>. The confluence of adverse climate change impacts and demographic developments risks widening existing developmental deficits, particularly among youth who have contributed very little to anthropogenic climate change<sup>5</sup>. Deteriorating climate change impacts are bound to threaten the health and well-being of youth, especially those living in developing countries<sup>6</sup>, and among particularly vulnerable youth groups including women and people living in informal settlements (see Text box 1 for examples).

## TEXT BOX 1: EXAMPLES OF DAMAGING IMPACTS OF CLIMATE CHANGE ON YOUTH

- Increasingly erratic weather and rainfall patterns affect food security and water availability, regions with younger populations such as Sub-Saharan Africa are highly exposed to drought, while flooding poses the greatest threat in the coastal areas of South Asia, Central America, and the Caribbean and Pacific islands<sup>7</sup>. Climate-induced disasters have also led to increased migration. In Africa over the past 20 years more than 10 million people have been displaced by environmental degradation and desertification<sup>8</sup>. Such displacement has lasting impacts on young people, including reduced educational opportunities, increased vulnerability to exploitation, and further descent into poverty.
- Children and young people are estimated to suffer more than 80 percent of the illnesses, injuries, and deaths attributable to climate change<sup>9</sup>.
- Certain groups among young people are more severely impacted, due to distinct social and cultural preferences and customs which lead, for instance, to gender-specific vulnerabilities<sup>10</sup>. For example, when schools are damaged or destroyed by extreme weather events and families cannot support children to go to school; girls are more likely to stay home<sup>11</sup>.
- The climate crisis may also lead to mental stress particularly among young people, as they are still developing physically and psychologically<sup>12</sup>.

### Role of young people in climate change adaptation<sup>13</sup>

Young people must not be mistaken as passive victims at the receiving end of climate impacts. Rather, they have a critical role in transforming our societies to a climate-resilient and low-emissions future. A better understanding of over-consumption, exploitation of resources, widening inequalities and worsening climate change impacts will further incentivize them to play active roles and speak up for effective solutions<sup>14</sup>. While young people have long been involved in schools and at the community level, rising education and active engagement are drivers that have led to these advocates shaping opinions and demanding stronger, more effective climate action, in addition to young people's lived experience of climate change impacts. In recent years, young people around the world have taken to the streets and called out their governments to act decisively. In decision-making processes, however, youth often find themselves on the fringes<sup>15</sup> and in need of better access to meaningful and

active policy engagement<sup>16</sup>. Institutions need to be particularly inclusive of youth from vulnerable groups, who are already bearing the brunt of climate change. However, empowering youth leadership should not be restricted to formal decision-making. Young people have the ability to think outside formal structures of power. It is therefore important to observe how organizations and movements led by young people have been successful at challenging conventional notions of decision-making hierarchy, advocating and maintaining democratic structures, ensuring bottom-up decision-making processes and strengthening participatory approaches. Recent climate activism by young people demonstrates that they are not only pushing the climate action agenda, they are also ensuring fair decision-making by encouraging participation of young people from affected groups and communities, and by holding policy-makers accountable. In the context of the UNFCCC, youth

participation has been strengthened since the formal establishment of YOUNGO, the constituency of Youth Non-Governmental Organizations in 2010, which provides technical and policy inputs to negotiation groups, engaging with decision-makers, and inserting intergenerational and equity-based values into intergovernmental negotiations<sup>17</sup>. Similar youth constituencies such as the United Nations Environment Programme (UNEP)'s Major Group for Children and Youth (MGCY) are increasingly active at the regional and national levels. In Africa, Young Volunteers for the Environment are using community-based adaptation projects to impart knowledge of climate change impacts and to empower young people in 16 African countries<sup>18</sup>. According to UNDP's Peoples' Climate Vote (2020), perceptions of climate emergency was highest among young people in Africa, highlighting the importance of amplifying their voices and providing more opportunities<sup>19</sup>. In Southeast Asia, the Red Cross and Red Crescent (RCRC) Southeast Asia Youth Network (SEAYN) piloted the

Youth in School Safety Programme, developing and enhancing disaster risk-reduction strategies and conducting safety mapping in 11 countries<sup>20</sup>. Similarly, the Global Center on Adaptation's YOUTH ADAPT flagship events partner with universities for training and to provide youth networking opportunities. Young politicians are also making their voices heard at national level. In the U.S., for example, Alexandria Ocasio-Cortez became the youngest woman ever elected to the U.S. Congress, aged 29, arguing for a comprehensive Green New Deal which simultaneously seeks to achieve climate and social goals<sup>21</sup>. Young people are also seeking legal action to force governments to take climate action. For instance, youth plaintiffs have brought cases to courts in Portugal and the U.S.<sup>22</sup>. The recent Peoples' Climate Vote survey (2020) reflects greater awareness among young people across the world on climate change and its impacts, with nearly 70 percent of those under 18 years and 65 percent of those between 18-35 agreeing that climate change is a global emergency<sup>23</sup>.



## TEXT BOX 2: CONDITIONS FOR ENGAGEMENT OF YOUNG PEOPLE IN CLIMATE ADAPTATION POLICY; PERSPECTIVES FROM CHINA

China is home to over 269 million young people and the impacts of climate change are influencing the career choices of young Chinese. Xuechun (Emma) Wang, 28, a PhD student at the school of Public Policy and Management in Tsinghua University, and Hao Guo, 25, a young professional at the National Center for Climate Change Strategy and International Cooperation describe their journey to becoming climate policy professionals.



For Xuechun, witnessing extreme winter storms and the lack of local adaptive capacity has been a strong incentive to pursue a career in climate change: *"I didn't really understand what climate change was, but I could feel that the bad weather was causing great inconvenience to local residents. Therefore, I chose to study atmospheric science as a major when I applied for university. I look forward to learning about extreme weather and climate change and finding a way to better adapt to extreme weather."*



Hao Guo's personal dream is to visit the north and south poles to understand the impacts of climate change in these unique ecosystems: *"...in China, the young generation has a passion to help the world toward sustainable development. However, they don't know about the severe impacts of climate change and connection to their daily lives. Many young people will just think of floods as natural weather conditions. If nobody explains this, nobody will link this to climate change."*

Earlier studies have made compelling cases for youth participation in climate change decision-making, particularly in developing countries<sup>24</sup>. Youth are a key target group to engage in climate change awareness campaigns and efforts to improve skills for green jobs and sustainable development practices<sup>25</sup>. Unfortunately, participation often remains tokenistic with "... a few young people in adult-dominated processes"<sup>26</sup>. Awareness of young people and their participation therefore is necessary for them to actively and meaningfully participate in policy-making that benefits them. Consultations with young people should translate into the integration of youth voices in policy-making, for instance in national adaptation strategies<sup>27</sup>. To ensure intergenerational equity in policy-making, participatory processes should empower young people through capacity

building and provide them with adequate resources to exercise their rights and responsibilities.

Fewer studies have focused on factors that enable youth engagement, particularly in climate adaptation. The few studies undertaken often cover only a narrow fragment of the youth population, such as by focusing exclusively on developed countries<sup>28,29</sup>. For instance, one study examined the perception of ninth graders<sup>30</sup> in Finland of climate change and their willingness to act. The study looked into environmental concerns and increased international co-operation as factors that influence youth perspectives on climate mitigation efforts in particular. Other studies investigated the impact of climate change communication on youth engagement among Finnish and Swedish adolescents<sup>31</sup>.



While rendering important insights, these studies do not highlight the differences between young people in different countries and regions, particularly those in Africa and Asia who disproportionately experience extreme climate events. For instance, students from developed countries largely cite environmental concerns in an externalized manner, with a lower concern about consequences to themselves and as something that affects nature, animals and other people in low-income countries<sup>32</sup>. A recent review of studies on young people and perceptions of climate change found that almost all studies were conducted in school settings in high-income countries. These studies often show a higher awareness of impacts on natural systems than on human systems<sup>33</sup>. By comparison, a study of Nepalese students showed a higher awareness of climate change impacts in terms of climate risks and hazards, and the need for climate education and effective government plans and policies<sup>34</sup>. It examined social media as a viable alternative platform to impart climate change knowledge, including information on adaptation and mitigation strategies.

The objective of this study is to understand the various factors that affect young people (13-35 years)<sup>35</sup> engagement across the world but particularly in developing countries, their perceptions of climate change adaptation, willingness to change, etc. This was undertaken through a detailed online survey that was disseminated through various youth networks with particular emphasis to ensure responses of young people from developing countries in Asia and Africa, garnering more than 3000 responses. The second part of the study focuses on Africa, as the continent has a young population, but is also particularly vulnerable to climate change impacts. It features interviews with 18 young people in Africa whose experience was shaped by two climate events (Cyclone Idai and floods in the Horn of Africa) to understand their factors of engagement. This study addresses a crucial knowledge gap in the research area by incorporating views of young people from developing countries in Asia and Africa with their own understanding of climate change and engagement in climate action. The study tries to understand what motivates a large, diverse group of young people to participate in climate action and the roadblocks faced by them for doing so. We underline that engagement of young people particularly from

the developing world is necessary for ensuring a resilient future and successful adaptation strategies and therefore it is necessary to provide them with an enabling environment to bring their voices to the table and assist with required support and recognition for their actions. We also acknowledge that the burden of coping with climate change impacts and adapting should not be placed on young people alone when serious impediments to their participation in political processes exist in many societies. It is still imperative for any effective sustainable development scenario that young people are integrated into decision-making to shape the world and its future.

### Young people's engagement and key questions

Growing engagement of young people gives reason for hope – but global warming and demographic trends necessitate an unprecedented level of youth empowerment and participation to ensure preparedness against damaging impacts and to build resilience. Engagement may be driven by increased awareness, the inclusion of climate change education in curriculums at schools and universities, or by experiencing extreme weather events. Yet little is known about what factors are most significant in driving engagement of young people. Key questions in this regard are: which factors will enable massive empowerment of young people and engagement worldwide; and, how do the numerous affected young people become empowered young people who shape a climate resilient future through effective climate adaptation?

Although these questions are challenging in scope, this report aims to make an important contribution by gauging young people's<sup>36</sup> perspectives on climate change adaptation and investigating drivers of, and barriers to, their engagement. The report proceeds to (1) investigate knowledge and expectations about climate change impacts and perceptions of successful adaptation; (2) analyze factors that contribute to, or inhibit, different forms of engagement – at the community and school level, in decision-making, and in initiatives led by young people; (3) the willingness of young people to make lifestyle changes that contribute to effective climate action; and, (4) understand how extreme weather related events affect personal engagement in, and outlooks on, climate adaptation.



# APPROACH AND METHODS

To address the above questions this report uses a combination of research methods.

First, the *Global Youth Climate Adaptation Survey*, containing 34 questions, was disseminated in four languages (English, Simplified Chinese, Nepali, and Bengali) through global and regional youth networks, including but not limited to networks with an environmental focus. Unlike previous surveys, which often aimed at identifying youth attitudes toward climate change (in general)<sup>37,38</sup>, the Global Youth Climate Adaptation Survey was designed to understand whether and under which circumstances young people might become motivated to engage in adaptation action at different levels, allowing for a more targeted approach toward empowering young people in climate adaptation. Between 28 October and 22 November of 2020 4,052 responses from around the world were received (53% female and 47% male), of which 3,307 were complete and used in our analysis. It should be noted that the dissemination through youth networks may have introduced biases, including a

relatively high level of knowledge of climate change, a sampling of relatively internationally connected young people, and a relative overrepresentation of university and college students (53% attained at least a Bachelor's degree). The survey targeted young people between the ages of 13 and 35 and received 42.8% of responses from the 18-22 age group, followed by 21.3% from the 23-25 age group and 17.3% from 26-30 age categories. Since it is impossible to survey all young people, we use a random sample to estimate the population parameters and then generalize the results of the sample to the larger group. The survey was not designed to be representative at the level of countries or regions, neither are respondents from one country representative of the total population of young people in that country, nor are sets of respondents from one country comparable with another country. While the survey prevents some findings at the regional level in a comparative manner, they should be cautiously interpreted. Such limitations relate to the openness of the data-collection strategy to enable a high number of responses within a limited period

of time. The research team aimed to maximize variability among groups of young people, seeking youth responses from diverse geographical, environmental, and social settings including, urban and rural, developed and developing regions as well as young people from environmental and non-environmental backgrounds. The research team achieved this by (1) facilitating multiple survey data collection methods; and (2) additional efforts to elicit responses from a select number of countries in Africa and Asia, namely Bangladesh, Nepal, China, Ghana, Kenya, Rwanda, Myanmar and Nigeria. Regarding data collection methods, these include inputs through SurveyMonkey, and TypeForm – to optimally fit different communication channels (including mailing lists and social media) and input methods (on computers and hand-held devices). Notably, in a few selected developing countries, data was collected by field enumerators specifically to reach young people in rural areas with limited internet connectivity. Data from different channels were collated for the analysis. Regarding country specific efforts, the team focused on a select number of countries in Asia and Africa, to avoid an overrepresentation of responses from highly

developed industrialized nations – which has been a known problem in other surveys.

Second, 18 in-depth qualitative interviews were conducted focusing on young people who have recently been affected by extreme weather events, particularly the 2019 floods across the Horn of Africa region and countries struck by tropical cyclone Idai in March 2019, one of the worst on record to affect Africa and the southern hemisphere. These interviews were held to understand how extreme weather-related events affected personal engagement and outlooks on climate adaptation. Although interviews are very personalized accounts, natural language processing techniques were used to identify general patterns in experience and responses, constructing *archetypical personae* in responses to climate change impacts and climate adaptation action. This method also helps to provide a more illustrative account of youth action and resilience in facing climate change impacts, particularly in Africa.

For details on our survey and qualitative methods, see Annex II and III.



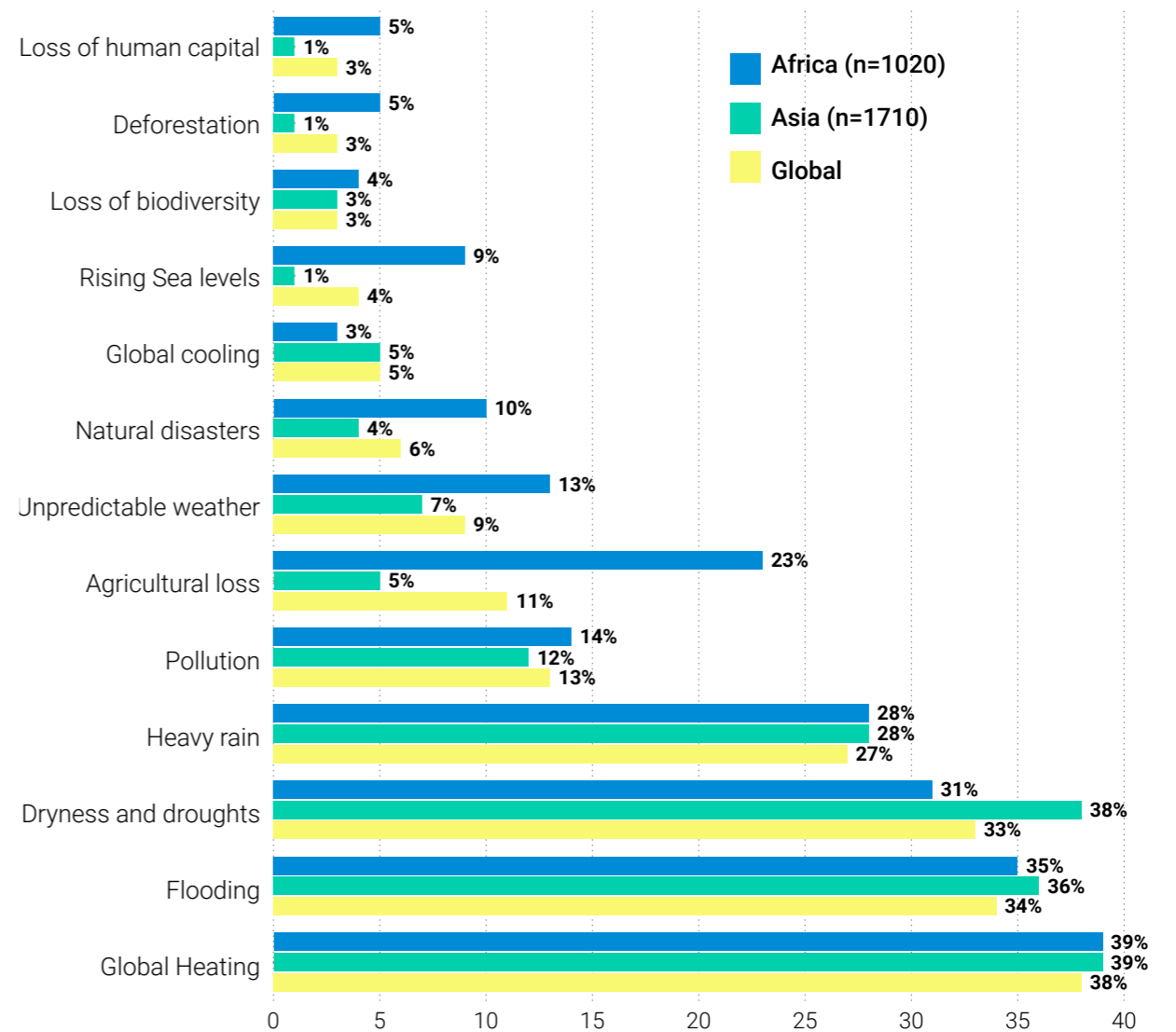
# SURVEY FINDINGS

## Knowledge and expectations about climate change impacts and successful adaptation

Knowledge of climate change impacts and perceptions of urgency are likely to affect views of what successful adaptation might entail. Respondents worldwide indicate global heating (39 percent), flooding (35 percent), dryness and droughts (30 percent), and heavy rains (28 percent) as the most urgent impacts. However, regional variations exist.

For instance, surveyed young people in Africa more frequently mention agricultural loss (23 percent), unpredictable weather (13 percent), natural disasters<sup>39</sup> (10 percent), and rising sea levels (8 percent); while respondents from Asia are more likely to mention dryness and droughts (38 percent).

Figure 1: What do you believe are the most urgent climate change impacts in your region?

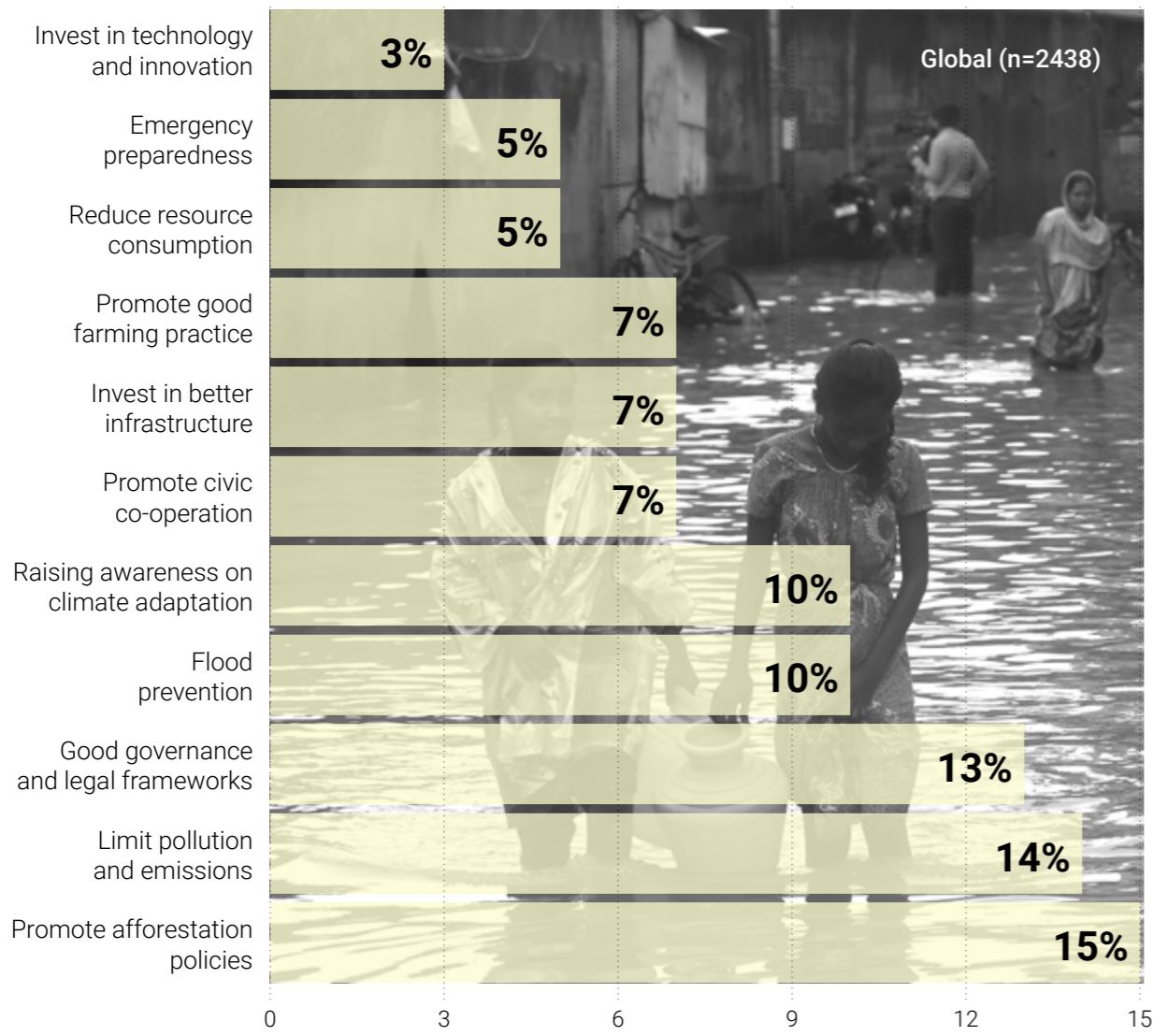


Comments often included multiple themes so the percentages do not always add up to 100 percent

Perceived urgency of climate change impacts is often interrelated, so a cluster analysis was conducted. Young people who mentioned *rising sea levels* were more likely to mention *flooding*. Additionally, *dryness and droughts, heavy rain, unpredictable weather, agricultural loss, and global heating* were often mentioned together. As surveys of this scale rarely have such a high level of consensus, it can be deduced that a majority of surveyed young people were familiar with the concept of climate change and its potential impacts. This could be due to a bias towards respondents from youth environment networks.

Analysis of the open-ended responses revealed that perceptions of successful adaptation varied greatly across the globe. Despite a lack of consensus, three themes were most frequently mentioned, namely: *promoting afforestation policies* (15 percent); *limiting pollution and emissions* (14 percent); and *good governance and legal frameworks* (13 percent). While remaining themes accounted for less than 10 percent of responses, particularly worth mentioning are *reducing resource consumption, awareness raising* and *flood prevention*.

**Figure 2:** Can you describe what successful adaptation to climate change impacts in your community/country might look like?



Comments often included multiple themes so the percentages do not always add up to 100 percent

A cluster analysis reveals three major clustered themes that relate to distinct perspectives of successful adaptation. The first cluster includes a combination of *afforestation policies, limiting pollution and emissions* and *promotion of good farming practices*. For example, a male respondent from China refers to “[the] South–North Water Transfer Project, returning farmland to forests, returning farmland to lakes, building dams” as particularly important government policies. The second cluster includes *flood prevention, investment in better infrastructure, emergency preparedness* and *promoting good farming practices*. For example, a female respondent from South Africa highlights damages caused by floods and how infrastructure adjustments are necessary: “[We] must use scarce water resources more efficiently. [Adopt] building codes to future climate conditions and extreme weather events. [Build] flood defenses and raise the levels of dykes. [Develop] drought-tolerant crops. Choose tree species and forestry practices less vulnerable to storms and fires and set aside land corridors to help species migrate.” The final cluster includes *good governance and legal frameworks* and *promoting civic co-operation*; or *good governance and legal frameworks* and *invest in technology and innovation*. For example, a female respondent from Sri Lanka pointed out the need for government and civil society collaborations: “There should be a preparedness plan for vulnerable communities on how to respond when climate hazard occurs. Identifying vulnerable communities, avoiding risks, mitigating risks and adapting to risks is essential. Risk-reduction tools like insurance schemes can be used to protect vulnerable communities from climate change issues. It is important to formulate proper government procedures to integrate information systems and decision-making processes.”

**Factors that contribute to or inhibit engagement**

Young people engagement was measured through four types of activities: contributions to risk preparedness at the community level (e.g., at schools, in families and local communities); interactions with local and national policy-makers, participation in national-level decision-making; and participation

or taking a leadership role in climate adaptation initiatives (beyond decision-making processes and communities).

Overall, the level of engagement in community-level responses to, and preparations for, climate-induced events was relatively high among respondents (60%), which likely relates to a bias towards relatively interested and engaged respondents from youth networks. However, even within this relatively engaged group, participation in national and local-level decision-making and policy development was much lower (15% of respondents). The results also found significant regional differences, with engagement in policy and decision-making comparatively low among respondents from Asia and among females. Surveyed young people in Africa and Asia showed higher participation at the local level whereas in Europe and North America young people were more likely to participate at the national level. Slight variation exists between engagement of male and female young people in Asia and Africa (1.4 times). However, male youth in Europe and North America are 2-3 times more likely to make a policy intervention than females. It must be noted that educational levels also impact participation at different policy levels with more educated young people more likely to participate in policy-making. For young people in Africa, the level of engagement in community-level responses to, and preparations for, climate-induced events were relatively high among respondents (79%). However, less than half of the respondents (44%) indicated that they participated in national-level decision-making. Meanwhile, just over half of the respondents (52%) indicated that they participated or took a leadership role in climate adaptation initiatives.

To further analyze factors, an ordinal logistic regression model was used to predict the likelihood of all types of engagement (see Annex II). This analysis finds that knowledge of climate change impacts, personal experience with extreme weather events, and participation in global youth networks are among the most significant factors. Although level of education did not affect the likelihood of contributing to risk preparedness at the community-level, a higher level of education is associated with participation in national-level decision-making (1.2 times as likely),

interactions with local and national policy makers (1.4 times), and participation or taking a leadership role in climate adaptation initiatives (1.4 times), compared to young people with a lower level of education.

Personal experiences with extreme climate events appear to be an important factor. Young people who have experienced disruption to schooling due to extreme weather conditions are more likely to be engaged in community-level preparations (1.3 times); interactions with local and national policy makers (1.2 times); participation in national-level decision-making (1.3 times); and participation or leadership role in climate adaptation initiatives (1.3 times). Similarly, young people who have personally lived through the consequences of an extreme weather event – such as food insecurity show more engagement at around 1.4 times depending on the type of engagement. Respondents who belong to a global youth network are twice as likely to interact with local and national policy makers

and to participate and take on leadership roles in climate adaptation initiatives. Similarly, within Africa, young people belonging to a global youth network, despite being a small subgroup, were twice as likely to contribute to risk preparedness at the community level; thrice as likely to interact with local and national policy makers; and three times more likely to participate or lead in climate adaptation initiatives.

Among respondents who did not participate in climate adaptation activities at the community level, key factors for non-engagement include less or no experience of (a particular) climate change impacts (31%) and a lack of material and financial resources (27%) (See Figure 3). Factors that inhibit participation in national-level policy-making and interactions with policy-makers, however, are different with the most frequently cited reason being the absence of invitations to engage, suggesting that – when asked – many young respondents would choose to participate.

**Figure 3:** If you have not participated in the following activities, can you explain why?



**Willingness to change lifestyle**

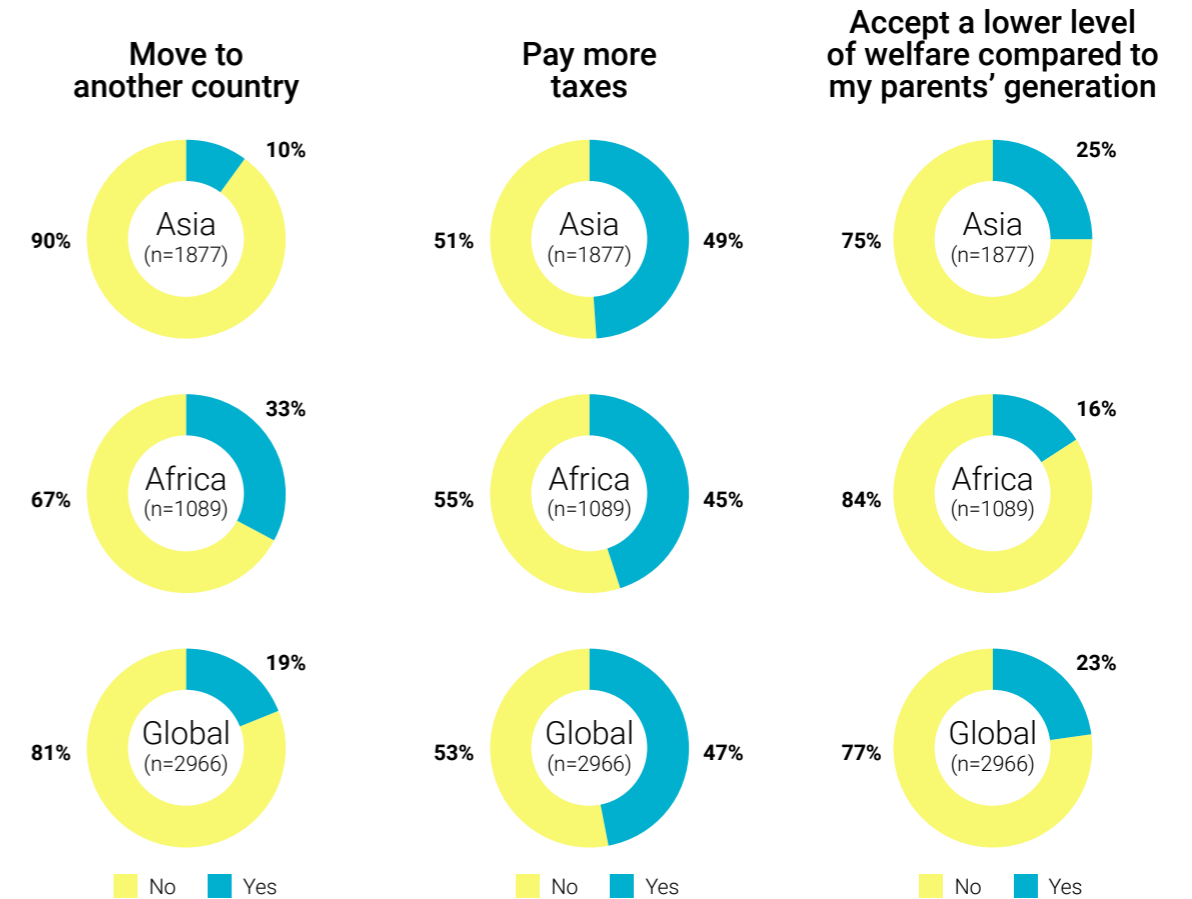
Survey responses indicated variations in willingness to make lifestyle changes in order to adapt to climate change impacts (Figure 4). Overall, less than a quarter of respondents were willing to move to another country (19%) or to accept a lower level of welfare compared to their parents' generation (23%). A Pearson's chi-squared test of independence revealed that there was a significant association between the region of origin of respondents and their willingness to move to another country or to accept a lower level of welfare compared to their parent's generation. Young people in Africa are five times more willing to move to another country than young people in Asia; and young people in Asia are 1.6-times more willing to accept a lower level of welfare compared to the average of the sample. Although the consensus on the willingness of young people to pay more taxes was mixed --just under half of the respondents (47%) indicated they are willing to pay more taxes-- regional

differences were found to be significant. A Pearson's chi-squared test of independence showed that young people in Asia is 1.2 times more likely to pay more taxes than young people in Africa.

Incidentally, the survey found that, globally, 23% respondents are willing to change their jobs. However, a Pearson's chi-squared test of independence showed no significant association at the regional level.

To further estimate the willingness of youth to change lifestyles, a binary logistic regression model was developed (see Annex II). However, the models failed to provide statistically significant results ( $R^2 < 0.09$  and Hosmer and Lemeshow test;  $p > 0.1$ ) probably due to the difficulties of generalizing willingness of young people to change their lifestyles across the different regions of the world. Therefore, a deeper look at young people in Africa is presented in the next section.

**Figure 4:** Are you willing to change your lifestyle to adapt to climate change impacts?



### Perspectives from Africa

The African continent is particularly susceptible to climate-related disasters, although it accounts for less than 4 percent of the world's global emissions<sup>40</sup>. Extreme weather events such as Cyclone Idai and worst-in-century floods in East Africa are making adaptation action more urgent. The devastation caused by Cyclone Idai and subsequent floods during 2019 resulted in huge loss of lives and assets, as well as displacement, with Mozambique being the worst affected. More than 600 people were killed and an estimated 1,600 injured. Overall, more than 1.8 million people were affected by the cyclone, which also caused an estimated US\$ 773 million in damages to buildings, infrastructure and agriculture<sup>41</sup>. In the Horn of Africa region, over 2.8 million people were affected from the 2019 flood season leaving Ethiopia, Somalia, Sudan and South Sudan with an estimated financial need of 228 million USD<sup>42</sup>. Eighteen interviews were conducted with a view to understanding the impact of such extreme weather

events on local youth and their role in strengthening the resilience of their communities. Young people across Southern Africa (Mozambique, Madagascar, Zimbabwe and Malawi) as well as the Horn of Africa (Somalia, Ethiopia, Sudan, and South Sudan) who closely experienced Cyclone Idai and floods respectively were interviewed in November 2020.

Interviewees were approached through an open call via regional youth networks, and selected based on their on-the-ground experiences as well as willingness to share their personal stories. Contrary to the previous survey, we held interviews with young people aged between 23 to 35 years, with most of them being undergraduates, and often based in rural areas.<sup>43</sup> The male to female ratio among respondents was almost 50%. The interviews were guided by the following five-topic framework which was designed to help reveal a distinct set of engagement patterns:

- **Memory of the event:** Highlight the interviewee's memory of what happened, how they were directly and indirectly affected.
- **General reflection of the event:** From the interviewee's responses, highlight the lessons learnt from the event, what went well, what were the challenges.
- **Personal engagement:** From the interviewee's responses, highlight the interviewee's engagement/response/actions during the event.
- **Young people's engagement:** From the interviewee's responses, highlight how young people acted during the event, as well as the role of young people during such extreme weather events.
- **Looking into the future:** What are the interviewee's expectation for future events, what role does the interviewee see for themselves, and what are their key messages to stakeholders and their peers?

Using natural language processing techniques, the responses were deconstructed down to the sentence level and clustered based on semantic similarity. From there themes emerged based on a review of word representations within each cluster. For example, "underestimate," "early," "alert,"

"warn," "surprise," "shock," and "unexpected" all imply people were taken by surprise by an extreme weather event. Repeating this analysis for each cluster ultimately informed the personae presented in the rest of the report.

### Memory of the Event

The devastation wreaked by Cyclone Idai in early March of 2019 and extreme floods in the Horn of Africa were clearly on the mind of all the interviewees. Their memory of these events triggered discussions around the need for better agricultural practices, food insecurity, and significant economic loss suffered by their community and their country.

***"At the end of the day, I had nothing, I did not harvest because of the floods, my crops were washed away."***

Alinafe Nazombe, 25, Malawi

***"The flood does not just affect the river, it also affects the economy. It blocked all the roads and prevented us from getting goods which we are supposed to be getting from other states."***

Buonkuoth Jundi, 28, South Sudan



This was closely followed by a reflection on the unpredictable nature of the event and the lack of emergency preparedness or early alert systems.



***"The cyclone affected us in so many ways. Firstly, it caught us off guard. We didn't know that it was coming. We were not even prepared. No one was prepared. So when it came, at first, it was more like a joke. It was more like... 'maybe this is just an ordinary rain, maybe it is just going to rain and the rain will go away.' Not knowing that the rain is coming to destroy everything. The rain is coming to take some of our colleagues. The rain is going to destroy the vegetation, the buildings, infrastructure... basically everything."***

Lucia Gulugulu, 35, Zimbabwe

***"I was even alerted by the authorities, but something like that was not expected."***

Dr. Wilker Dias, 25, Mozambique



A couple of the interviewees who were students recalled disruptions to their studies because of blocked access to schools or the need to return home to support family.



***"It affected my education because I couldn't go to school with all the necessary resources, [my parents] had to cut my budget for school, to help my siblings."***

Chimwemwe Banda, 23, Malawi

***"My home is destroyed, my family and I are currently living with some friends outdoors: we managed to build some tents since we don't have enough money to rebuild the destroyed houses. The government did not support us financially, they came and saw the effects of the disaster but did not take action... all schools were closed for a lot of kids and young people, because the schools were used to gather the population who were affected by the cyclone."***

Ousmane Laminou, 28, Nigeria

**General reflection on the events**

After Cyclone Idai a few developments were well-received, including increased collaboration in communities that led to new emergency preparedness initiatives. Collaborations with the government also played a role, albeit reactions were mixed. In addition, initiatives emerged to plant more trees in order to mitigate the effects of unexpected flooding.

***"The good things which happened were the help that people, the community, the government and different institutions provided to these affected people."***

Chimwemwe Banda, 23, Malawi

***"For the first time, I can see people talking and discussing the environment in depth. Before we heard only that we must protect the environment because it is important for everyone in Mozambique and in the world. Now people talk about it as if their lives depend on it."***

Mirana Njakatiana, 27, Madagascar

Good governance, transparency and support from the international community also played an important role. However, interviewees highlighted that it was not always transparent how aid was allocated.



***"Foreign governments gave us a generous offer and this is something that I really appreciate, especially the assistance that we got from neighboring countries."***

Elizabeth Gulugulu, 30, Zimbabwe

***"The international community and the local government don't trust young people because of the corruption issues in my country. They think that young people should not be prioritized in taking responsibility for anything. Although we need a lot of things to solve this issue, I think concrete reports, documentation, and action plans might also solve this part of the trust issue between the government and young people."***

Nisreen Elsaïm, 26, Sudan

Interviewees felt that adapting to better agricultural practices in light of climate uncertainty and flooding is essential to build resilience. Having access to resilient infrastructure was also brought up in comments about broken waterways, destroyed roads, and the need for proper sanitation.

***"Due to cultural norms in different places, people are still planting the old crops or the old vegetation that they always do. For example, they might plant onions in a flooding period and basically all of their plants will be decimated by the floods."***

Jodhani Petros, 23, Ethiopia



***"The main income of Somali people is mostly livestock or agriculture. They have a challenge to practice fishing—they have a lot of coastal area, but they don't practice it and they don't know how to start it. They mostly don't like to use or eat fish. Somali people depend on agriculture and extreme weather events caused by climate change is impacting farmers, especially those who have small farms."***

Amir Mohamed Amir, 25, Somalia

**Personal engagement**

In the aftermath of Cyclone Idai, several interviewees focused on helping people relocate to safer locations and to help reconstruction efforts.

***"One of the campaigns that I was leading by the time that Cyclone Idai happened was a national solidarity campaign to support internally displaced persons in one of the provinces in the north that is being attacked by terrorists, and what I did was to collect donations."***

Cidia Chissungu, 24, Mozambique



***"We have also been monitoring what climate change actions are. Knowing that Cyclone Idai left many families homeless, we are now working with the Municipal Council of Beira and architects to at least ensure that buildings today, after Idai, are more resilient constructions. We are also identifying safe places to facilitate the evacuation of people living around risky areas to be able to resettle in safer places."***

Jossias Sixpence, 35, Mozambique

One of the most common ways the interviewees became involved was to take up one or more civic responsibilities around climate adaptation activities through volunteering, awareness building, charitable campaigns, and creating and disseminating content via social media platforms. The central theme in all of this is to build up knowledge and capacity to prepare for future extreme weather events.

**“Personally, I found that most of our schools where our youth and our children are raised don’t even have plans or environmental education programs. They do not even know what climate change is! Hence, I sent a proposal to the Directorate of Environment for climate change to be taught in schools.”**

Hassan Mowlid Yasin, 28, Somalia



**“That’s why I have a YouTube channel! I mean, people are much more interested in entertainment, rather than other non-interactive forms of education. So, for me, the goal is to reach people who like entertainment and use that medium to educate them.”**

Jodhani Petros, 23, Ethiopia

**Young people’s engagement**

The most common form of youth engagement the interviewees witnessed was the promotion of civic collaborations and awareness building. Many of these activities are grassroots efforts, using social media, and also reflect a desire to engage in a fun manner. In such cases, government involvement can sometimes feel like an unnecessary barrier unless funding is required. Rallying around a cause and growing a movement before reaching out to government or foreign aid was perceived as more effective.

**“The first thing is supporting the seniors to move uphill to a safe place, which is not affected by floods. Another thing is there are essential materials which need to be moved from the affected area. Young people distributed the support for foods, etc., which is really a critical role”**

Yared Abera, 26, Ethiopia



**“Young people really played an active role in this, most of them supported through advocacy on behalf of the affected people and the community level to voice the issue of climate action. They took it to social media and posted pictures about the flooded area.”**

Joan Bazilika, 25, South Sudan

**“Youths are normally doing things practically. Older people help in terms of decision-making, but when it comes to action, youth are the best.”**

Buonkuoth Jundi, 28, South Sudan

**Looking into the future**

Many of the interviewees also mentioned the importance of collaborative professional networks, and the need for young peoples’ voices to be represented at the table when discussing issues such as climate policies and national initiatives.

**“There needs to be a proper network and training on adaptation, but that training needs to go even beyond those [climate activists]. The training or networks should be able to bring in scientists, innovators, engineers, lawyers, marketers, doctors, and so many other fields to work together.”**

Jodhani Petros, 23, Ethiopia

**“We need to give jobs to young people, we [youth organizations] should have partnerships with professional training institutes on climate adaptation. For example, one of the things that makes me so proud is we managed to create a link between vocational training centers with young people.”**

Jossias Sixpence, 35, Mozambique

**“Most of the time youth are tokenized. They will just invite us to meetings because they feel like, well, we need to invite them. But after that, what happens next? How are youth included in the design of government action plans on climate adaptation? What are they expected to do? If we know what young people are expected to do, it will also be easy to channel some sort of finance or resources to them, so that it makes their job easier. So, it all begins with meaningful youth engagement.”**

Elizabeth Gulugulu, 30, Zimbabwe

**Additional themes**

Some interviewees mentioned the impact on mental health, especially those who witnessed or were directly affected by Cyclone Idai.

**“I tried to reach her but she’s not available: She can only use text and I didn’t have data bundles to respond to her messages. So, I feel like in as much as there was not a direct victim, my sister was a victim and it affected me psychologically. I was really stressed, we spent two days without hearing from her and the way she described her last message when she told me that ‘people are climbing trees, there’s a lot of rain’ that I think it could be a cyclone.”**

Elizabeth Gulugulu, 30, Zimbabwe

*"In terms of actions on Cyclone Idai, I have been involved in several campaigns that so far I have been doing. An example is the monitoring of the families that were greatly affected by Cyclone Idai, also to mobilize actions for advice or to give some psychological support to the families, because there were individuals who lost their lives, there were disadvantaged families who became homeless, and even in this the moment that we are talking, we follow up on families donating building materials, donating clothes, and we have managed through various partners from Portugal and other countries to donate to these needy families"*

Jossias Sixpence, 35, Mozambique



*"Cyclone Idai was very stressful, emotionally, it was very disturbing. But I highlight healthcare because we (nurses) just had to be bold, we just had to be brave and do our duties so that it would save those who were injured and also all those psychologically affected from broken homes. A lot of people were taken away with the water. A lot of property was lost: houses, cars, you name it. So, a lot of people are in despair, even up to now, not everyone has regained what they had before the cyclone. A lot of people are still trying to survive. Now, it is all about survival rather than living."*

Lucia Gulugulu, 35, Zimbabwe

**Personae**

Personae research is a method of identifying different types of people based on their background, behaviour and work life/lifestyle needs, challenges and opportunities (for details on the method, see Annex III). We analyzed the interviews with 18 young people across Africa to understand their personal experiences from the effects of extreme weather events and actions they took toward climate adaptation. By identifying themes across all the interviews and analyzing their relationship between the themes using a method of cluster analysis, we were able to summarize the results into three distinct types of young people who are actively engaged with climate adaptation activities<sup>44</sup>.

Overall, the interviewees shared similar memories about the devastating impacts of Cyclone Idai or flooding and conclusions about what the future looks like for young people engagement in climate adaptation, so three personae emerged from the analysis.



**Tech-savvy Mobilizers**

The African youths in this group realize the impact of social media activities in building awareness around climate adaptation efforts. For them, social media is about community mobilization, generating support (financial and volunteerism ), and urging policy-makers to act.

The digital voice of youth could be a source of rich insight on where the current conversations on climate adaptation is moving.



**Bridge Builders**

Young professionals in Africa who are working in public agencies, regional NGOs, or are involved in the youth climate movement appear to have the most experience with working across different institutions.

Their experiences create an opportunity to connect local and national policies with student initiatives and community programs. This could also help build trust and transparency around funded climate adaptation initiatives.



**Community Champions**

Young people who were closely or personally affected by the destruction brought by Cyclone Idai or extreme floods demonstrated leadership and took on new responsibilities such as setting up local initiatives to recover from the shocks and building resilience toward future extreme weather events. Often, these initiatives are grassroots-driven, with limited resources and a lot of personal commitment.

They could be ideal partners to ensure that national climate adaptation programs are effectively disseminated and meet local needs.





*"So I feel like this is a wake-up call to give a warning to the policy-makers who do not want to put their adaptation policies into action."*

Jundi Bounkunth, 28, South Sudan.

## CONCLUSION

Over 3,000 complete responses from young people were captured through the *Global Youth Climate Adaptation Survey*, along with interviews of 18 young Africans about their climate adaptation experiences during extreme events.

Surveyed young people have a relatively sound understanding of climate change. When asked about climate change adaptation, young people often mention both measures related to climate change adaptation and mitigation, for instance afforestation efforts or limiting the use of resources. This may be due to a limited understanding of

adaptation and mitigation as distinct action areas but may also reflect an understanding of interconnectedness and significance of both adaptation and mitigation. Young people generally associate successful adaptation with good governance, for instance the use of participatory approaches and collaboration between communities, civil society and governments. Increased exposure to climate change events and local knowledge within communities enhance learning and encourage young people to build greater resilience and to involve themselves in youth-based initiatives and networks. Personal experiences with climate change impacts, for instance reduced accessibility to schools due to

weather events, affect youth engagement. Knowledge on climate change and education are strongly related to participation at the national level and interactions with policymakers. Higher education is more often associated with participation in, and leadership of, adaptation initiatives. By contrast, lower levels of education are often related with lower levels of engagement. Therefore, targeted school educational programs and integration of climate adaptation as a topic in school curriculums could positively affect engagement by young people. We also find significant regional differences in young people's engagement. In our sample, young people in Asia and Africa are more likely to actively engage

in action at the community level, while young people in European and North American are more likely to engage in policy decision-making. Young people in Africa who are part of global youth networks are more likely to engage at the community level, interact with local and national policy makers and lead climate adaptation initiatives. Differences in engagement across genders were not significant among young people in Asia and Africa. In Europe and North America, however, men engaged more often than women in policymaking.

Engagement in youth networks emboldens young people to take action at different levels of governance. By contrast, infrequent invitations for youth to engage can be considered an important stumbling block to their engagement. Moreover, even if such engagement is welcomed by policy-makers, engagement should not be limited to allowing for youth to voice their opinions, but also to allow them to have real influence over policy outcomes.

Young people have emerged not only as proactive leaders during disasters, but also as enablers of knowledge building and preparedness as recognized by the Sendai Framework for Disaster Risk Reduction<sup>45</sup>. Rather than primarily considering themselves as a vulnerable group, youth demonstrate enormous resilience during extreme weather events, for instance by helping in rehabilitation, relocation, and reconstruction efforts. Experience of climate change impacts have instilled a sense of responsibility, especially at the community level.

Young people are willing to contribute to more effective adaptation, rather than paying the much steeper price of uncontrolled climate change impacts. For instance, many young people are willing to

economically support adaptation schemes through paying higher taxes, and accepting a lower level of welfare to ensure effective adaptation. However, such choices seem unfair, and may amount to a shifting of responsibilities by older generations. Adaptation action should incorporate measures that improve general well-being of the population rather than compromising welfare. The willingness to invest in adaptation may further increase when youth grow more aware of the so-called 'triple dividend' of adaptation action: the reduction of damages due to climate change impacts, the creation of jobs, and economic and ecological benefits. Indeed, the strong willingness of young people is already apparent, they step up to make important societal contributions through volunteering, tree planting, advocacy, knowledge dissemination and awareness through social media and in local communities. Such efforts do not stand alone, interviewees pointed out the importance of partnerships among communities, with governments and other stakeholders. While young people are enthusiastic and forthcoming to participate in processes that shape their present and future, it is necessary to also acknowledge that they are among the least responsible for the current climate crisis. Young people's engagement and their willingness to act should not take away from the responsibility of stakeholders with more political and economic capital to influence policies in favor of youth in the present and future. Through interviews with young professionals and young people at an early stage in their career, we identified archetypical personae that highlight their different roles and strengths that can help strengthen adaptation responses across Africa. These include social media savviness, a drive to connect and collaborate and show leadership in the face of local climate change impacts. These characteristics have enormous potential to strengthen and reinvigorate resilience building and adaptation efforts.

At the same time, young people also face limits that are hard to overcome. Young people in vulnerable communities risk becoming trapped in a vicious cycle of poverty and worsening climate change impacts, which make it extremely difficult to - for instance - take up alternative livelihoods. This is

one major reason why migration emerges as a significant coping strategy, particularly among young people in Africa.

Knowledge about drivers of engagement by young people should inform effective policies that help more them from being affected by climate change to becoming empowered as builders of a resilient future. Young people need to be engaged in decision-making in more than a tokenistic manner, allowing them to make demands, for example on education, job creation, youth-led adaptation solutions, health and well-being. Successful adaptation responds to different climate impacts and needs to be sensitive to differing conditions across geographies and segments of society. Young people as current and future leaders with considerable understanding of climate change impacts are capable of bringing these distinct conditions and nuances to the table.

The survey presented in this study makes an important first step in understanding factors of engagement but does not provide granular comparisons between across countries and regions and within countries. Moreover, although interviews in this study point to the importance for young people to overcome mental and physical stress before they become champions of climate adaptation action, the current study does not investigate this in further detail. Future research should therefore focus on catalyzing and enabling youth led action across different regional and cultural contexts, but also look at potential drivers and barriers at the individual level. Critical questions need to be asked about, for instance, the cultural and economic factors that limit adaptive capacity; mental and physical health as a factor in young people's engagement; as well as normative questions, such as whether young people can be asked to take up new livelihoods and leave behind activities that their communities have historically depended on.

Consequently, research and policy should also focus on understanding mental and physical health as a factor in youth engagement and in enabling youth to become champions of a climate-resilient future.

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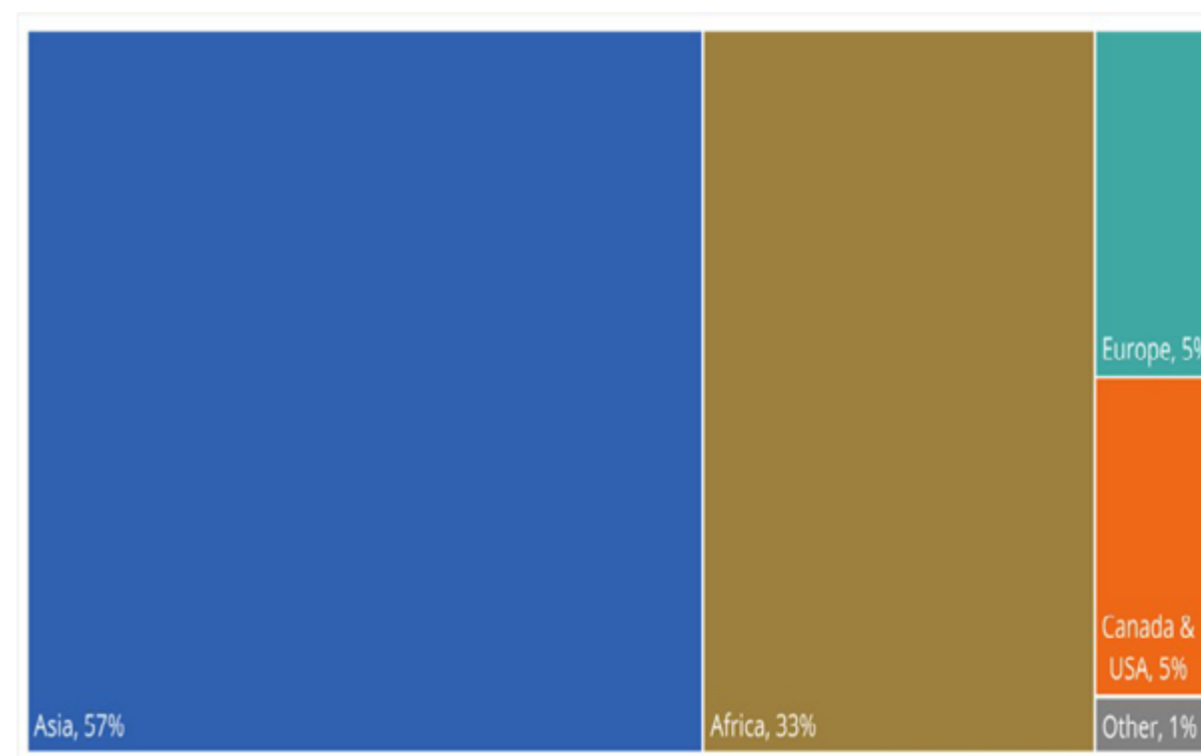
# ANNEX

## I. SELECTION OF SURVEY RESPONSES

The Global Youth Climate Adaptation Survey, containing 34 questions, was disseminated in four languages (English, Simplified Chinese, Nepali, and Bengali), through global and regional youth networks, including but not limited to networks with an environmental focus. Between 28 October and 22 November, 4,052 completed responses from around the world were received (53 percent female and 47 percent male), of which 3,307 were complete and used in our analysis. In checking the quality of the response data, the following steps were taken:

1. Responses that took less than 2.5 minutes to complete were removed.
2. Responses that had incomplete mandatory questions were removed.
3. Responses with missing socio-demographic information such as region, country, and country were removed.

Furthermore, it is important to note that cultural and legal restrictions prevented some survey choices from being shown in Bangladesh, China, and Rwanda. In Bangladesh, questions on LGBT identity were removed. In China, questions around participation in protests and demonstrations were removed. In Rwanda questions on minority status were removed.



## II. ANNEX FOR ORDINAL REGRESSION MODEL: MODEL OUTPUT

Ordinal regression is used to predict the probability of the ordered category of dependent variable using a list of predictor variables. The advantage of using this model is that it does not assume spacing between the dependent variable, it uses only rank ordering of dependent variable's responses (Harrell, F. E. (2017). Regression modeling strategies. BIOS, 330, 2018). Thus, in current study where dependent variables have 3 levels of ordered responses ("No, not at all", "Somewhat/sometimes" and "Yes, very actively") ordinal regression becomes an appropriate method to identify the factors contributing variation in the dependent variable. The model fit test: omnibus test is a likelihood-ratio chi-square test of the full model versus the null model, which is used as model fit indicator (Omnibus test. (n.d.). IBM Knowledge Center. Retrieved December 5, 2020, from [https://www.ibm.com/support/knowledgecenter/SSLVMB\\_23.0.0/spss/tutorials/genlin\\_ships\\_omnibus.html](https://www.ibm.com/support/knowledgecenter/SSLVMB_23.0.0/spss/tutorials/genlin_ships_omnibus.html)).

**Omnibus Test**

	Likelihood Ratio Chi-Square	df	Sig.
Help community prepare against Climate events	349.090	26	0.000
Talk to policy makers	344.251	26	0.000
Participate in National Action Plan	316.806	26	0.000
Participate/lead climate projects	462.936	26	0.000

Parameter	Help community prepare against Climate events	Talk to policy makers	Participate in National Action Plan	Participate/lead climate projects
	Exponentiation of the B coefficient (Odds ratio)			
Threshold [No, not at all=2.00] [Don't know/not answerable=3.00]	14.8**	12.4**	15.5**	18.7**
	127.4**	62.4**	75.0**	116.9**
Africa	6.0**	1.4	2.4	2.0
Asia	6.0**	1.4	1.7	1.2
Europe	3.3*	2.5	3.3	2.4
North America	3.8*	2.3	4.1*	3.2*
Male	1.2*	1.3**	1.3**	1.1
Climate impacts	1.7**	1.2	1.4	1.3
Asset damage	1.4**	1.0	0.9	0.9
Food insecurity	1.3**	1.5**	1.4**	1.4**
Lost access to school	1.3**	1.2*	1.2*	1.3**
Lost access to job	1.1	1.2*	1.3**	1.1
Mental health problems	1.3**	0.9	1.1	0.9
Forced migration	1.3*	1.2	0.8	1.0
Willing to move to another country	1.3**	1.1	1.0	1.1
Willing to change job	0.8	0.6**	0.6**	0.7**
Belong to LGBTQ community	1.1	1.3	1.4*	1.3
Belong to lower income group	0.8*	1.1	1.0	1.1
Belong to middle class	0.8	0.8*	0.7*	1.2**
Connected to global youth network	1.7**	2.0**	1.3**	2.2**
Activist	1.2*	1.2*	1.1	1.3**
Government representative	1.5*	1.1	1.4	1.4
Researcher	1.0	0.8	1.2	1.2*
Student	0.8	0.5*	0.6**	0.6**
Negative impact of C.C.	1.1*	1.0	1.0	1.0
Knowledge about C.C. impacts	1.2**	1.2**	1.1**	1.2**
Age	0.9	0.8**	0.8**	0.8**
Education	0.9	1.3**	1.2**	1.3**

\*\* Significant at 1%, \* Significant at 5%

**Binary Logit Regression Model Output**

### Binary logit regression:

The binary logistic regression analysis may be considered as an approach that is similar to that of multiple linear regression. It is used when a dependent variable is dichotomous. The model estimates the probability of occurrence of a particular event, which is known as "Odds ratio". The -2 log likelihood model is a measure of "variance explained" (Tranmer, M., & Elliot, M. (2008). Binary logistic regression. Cathie Marsh for census and survey research, paper, 20.). Hosmer and Lemeshow test compares -2 log likelihood of null and full model to evaluate the goodness-of-fit of model. Regression coefficient R<sup>2</sup>, was also used to understand the quantum of variability explained by the model. Nagelkerke R<sup>2</sup> was used to interpret the model instead of Cox and Snel's R<sup>2</sup> due to its limitation "that even for a perfect model this statistics never reaches its theoretical maximum of 1." (Field, A. (2013). Discovering statistics using IBM SPSS statistics. sage.)

The binary logistic regression model was developed to gauge the willingness to change lifestyle to adapt to impacts of climate change. The current model fit indicators draw poor results (R<sup>2</sup> < 0.09 and Hosmer and Lemeshow test; p > 0.1) probably due to the difficulties of generalizing youth willingness to change their lifestyles across the different regions of the world. Hence, robustness of the results remains ambiguous. However, despite this limitation, the models are described in detail to explore the suitability of binary logit models in similar study and provide reference points for further research.

This analysis demonstrates that youth who experienced loss of assets, food shortages and inaccessibility to schools are more willing to pay higher taxes and also more willing to move to another country. On the other hand, individuals with less knowledge on climate change and its impacts, are less willing to accept higher taxes, migrate, or to accept a lower level of welfare compared to their parents' generation. Moreover, the analysis also showed that youth belonging to the middle class and lower income groups were willing to change their jobs.

Willingness to	Model Summary		
	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
Pay more taxes	4271.165	.062	.082
accept lower level of welfare	3218.728	.053	.081
Change job	3336.658	.026	.040
Move to another country	2992.937	.047	.076

Willingness to	Hosmer and Lemeshow Test		
	Chi-square	df	Sig.
Pay more taxes	12.632	0	.125
accept lower level of welfare	11.430	8	.179
Change job	11.617	8	.169
Move to another country	11.010	8	.201

Willingness to	Pay more taxes	accept lower level of welfare	Change job	Move to another country
	Exponentiation of the B coefficient (Odds ratio)			
Negative impact of CC	0.7**	0.8*	1.1	.9
Knowledge about CC impacts	0.7**	0.8**	.9	1.1**
Male	.8	1.1	.8	1.1
Climate impacts	1.1	.6	1.4	1.1
Asset damage	1.3**	1.1	1.3*	1.1
Food insecurity	1.3**	1.6**	.9	1.3*
Lost access to school	1.2*	1.6**	1.0	1.6**
Lost access to job	.8	1.2	1.91**	1.3*
Mental health	1.4**	1.3**	1.2	.9
Belong to LGBTQ	1.2	.9	1.0	1.8*
Belong to lower education group	.9	1.6**	0.6**	1.3
Belong to lower income group	.8	.8	1.5**	1.6**
Belong to middle class	1.1	1.1	1.3*	2.1**
Connected to global youth network	1.3*	.9	1.1	1.3*
Constant	3.9**	3.0**	1.4	0.2**

\*\* Significant at 1%, \* Significant at 5%

### III. QUALITATIVE METHODS

#### Perspectives from Africa

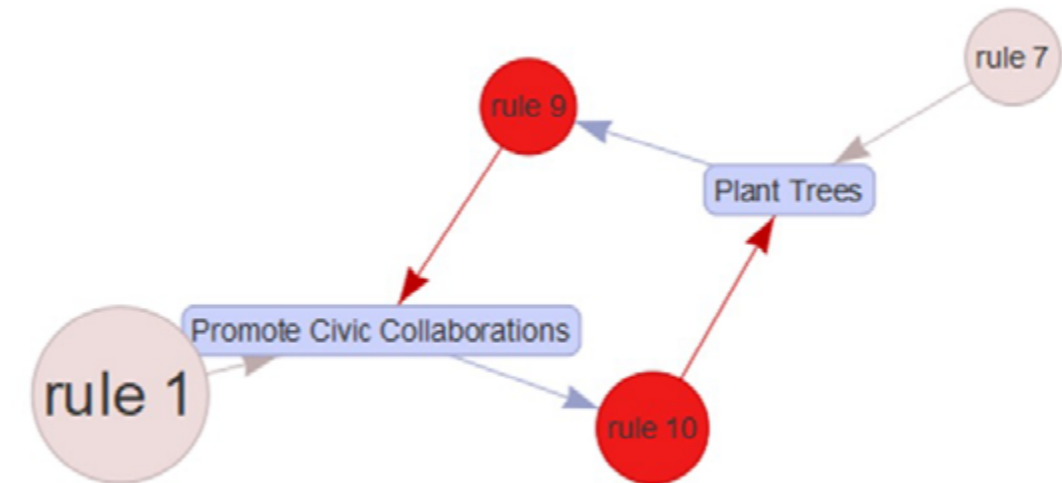
Every participant provided verbal and written consent to have their interviews recorded and published. The audio recordings were transcribed by research assistants at GCA. Once transcribed, the responses from each interview were deconstructed into individual sentences/complete thoughts and categorized into the five-question framework. From the 18 interviews that were analyzed, this ultimately generated 1,093 sentences/complete thoughts. The following steps were then taken:

1. We applied topic modeling techniques to identify and tag each sentence/complete thought with one or more themes. For example, if sentences contain the phrases “youth movement”, “civil effort”, “youth mobility”, “people collaborate”, or “local community” it was tagged as “promote civic collaborations”
2. For each participant, their socio-demographic information/personality traits such as age, gender, nationality, occupation and level of education were compiled together. These provided the foundation to identify personas.
3. Then we cross-tabulated the five (5) personality traits against all twenty-one (21) tagged themes to generate a 5 by 21 matrix for cluster analysis.

id	comments	comment_sent	label	Unpred	Early Ad	Flooding	Good Co	Importa	Senior	Promote	Loss life
Jodhani	What you hav So that's why I try myself, I make myself listen more when people w personal engageme		general reflection	0	0	0	0	0	0	0	0
Hassan	Thank you, Jor So this has really frustrated me and impacted me especially for the		general reflection	0	0	0	0	0	0	0	0
Hassan	Thank you, Jor So this is how climate change is crazy in Somalia: flooding rivers, ha		general reflection	0	0	1	0	0	0	0	0
Hassan	Thank you, Jor So what they have excluded is resilience programmes.		general reflection	0	0	0	0	0	0	0	0
Hassan	Thank you, Jor So, due to a lot of rainfall, this river came to its hold and it has over		general reflection	0	0	1	0	0	0	0	0
Hassan	Thank you, Jor So, especially how it's affecting me, because the products that we i		memory of the eve	0	0	0	0	0	0	0	0
Hassan	Thank you, Jor So, in this Lower Shabelle Region has been submerged by these floo		general reflection	0	0	1	0	0	0	0	0
Alinafe	This made us : So, one of the initiatives that we were doing as youth: We had to pl		youth engagement	0	0	0	0	0	0	1	0
Jodhani	What you hav So, people need to feel like whatever that they are discussing can h		looking into the fut	0	0	0	0	0	0	0	0
Jodhani	What you hav So, that's why I try to push people into having their own influences, looking into the fut		looking into the fut	0	0	0	0	0	0	0	0
Hassan	Thank you, Jor that we need to educate young people on the importance of conser		personal engage	0	0	0	0	0	0	0	0
Buonkuot	Yeah, I think ! That's why I say it is a wake up call now for the policymakers to see		general reflection	0	0	0	1	0	0	0	0
Jodhani	What you hav That's why I have a YouTube channel, I mean, people are much mor		personal engage	0	0	0	0	0	0	0	0
Hassan	Thank you, Jor The data directory, climate change and environment is responsible		general reflection	0	0	0	0	0	0	0	0
Hassan	Thank you, Jor The Minister of Education does not plan on teaching this, so i		personal engage	0	0	0	0	0	0	0	0
Alinafe	This made us : The other problem that we're facing right now is that we always ex		general reflection	1	0	0	0	0	0	0	0
Jodhani	What you hav There needs to be a proper amount of network, the proper type of		looking into the fut	0	0	0	0	0	0	0	1
Jodhani	What you hav There needs to be a proper network there needs to be proper traini		looking into the fut	0	0	0	1	0	0	0	1

A snipping of the interview data with labels and tagged themes.

4. Using cluster analysis, we were then able to determine a set of rules (probabilities) that identified which types of personality traits aligned most closely with the different themes. For example, when asked to provide examples of Youth Engagement, respondents who talk about Promoting Civic Collaboration were also likely to mention Planting Trees.



Youth Engagement Rule Set

1. By analyzing the different set of rules, we were able to find common themes across the five-question framework. This ultimately informed us of the three personas that were presented in the report.

### IV. LIST OF INTERVIEWEES

1. Hassan Mowlid Yasin ..... (Somalia)
2. Joan Bazilika ..... (South Sudan)
3. Lucia Gulugulu ..... (Zimbabwe)
4. Nisreen Elsaim ..... (Sudan)
5. Cidia Chissungu ..... (Mozambique)
6. Elizabeth Gulugulu ..... (Zimbabwe)
7. Amir Mohamed Amir ..... (Somalia)
8. Mirana Njakatiana ..... (Madagascar)
9. Ousmane Laminou ..... (Niger)
10. Buonkuoth Jundi ..... (South Sudan)
11. Jossias Sixpence ..... (Mozambique)
12. Lalaina Randriarimanana .. (Madagascar)
13. Wilker Dias ..... (Mozambique)
14. Alinafe Nazombe ..... (Malawi)
15. Yared Abera ..... (Ethiopia)
16. Ahmed Khojali ..... (Sudan)
17. Chimwemwe Banda ..... (Malawi)
18. Jodahi Pedros ..... (Ethiopia)
19. Margarida Alberto ..... (Mozambique)
20. Guo Hao ..... (China)
21. Xuechung Wang ..... (China)

# V. SURVEY QUESTIONNAIRE

**General Information**

1. Gender  
 Female  
 Male  
 Other  
 (Please write in)

2. Region  
 Africa  
 Asia  
 Pacific  
 Europe  
 Latin America  
 Caribbean  
 Middle East  
 North America

3. Country of residence

4. Age  
 12 - 17 years old  
 18 - 22 years old  
 23 - 25 years old  
 26 - 30 years old  
 31 - 35 years old

5. What is your highest level of education?  
 Primary school  
 Secondary school  
 Bachelor's degree  
 Master's degree  
 Doctorate degree  
 None/Prefer not to comment  
 (Other please specify)

6. Are you currently employed?  
 Yes  
 No

7. If yes, which sector are you employed in?  
 Government  
 Small and Medium Enterprises  
 Large and Multi-national Corporations  
 Education  
 Non-for-profit organization  
 Self-employed  
 Other (please specify)

13. Have you been affected by the following climate change consequences? (Multiple answers possible)

Loss of, or damage to, infrastructure (for example roads, bridges, electricity supply, water pipes, dams etc.)  
 Food insecurity  
 Losing access to school  
 Losing (income or) jobs  
 Negative impact on mental health (for example anxiety, depression etc.)  
 You or your family/community have been forced to migrate  
 Other (please specify)

14. Who do you think should be responsible for protecting what is most precious to you from the consequences of climate change?

Please indicate your opinion on the scale below

	Most responsible	Second most responsible	Third most responsible	Fourth most responsible
Me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My community leader (Mayor, neighborhood leader)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My national government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foreign (other) governments/countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="text"/>			

15. Are you willing to compromise your lifestyle to adapt to impacts of climate change? (Multiple answers possible)

I would be willing to move to another country  
 I would be willing to pay more taxes for climate adaptation measures  
 I would be willing to accept a lower level of welfare/poverty generation  
 I would be willing to change jobs  
 I am not willing to compromise on my lifestyle  
 I am not willing to accept a lower level of welfare compared to my parents generation  
 Other (please specify)

**Climate Knowledge and Information**

16. Do you agree with the following statements?

Please indicate your opinion on the scale below.

	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat agree	Agree
I need to learn more about climate change impacts in order to better prepare myself and my community/family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need to learn more about climate change impacts in order to better participate in efforts to adapt to them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel quite powerless when confronted with climate impacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel overwhelmed/overwhelmed when confronted with knowledge of experience with climate change impacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By learning up with other youth/young people we can better prepare ourselves for impacts of climate change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Youth/young people are increasingly anxious due to climate change impacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical wellness aspects of post-pandemic times have been impacted in places where there have been impacts already (loss of livelihood, lost access, need to migrate, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Youth/young people sufficiently understand climate change impacts and what to do when their communities are affected by them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Youth/young people understand climate change impacts better than older people (over 35 years)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Which group of youth do you consider yourself part of? (Multiple answers possible)

Activist  
 Civil society  
 Indigenous people  
 Member of a youth organization  
 Government representative  
 Researcher  
 School/University student  
 Ethnic/cultural minority  
 Other (please specify)

Prepared by: Global Center on Adaptation  
 In partnership with the Centre for Environmental Education (CEE) and the Foundation for Environmental Education (FEE)

**Perception of Climate Change Impacts**

9. Climate change will bring about serious negative consequences. Please indicate your opinion on the statement, below.

Completely agree  
 Somewhat agree  
 Neither agree nor disagree  
 Disagree  
 Completely disagree

10. How much do you know about impacts of climate change in your region?  
 I have no knowledge  
 I know little  
 I have average knowledge  
 I am knowledgeable  
 I am very knowledgeable

11. Which according to you are the most urgent climate change impacts in your region? If possible, name five:

- 
- 
- 
- 
- 

12. Have you been affected by the following climate change impacts? (Multiple answers possible)

Drought  
 Drought  
 Cyclones and hurricanes  
 Heat waves  
 Sea level rise  
 Wildfires  
 Other (please specify)

17. Which of the following sources are most important to you for learning about climate change impacts?

Please indicate your opinion on the scale below.

	Not important	Somewhat not important	Neither	Somewhat important	Important
My own experience with climate change impacts/extreme weather events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Talking with friends and family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning in school/university	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watching TV/listening to the radio/hearing news/broadcast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in online courses/seminars/workshops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning through participation in climate adaptation/communities of practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading research reports, scholarly books and articles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Searching the Internet for information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. I do not know where to find learning resources/information about climate change impacts

Please indicate your opinion on the statement, below.

Disagree  
 Somewhat Disagree  
 Neither agree nor disagree  
 Somewhat agree  
 Agree

Prepared by: Global Center on Adaptation  
 In partnership with the Centre for Environmental Education (CEE) and the Foundation for Environmental Education (FEE)

**Youth Leadership**

19. Do you participate in the following activities?

	Yes, very actively	Sometimes/sometimes	No, not at all	Don't know/not assessable
I help my community/family/school when it is affected by extreme weather events (for ex. droughts, floods, hurricanes etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I help my community/family/school prepare for extreme weather events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I speak out about climate change impacts through my social media accounts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talk to peers and friends about our experiences with climate change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talk to national and local level policy-makers about climate change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I participate in the formulation and implementation of my country's National Adaptation Plans for addressing climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I participate in the formulation or implementation of my country's National Determined Contributions for addressing climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I participate in the formulation or implementation of my country's Long term strategies for climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. If you have not participated in the following activities, can you explain why?

I did not help when my community/family/school is affected by a climate impact.

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

Don't know/not assessable

Other (please specify): \_\_\_\_\_

21. I did not help my community/family/school prepare against climate events

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

Don't know/not assessable

Other (please specify): \_\_\_\_\_

28. I did not participate in, or led (a) project(s) on climate adaptation

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

Don't know/not assessable

Other (please specify): \_\_\_\_\_

29. What do you/young people have to offer in efforts to adapt to climate change impacts?

Please indicate your opinion on the scale below.

	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree
Young people have more at stake than older generations, and therefore will put in more efforts into preventing negative impacts of climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Young people know less about climate change impacts in meaningful activities or efforts to adapt to climate change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Young people have little voice in influencing policy and public that can help us adapt to climate change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Young people become excluded in their action to adapt to climate change when confronted with impacts of climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32. Which youth groups are underrepresented when it comes to climate policies and/or efforts to adapt to climate impacts? (Multiple answers possible)

Women Youth

LGBTQ Youth

Lower Education Youth

Lower Income Youth

Youth belonging to ethnic/racial minorities

Other (please specify): \_\_\_\_\_

33. Would you consider yourself as belonging to the following youth groups? (Multiple answers possible)

Women Youth

LGBTQ youth

Lower Education Youth

Lower Income Youth

Youth belonging to an ethnic/racial minority

In my country I am part of the 'middle class' or relatively privileged

I'm connected to global youth networks

Other (please specify): \_\_\_\_\_

34. What are the best channels to educate young people about climate change? (Multiple answers possible)

Schools

Traditional media (e.g. TV, radio, newspaper)

Social Media

Work environments

After school activities

Other (please specify): \_\_\_\_\_

\* 35. Do you want to be part of GCA's Youth Adaptation Network (YAN) and keep updated with opportunities and news?

Yes

No

22. I did not speak out about climate change impacts through my social media accounts

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

Don't know/not assessable

Other (please specify): \_\_\_\_\_

23. I did not talk and share experiences about climate change impacts with friends

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

Don't know/not assessable

Other (please specify): \_\_\_\_\_

24. I did not talk to national and local level policy-makers about climate change impacts

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

Don't know/not assessable

Other (please specify): \_\_\_\_\_

25. I did not participate in the formulation or implementation of "National Adaptation Plans"

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

Don't know/not assessable

Other (please specify): \_\_\_\_\_

26. I did not participate in the formulation or implementation of "Nationally Determined Contributions"

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

Don't know/not assessable

Other (please specify): \_\_\_\_\_

27. I did not participate in formulation of "Long term strategies" for climate change policies

I did not experience a relevant climate change impact

I feel powerless

I was not invited / asked to

I lack material resources / finances

I lack knowledge to participate

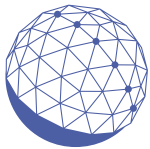
Don't know/not assessable

Other (please specify): \_\_\_\_\_

# ENDNOTES

- 1 World Commission on Environment and Development (WCED), Our Common Future (Oxford University Press, 1987)
- 2 United Nations, World Youth Report, 2020
- 3 United Nations, The World Youth Report: Youth Social Entrepreneurship and the 2030 Agenda, 2020
- 4 The World Bank, Poverty and Shared Prosperity, 2020: Reversals of Fortune, 2020
- 5 UNGA, The Future We Want, 2012
- 6 Office of the Secretary-General's Envoy on Youth, 2015
- 7 United Nations Development Programme. Bureau for Crisis Prevention 2004
- 8 United Nations, Department of Economic and Social affairs, 2010
- 9 McMichael et al., 2004
- 10 Spiess, et al., 2008
- 11 Gibbons, 2014
- 12 Wu et al. 2020
- 13 According to IPCC, adaptation is the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects.
- 14 Cade, A., & Bowden, R. 2011
- 15 United Nations, Department of Economic and Social affairs, 2010
- 16 Amponsem et al., 2019
- 17 United Nations. Joint Framework Initiative on Children, Youth and Climate Change, 2013
- 18 United Nations. Joint Framework Initiative on Children, Youth and Climate Change, 2013
- 19 United Nations Development Program (UNDP) and University of Oxford. Peoples' Climate Vote, 2021
- 20 International Federation of Red Cross and Red Crescent Societies
- 21 Harvard Business Review, 2019
- 22 Sanson et al., 2019; Irfan, 2019; Barnes, R., & Dennis, B., 2018
- 23 United Nations Development Program (UNDP) and University of Oxford. Peoples' Climate Vote, 2021
- 24 Narksompong, J., & Limjirakan, S. 2015, Amponsem et al., 2019
- 25 Doha Work Programme on Article 6 of United Nations Framework Convention on Climate Change (UNFCCC), 2012
- 26 Narksompong, J., & Limjirakan, S. 2015
- 27 Amponsem et al., 2019
- 28 Ratinen, I., & Uusiautti, S. 2020
- 29 Ojala, M., 2013
- 30 Hermans, M., & Korhonen, J., 2017
- 31 Ojala, M., & Lakew, Y. 2017
- 32 Ojala, M., ; Pettersson, 2014
- 33 Lee, K. et al., 2020
- 34 Devakota, N., & Phuyal, R.K., 2019
- 35 The United Nations defines youth as persons between the ages of 15 and 24 years. For the purpose of our study, and to cover a wider base of young population, we consider "youth" as persons between 13 and 35 years of age (also based on YOUNGO's definition of youth as persons under 35 years of age)
- 36 In line with the definition of youth according to GCA Youth Adaptation Network
- 37 Ojala, 2010
- 38 Hermans, M., & Korhonen, J. 2017
- 39 Natural disasters include non-climate change related events such as earthquakes, epidemic outbreaks, insect infestations and other natural phenomena
- 40 United Nations, 2019
- 41 United Nations News, 2019
- 42 World Vision International, 2019
- 43 The researchers aimed at a different age bracket to target young people who can be considered 'early-career', or who are about to start a professional career. The chosen focus was practically informed by considerations about data protection of younger age brackets, and informed by the theoretical assumption that people in their early career stage potentially are at a point where they become decision-makers themselves.
- 44 Note: With persona research, it is not recommended to prioritize one over the other (read: in terms of proportion) since these are fictional archetypes derived from the qualitative research. Instead, they should be treated with equal level of importance.
- 45 UNDRR, Sendai Framework for Disaster Risk Reduction 2015-2030, 2015
46. Secretary-General's address at Columbia University: "The State of the Planet", December 2020
47. <https://public.wmo.int/en/our-mandate/climate/wmo-statement-state-of-global-climate>





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