

# GROWING UP IN THE CLIMATE CRISIS

The impact of climate change on children and young people in Ninewa governorate, Iraq



## ACKNOWLEDGMENTS

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# 1. EXECUTIVE SUMMARY

*“Taking action makes me feel hopeful.”*

10-year-old girl, small town

Climate change is a global challenge that threatens to devastate local communities, not least in Iraq, which is rated in the highest category of climate change risk by EU Inform’s risk index.<sup>1</sup> Communities in Iraq are affected by extreme weather events, droughts, and floods, the effects of which are exacerbated by enduring challenges linked to post-conflict fragility. Iraq faced severe drought and water scarcity in 2022, especially affecting the governorate of Ninewa.<sup>2</sup> In Iraq as a whole, children and young people are grappling with fragile educational systems and worsening poverty. Moreover, the median age in Iraq is 20.2 years; half of Iraq’s population is under 21 years old.<sup>3</sup>

How, then, do children and young people in Ninewa perceive the impact of climate change on their lives and those of their peers?

This study focuses on key factors that affect child well-being, including education, employment, health (including mental health), violence (including against women and girls), food security, and water security. By capturing the perspectives and experiences of children (eight to 11 years), adolescents (12 to 17 years), and young adults (aged 18 to 24 years), this research aims to explore the specific challenges young people face and identify interventions and policies that will help to enhance their resilience, mitigate climate change’s adverse effects on them, and promote their overall well-being and future prospects. Moreover, this research looks at layered intensifiers of vulnerability to climate change effects such as gender<sup>4</sup> and disability.

Employing a mixed methods approach, this research gathered data through structured interviews and surveys with young people, complemented by caregiver interviews to add intergenerational comparison. Interviews with young people employed a vignette method, in which the circumstances of a fictional individual, Majd, were described as part of framing the dialogue. Surveys, meanwhile, employed purposive sampling to provide background on the lives of children known to be affected by climate change – although, due to resource constraints, respondents mostly lived in Eastern Ninewa rather than the more dramatically impacted, but harder-to-access western Ninewa.

To complement young people and caregivers’ perspectives, this research also includes KIIs with two faith leaders and two government officials knowledgeable about climate change and environmental stewardship in Ninewa, helping to create a more comprehensive understanding of the complex climate crisis impacts on younger generations in Ninewa.

<sup>1</sup> [INFORM Annual Report 2023](#)

<sup>2</sup> As judged by relative vegetation loss in [Migration, Environment and Climate Change in Iraq](#), IOM Iraq, 2022.

<sup>3</sup> [World Population Prospects - Population Division](#), UN Department of Economic and Social Affairs, 2022.

<sup>4</sup> Noting recent restrictions on the use of the word gender in Iraq, World Vision Iraq’s gender-related programming promotes women and girls’ flourishing and full participation in society alongside men and boys, pursuing equality and respecting Iraqi cultural norms.



This is not research about how many children in Iraq are affected by climate change, but of *how* climate change is perceived and experienced by young people in communities already impacted by climate change.

This study is part of a suite of research conducted by World Vision on this subject, across the Middle East and Eastern Europe Region.

## How young people in Ninewa perceive the impacts of climate change on their communities

The young people in this study know that climate change is impacting their lives now. They describe exposure to extreme weather events such as heat waves, dust storms, and harsh winters, as familiar experiences that affect their daily routines and present health risks. These include a rise in waterborne diseases, posing additional burdens on the health care sector. The scarcity of water resources and contamination further exacerbate the challenges faced by the community in accessing clean water, with significant implications for their well-being.

The educational pursuits of children are also hindered by climate change, as floods and droughts disrupt school attendance. Food security has been compromised and dietary impacts include reduced nutritional diversity.

When it comes to activities in response to climate change, common practices include conserving water and electricity, reducing plastic use, and engaging in intentional waste management. Families and communities play a crucial role in instilling environmental awareness from an early age. Nevertheless, simple mitigations such as walking are not recognised by most young respondents as being part of a sustainable response to climate change.

This research points to noticeable emotional impacts resulting from living every day with the effects of climate change and in anticipation of a deterioration in individual or global well-being. Emotions such as worry, anxiety, fear, and a sense of helplessness were evident, though some children also exhibited resilience and hope, expressing optimism about finding solutions to address climate change.



Reports of feelings of fear, anxiety, and even guilt and shame point to the possibility of mental health impacts related to young people's perceived lack of agency in the context of climate change. The precise relationship between participation in climate response activities and mental health would be a fruitful area of further research, but responses are suggestive of complex motivating and demotivating factors for young people when it comes to acknowledging and exerting their agency to mitigate climate change effects and practice more sustainable living. Interview responses stressed the importance of participation in mitigation efforts, but in survey data there is no correlation between participation in climate response activities and negative emotions. This possibly reflects the fact that negative emotions are a driver of participation while participation drives down negative emotions.

Gender-based vulnerabilities related to climate change are recognised by our respondents, with girls perceived as somewhat more vulnerable than boys. Girls and boys are often expected to leave school to assist their families in coping with climate consequences affecting agricultural production, household food access, and income. Girls may bear a greater burden in the face of food and water scarcity, taking on responsibilities such as fetching water and facing specific challenges related to poor sanitation and hygiene. Additionally, climate change is believed to increase the risk of early forced child marriage for girls. However, older young adult respondents reported particular pressure on young men to leave education to become breadwinners.

## The intergenerational perception of climate change

Caregivers in this research acknowledge the urgency of addressing climate change collectively while expressing pessimism about the world they are leaving for their children. Some caregivers actively support their children in combatting climate change by raising awareness and advocating for environmentally friendly practices. They take concrete actions like planting trees and promoting responsible waste management. However, they also describe challenges in influencing decision-making processes leading to some feelings of frustration and powerlessness.

## Expert stakeholder perspectives

Our expert stakeholder respondents emphasise the need for collective action and cooperation among nations. They stress both the need for a global response and for locally-implemented interventions, specifically promoting sustainable agricultural practices, raising awareness, and enhancing climate change initiatives through governmental and non-governmental support. Stakeholders value the role of young adults in driving positive change and advocate for their active involvement in official roles related to climate change.

Conscious of the gendered impacts of climate change, they prioritise inclusivity both in terms of benefiting from programming and in seeking input from both boys and girls. These stakeholders call for international financial assistance alongside support for developing institutional capacity to effectively address climate change challenges. Stakeholders express commitment to fostering a sustainable and resilient future for their community.



## Key findings

This research contributes to a body of evidence on the effect of climate change on children and youth. Its findings support UNOCHR General Comment No. 26 on children's rights and the environment with a special focus on climate change<sup>5</sup>. It provides a working example of one way in which the views and experiences of children in the face of climate change can be surveyed and applied to protect their rights. The research findings suggest that engaging and empowering children and youth in climate action is likely to have benefits for children's psychosocial well-being. Dialogue with children contributes to an accurate and nuanced account of their experiences of climate change that can and should be used to design and influence the allocation of Loss and Damage funds and to make programme decisions.



**Awareness** Young people are aware that extreme weather events like heat waves, dust storms, heavy rainfall and floods are related to climate change.



**Effects** Young people are impacted by low crop yields, lack of nutritional diversity, lack of access to clean water, and health and sanitation challenges as secondary consequences of these events.

- **Local impacts** Young people are especially conscious of air pollution and waterborne diseases which have affected, or can affect, their health in a context where access to healthcare can be limited.
- **Poverty as a catalyst** Young people highlight that poverty, especially lack of access to fuel and electricity, and a reliance on successful agricultural harvests, further compound these effects.
- **Gender as a catalyst** Many young people are aware that these effects are gendered, especially as males and females experience specific challenges related to access to education, sanitation, access to food, and early, forced and child marriage.



**Mental health and participation** The effects of climate change create strong emotional reactions in children and adolescents, with some highly motivated to respond proactively as part of community-level responses and others feeling helpless.



**Perceptions of the government's response** to climate change are mixed. While many believe the government takes their concerns seriously, others feel their experiences are dismissed and nearly one-third believe the government is not entirely truthful about its response. Most respondents believe that the government should prioritise climate awareness, afforestation, waste management, and the promotion of renewable energy sources.

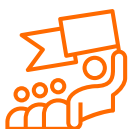
<sup>5</sup> [General comment No. 26 on children's rights and the environment with a special focus on climate change](#), OHCHR, 2023

## Key Recommendations



### **Enhance education and awareness programmes**

- a. **Who?** National governments (Government of Iraq (GOI) and Kurdistan Regional Government (KRG)), international donors, NGOs
- b. **What?** Resource and implement climate change education and awareness programmes with pathways to youth-led community environmental improvement.
- c. **Why?** To enhance young people's well-being and especially to address negative feelings, helplessness and depressed or pessimistic thinking reported by young people who are living with the effects of climate change; to capitalise on young people's high levels of motivation for impactful action; to enhance local environments and their resilience in the face of climate change.



### **Clearer national leadership**

- a. **Who?** National governments (GOI and KRG) with international support and NGO partners
- b. **What?** Enhance the communication of appropriate climate crisis adaptation and mitigation initiatives outlined below, with incentives and disincentives appropriate to a sustainable transition.
- c. **Why?** To address the trust deficit expressed by young people in government leadership in this area.



### **Promote sustainable agriculture**

- a. **Who?** National governments (GOI and KRG), international donors, local governments, NGOs, rural agriculturalists
- b. **What?**
  - i. Transition rural communities to climate change-adapted, sustainable agricultural practices that support food security and reduce vulnerability to droughts and seasonal weather variations.
  - ii. Urban projects should implement a Disaster Risk Reduction (DRR) approach to reduce the impact of heat waves and high temperatures by encouraging activities that reduce heat (shading, reflection).
  - iii. Agriculture projects must ensure inputs are not vulnerable to prolonged higher temperatures.
- c. **Why?** To address losses in food and crops, and consequent hunger and economic vulnerability experienced by children, and more broadly to protect children.





### **Promote water security**

- a. **Who?** National governments (GOI and KRG), international donors, local governments, NGOs, technicians
- b. **What?** Promote technologies and practices to minimise water waste and losses, and seek opportunities to rejuvenate water resources and build resilient water supply systems.
- c. **Why?** To address the failure of reliable and adequate water supply and to promote drought resilience.



### **Enhance the resilience of education**

- a. **Who?** National governments (GOI and KRG), international donors, governorate education departments, education practitioners, technicians, NGOs
- b. **What?** Support climate-resilient educational practices and infrastructure to ensure continuity of education during weather events.
- c. **Why?** To address the frequent losses in educational days to climate-related events.



### **Improve resilience to heat waves, dust storms, floods and droughts**

- a. **Who?** National governments (GOI and KRG), international donors, local governments, NGOs
- b. **What?**
  - i. Enhance climate-resilient infrastructure and landscapes, and establish and maintain community-based early warning systems for disaster preparedness and response.
  - ii. Promotion of DRR to reduce impacts of heat waves, dust storms, floods and droughts.
- c. **Why?** To minimise disruptions to essential services such as fuel, electricity, water and sanitation infrastructure, and housing, as indicated in this research.



### **Be sensitive to specific impacts on women and girls**

- a. **Who?** National governments (GOI and KRG), international donors, local governments, NGOs
- b. **What?** Systematic integration of gender indicators (measuring the specific impacts of climate change and programming responses for women, men, girls and boys) into government and non-governmental programmes.
- c. **Why?** To respond effectively to gender-based vulnerabilities exacerbated by climate change such as access to education, food, sanitation, and early, forced and child marriage.

## 2. INTRODUCTION

Among the regions projected to be most affected by climate change, the Middle East stands out. The International Panel on Climate Change highlights its vulnerability to the impending climate crisis.<sup>6</sup>

While many parts of the Middle East are known for high temperatures and humidity, studies indicate that climate change may even trigger a permanent shift in the region's geography, rendering certain areas uninhabitable.<sup>7</sup> Such changes threaten to leave people without homes, on the brink of starvation, or facing perilous conditions that will likely result in loss of life.

Additionally, climate change is anticipated to escalate poverty levels and exacerbate financial struggles throughout the Middle East. Agriculture, a significant income generator for many residents, will be severely impacted by rising temperatures and prolonged droughts, leading to the destruction of crops and leaving countless individuals without sustenance or income.

Furthermore, the Middle East region already grapples with complex intersecting challenges, including political instability, conflicts, and the refugee crisis. Climate change exacerbates the effects of these existing issues, adding another layer of challenge to the lives of children and young people. The compounding effects of climate change alongside ongoing social, economic, and political crises further threaten their education, weakening the already fragile educational systems in the region.

In 2022, Iraq experienced a severe drought for the second consecutive year, with record-low levels of rainfall affecting the entire country. Impacts of this prolonged drought were intensified by the broader impacts of climate change, making Iraq one of the most vulnerable countries to rising temperatures, reduced rainfall, and related food and health crises. The situation is further compounded by decreased transboundary flows from the Tigris and Euphrates rivers and inadequate water resource management and treatment systems.<sup>8</sup> In April 2022, the Iraqi Ministry of Water Resources reported that the country's water reserves had plummeted by an estimated 50 percent. This alarming decline was attributed to a combination of factors, including prolonged drought, inadequate rainfall, and the decreasing water levels of the Tigris and Euphrates rivers.<sup>9</sup>

In addition, Iraq is facing an alarming rise in the occurrence of sand and dust storms. These storms have become more frequent and are expected to continue due to the lack of water and vegetation coverage, which prevents dust and soil from being held in place and makes them susceptible to being carried by the wind.<sup>10</sup> By May 2022, Iraq had already experienced an alarming total of nine sandstorms in less than two months. These events not only have severe health implications, particularly for respiratory conditions, but they also have detrimental effects on soil and water quality, as well as crop production.<sup>11</sup> The interconnected crises of water scarcity and climate change have become a serious threat to millions

<sup>6</sup> [Climate Change: The Middle East Faces a Water Crisis](#), Middle East Institute, 2017.

<sup>7</sup> [Strongly Increasing Heat Extremes in the Middle East and North Africa \(MENA\) in the 21st Century](#), Lelieveld, J., Yiannis Proestos, Panos Hadjinicolaou, Meryem Tanarhte, Evangelos Tyrlis, and George Zittis. *Climatic Change* 137 (1–2): 245–60, 2016.

<sup>8</sup> [Iraq's Drought Crisis and the Damaging Effects on Communities](#), Norwegian Refugee Council, 2021.

<sup>9</sup> Rudaw, [Iraq's Water Reserves 'Down 50 Percent'](#), Alannah Travers, RUDAW, 2022.

<sup>10</sup> [Dust Storms Highlight Iraqi Leadership Failures as Climate Crisis Worsens](#), Porter, Lizzie, Najl, Jamal, Al-Aqily, Ali, and staff, Iraq Oil Report, 2022.

<sup>11</sup> [Ninth Sandstorm in Less than Two Months Shuts Down Much of Iraq](#), The Guardian, 2022.



of people already affected by conflicts and displacement across Iraq. The three governorates of Ninewa, Diyala, and Basra were determined to have the populations most vulnerable to water scarcity and climate change.<sup>12</sup> The 2022 cropping season saw particularly devastating consequences, as drought conditions and reduced river levels severely restricted access to clean drinking water and irrigation, leading to diminished harvests and incomes, and exacerbating barriers to food accessibility.<sup>13</sup>

## Research question and indicators

In a governorate most affected by water scarcity and other climate change effects, this study asks:

### How are the effects of climate change impacting children and young people in Ninewa?

These effects are indicated by the perceptions of children, young people, caregivers and expert stakeholders. Drawing on observations gleaned through World Vision programming across the region, the research explored perceptions of known child well-being risks such as access to education, employment opportunities for families, physical and mental health, exposure to violence (including gender-based violence), food security, and water security.

We examined more broadly the gendered impacts of climate change through the eyes of children and young people. We explored their level of preparedness for climate change-related disasters, recognising the importance of equipping them with the necessary knowledge and skills to respond to and recover from such events. Noting the potentially catalytic effects of other social factors such as gender, income levels, rurality and disability, our research considered the broader social context and the ability of children and young adults to withstand climate change effects while negotiating other social hurdles.

Additionally, we explored their agency in advancing community resilience to climate change effects, acknowledging their capacity to contribute actively to addressing the climate crisis and advocating for sustainable solutions.

This knowledge will inform targeted interventions, policies, and strategies to enhance their resilience, mitigate the adverse effects of climate change, and promote their well-being and prospects.

<sup>12</sup> [Iraq 2023 Plan](#), IFRC

<sup>13</sup> [Hunger Hotspots: FAO-WFP early warnings on acute food insecurity](#), WFP and FAO, June to September 2022 outlook.

## 3. METHODOLOGY

### Research design

This study combined quantitative and qualitative data collection methods, with a view to yielding a nuanced understanding of the impact of climate change on children, adolescents, and young adults, and their responses to these impacts. The quantitative data was intended to provide an indicative sense of how interviewees' experiences and perceptions, garnered through the qualitative part of this research (structured interviews), resonated with, or were shared by, a wider sample of the population.

### Sample size and data collection tools

To gather quantitative and qualitative data from children, adolescents and young people, a range of research tools were employed, including KIIs and surveys:

1. Structured interviews
  - a. Ten interviews were conducted with children and adolescents, nine in a small town and one in its rural environs.
  - b. Four structured interviews were conducted with young adults, all in a small town.
  - c. Three structured interviews were conducted with caregivers, all in a small town.
  - d. Four KIIs were held with two government officials and two faith leaders with demonstrable knowledge of climate change and environmental stewardship, all in a small town.
2. Surveys: two surveys, one for children and adolescents and another one for young people were administered to collect quantitative insights alongside the qualitative component. The sample included 86 children aged 8-11, 86 adolescents aged 12-17, and 53 young women and men aged 18-24, selected from across Ninewa (urban and rural).

### Sampling strategy

The sampling strategy employed in this study was purposive sampling, focusing on Ninewa governorate, an area affected by climate change-related vegetation loss and declining water resources. By focusing on communities known to be affected by climate change, the study aimed to capture the lived experiences and perspectives of Iraqi young people who are directly impacted by environmental challenges in their daily lives. This sampling approach increased the likelihood that the data collected would be relevant and representative of the specific context under investigation, providing a granular understanding of the climate change issues faced by Iraqi children and young people in Ninewa governorate while providing lessons of probable relevance to areas elsewhere in Iraq.



## Data collection

Interviews were conducted face-to-face in respondents' homes. The survey was administered through Microsoft Forms and conducted over the phone based on the expressed preferences and accessibility of the participants.

The use of both phone and face-to-face interviews allowed for flexibility in data collection, accommodating the diverse circumstances and geographical locations of the participants. It ensured that data could be gathered effectively while respecting the participants' preferences and maintaining the highest ethical standards.

Interviews with children involved the use of vignettes (short stories). This fictional but realistic scenario was presented to participants to stimulate discussion and draw out their reflections on climate change-related issues. The following vignette and questions provided a platform for participants to express their thoughts, emotions, and personal narratives related to the impact of climate change on their lives.

Majd was severely impacted by climate change and the flood. He was forced to miss school and was displaced with his family to a camp. The food and water in the camp was scarce and Majd suffered.

- a. Do you think that children your age in your community are impacted by climate change the same way as Majd? (Probe *drought, flood, heat waves, harsh winter, etc.*)
- b. Can you give us some examples of how children your age in your community are impacted by climate change? (probe: *house damage, losing access to electricity, water, fuel, etc.*)
- c. Do you think that climate change is affecting the food security of children your age in your community? How? (probe: *less food available, less diversity in food, food damaged or mouldy, market price increased*)
- d. Do you think that climate change is affecting the access to water for children your age in your community? How? (probe: *bad water quality, water scarcity etc.*)
- e. Do you feel that children's education is under threat in your community because of climate change? How? How many days have children in your community missed school due to climate change or climate variability?
- f. Which groups are threatened more than others by climate change (probe: *girls, minorities, children with disabilities*)
- g. Do you notice an increase in climate-related diseases in children in your community? (probe: *injury and mortality from extreme weather events, respiratory illnesses, waterborne diseases, foodborne diseases*)
- h. Do you think that violence is on the rise as a result of climate change? Which kind of violence? Where is the violence happening? Can you give us some examples? (probe: *At home, during fetching water, during displacement*)
- i. Which groups are more at risk of violence as a result of climate change? (probe: *girls, women minorities*).

## Data analysis

A thematic analysis approach was applied to the interviews. Thematic analysis involves identifying recurring themes, patterns, and concepts within the interview transcripts. This process allowed for a thorough exploration of the participants' experiences, perceptions, and perspectives on climate change and its consequences.

The collected data from the survey tools, which were administered through Microsoft Forms, was transferred to SPSS (Statistical Package for the Social Sciences) for data analysis. The analysis of the survey data involved conducting descriptive analysis using SPSS. This included examining frequencies, distributions, and percentages of the responses provided by the participants. The quantitative insights obtained from the survey were crucial in understanding the prevalence and patterns of various aspects related to climate change's impact on children, adolescents, and young people in the study.

To ensure the robustness and credibility of the findings, a triangulation approach was employed, whereby data from multiple sources were analysed in relation one to another. The survey data and the thematic analysis of the KIIs were triangulated to build distinct accounts of each age group's range of experiences, providing a rich and nuanced understanding of the impact of climate change on children, adolescents, and young adults.

## Ethical considerations

Ethical considerations were paramount throughout the research process to ensure the protection and well-being of all participants, particularly children and young people. Before data collection, a comprehensive informed consent process was followed, where participants were provided with a



clear explanation of the research objectives, procedures, potential risks and benefits, and their rights to voluntary participation and withdrawal. Consent forms were obtained from all participants, and for children and adolescents, additional consent was sought from their caregivers or legal guardians.

To uphold the principles of safeguarding, measures were implemented to ensure the physical and emotional safety of participants. Participants were assured that their responses would be treated with the utmost respect and used solely for research purposes. Confidentiality and anonymity were maintained by assigning unique identifiers to each participant, and all personal information was kept secure and accessible only to authorised researchers.

Appropriate referral pathways were established for any cases in which research could unveil safeguarding risks or disclose instances of harm or distress. This expressed the prioritisation of participants' well-being and sought to pre-empt any potential distress that might arise from their involvement in the research.

The ethical considerations surrounding this study were guided by internationally recognised ethical guidelines, ensuring the highest standards of research integrity and respect for human rights. The research team remained committed to upholding ethical practices throughout the entire research process, from data collection to analysis and dissemination of findings. By prioritising informed consent, safeguarding measures, and referral protocols, the study aimed to protect the rights, dignity, and well-being of all participants, fostering a research environment that adhered to ethical principles and promoted trust and respect.

## **Limitations**

It is important to acknowledge certain limitations that may have influenced the findings and interpretations.

External factors such as time constraints, resource limitations, and contextual challenges limited the sample size and the time available for each interview. Structured interviews confined the research to a series of given prompts, rather than longer, semi-structured or unstructured interviews which could have illuminated young people's experiences in more vivid colour. These limitations were taken into consideration when interpreting the results and applying them to policy or practice.

As ever, self-reported information may include biases or recall errors that could have influenced the data. Participants' perceptions and experiences are subjective, and their responses may have been influenced by various factors such as social desirability or personal interpretation. The study acknowledges that the participants, being vulnerable themselves, may have faced challenges in isolating their vulnerability specifically in response to climate change. Other intersecting factors, such as socioeconomic conditions and access to resources, may have influenced their ability to address climate change adequately.

Meanwhile, these perceptions cannot be generalised with confidence beyond Ninewa governorate, even as they do indicate something of the kinds of responses young people have to the effects of climate change in Iraq.

Despite these limitations, the study illuminates the impact of climate change on children, adolescents, and young adults in Ninewa governorate in Iraq. It highlights the importance of both further research, and appropriate interventions now to address the identified challenges and develop strategies that promote resilience and well-being in the face of climate change.

## 4. FINDINGS/DISCUSSION

### 4.1 Impact of climate change on children aged 8-11 and adolescents aged 12-17 in Ninewa governorate, Iraq

#### 4.1.1 Socio-demographic characteristics

The survey included 172 participants, equally distributed between children and adolescents. The survey was dispersed equally between genders, including 48% boys and 52% girls as participants. These participants reside mainly in urban areas in Ninewa governorate in Iraq (77.9%). When assessing their family situation, a large percentage came from single-parent households (45.9%) and female-headed households (30.2%). A notable percentage of the surveyed children reported living with members suffering from chronic illness (21.5%) or a physical disability (11%). A small percentage of surveyed children reported that they belong to families with members suffering from psychosocial disabilities (4.1%) or intellectual disabilities (1.7%) (Table 1). When it comes to education, 93% of the surveyed children were currently enrolled in formal education while the other 7% had dropped out (Table 1).

**Table 1** Socio-demographic characteristics of surveyed children

Total Sample		(%)
		N=172
Sex	Male	48.0%
	Female	52.0%
Marital status	Single	99.4%
	Married	0.6%
Status in the country	Citizen	94.2%
	Citizen/host community	4.7%
	Internally displaced	1.2%
Family situation	Single father/mother	45.9%
	Female-headed household	30.2%
	Members from minority groups	22.1%
	Unaccompanied minors	9.9%
	Members with physical disability	11.0%
	Members with psychosocial disability	4.1%
	Members with intellectual disability	1.7%
	Members chronically ill	21.5%
	Elderly members	14.0%
	Other	15.1%
Youth Groups	Currently	35.5%
	In the Past	2.3%
Community type	Rural	22.1%
	Urban	77.9%



Total Sample		(%)
		N=172
Current enrollment in formal education	Yes	93.0%
	No	7.0%
Current level (for children enrolled in formal education)	Primary	61.9%
	Intermediate	23.8%
	At least some secondary	13.8%
	Finished high school	0.6%
Highest level of education attained (for children not enrolled in formal education)	Illiterate	58.3%
	Primary	25.0%
	At least some intermediate	16.7%

#### 4.1.2 Experienced climate change and perceived impact on children and the community

***“Climate change casts a dark shadow on our lives, particularly concerning the inadequacy of essential resources like water, electricity, and fuel. The consequences of these shortages ripple through our daily routines, making it harder to study, stay healthy, and maintain a sense of normalcy in our community.”*** 16-year-old girl, small town

Child interviewees described vividly the impact of climate change on themselves and their communities. Some mentioned the effects on the material fabric of their homes, while water scarcity and sanitation reoccurred as critical issues that affect the lives of these children. Insufficient access to water not only affects daily routines but also hampers personal hygiene, potentially leading to health risks and discomfort.

A 10-year-old girl said: *“The lack of enough water in our homes really affects our personal hygiene and well-being in general. As climate change alters rainfall patterns, lack of water becomes a constant challenge, leaving us with limited resources to meet our basic needs.”*

Limited access to electricity and fuel compounds the difficulties faced by these children and their families. The lack of reliable energy sources not only disrupts daily activities but also restricts access to educational resources and healthcare facilities.

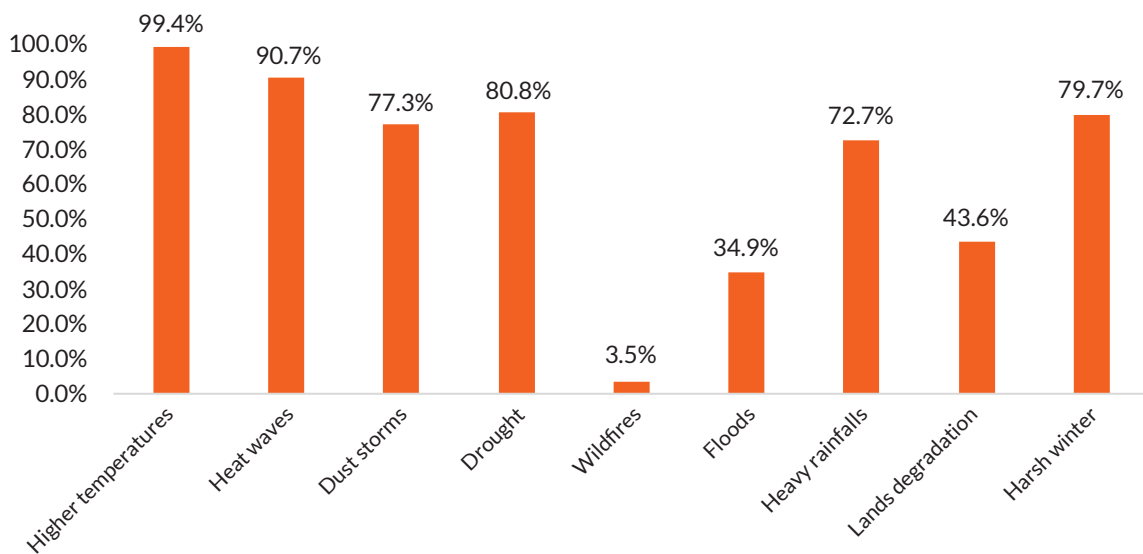
This lack of access hampers the pursuit of a better future and places additional burdens on the shoulders of the young generation. Such concerns echo throughout the survey data, with children and adolescents in Ninewa governorate reporting personal exposure to elevated temperatures (99.4%), heat waves (90.7%), dust storms (77.3%), drought (80.8%), heavy rainfall (72.7%), and harsh winters (79.7%). A smaller proportion of surveyed children mentioned the occurrence of floods (34.9%) or wildfires (3.5%) (Figure 1).

When asked to choose from a list of possible impacts of climate change on their community, the majority of surveyed children reported a decrease in crop yields, livestock productivity, or crop failure (89.9%) and a loss of access to water (83.2%). A majority (71.7%) mentioned that community members spent a significant amount of time cleaning up after climate change-related events. Other notable impacts

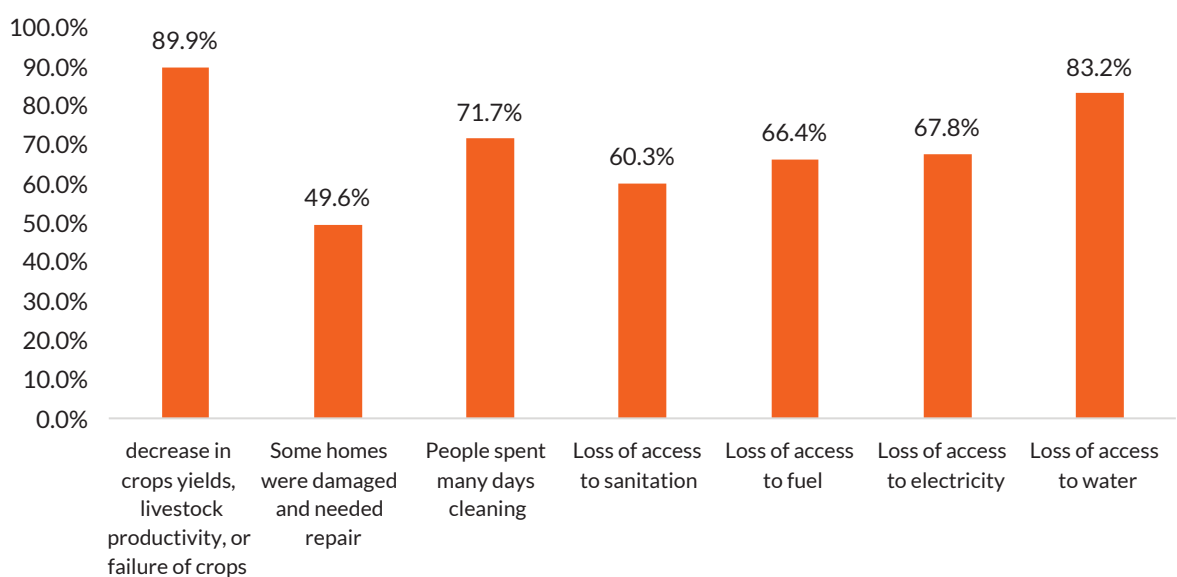
mentioned included a loss of access to fuel (66.4%), a loss of access to electricity (67.8%) and a loss of sanitation (60.3%) due to climate change. Concerns about the state of homes in their community were expressed by 49.6% of surveyed children, who felt that many houses required repair (Figure 2).

30.3% of surveyed children viewed the impact of climate change on their lives as very negative.

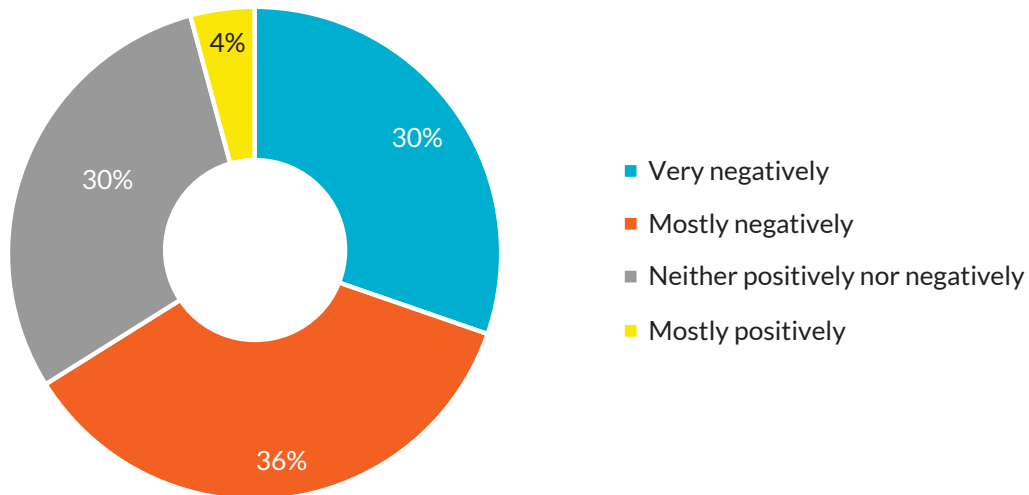
**Figure 1** Climate change consequences experienced by children and adolescents in their communities.



**Figure 2** Children's perceptions of climate change's impact on the community



**Figure 3** Children's perception of the general impact of climate change on people's lives in the community



### 4.1.3 Impact on education

Interviews with children directly reported some of the adverse effects of climate change effects on school attendance. A 10-year-old girl stated: “Children’s school attendance is reduced because of dust storms and heavy rains occurring in the area.”

These extreme weather events can make it unsafe for children to travel to school, resulting in reduced attendance rates. The physical barriers created by such weather conditions can disrupt the regularity of schooling and hamper the educational progress of children in the community.

Extreme heat or cold temperatures can make it challenging for students to concentrate and engage in learning activities. Unfavourable weather conditions may also lead to school closures or the suspension of classes, resulting in missed instructional time and potential setbacks in academic performance.

The survey results indicate something of the likely prevalence of these impacts of extreme weather on children’s education. The majority of surveyed children and adolescents (73.7%) believed that extreme weather events could hinder girls’ access to education. A slightly lower percentage (67.3%) believed that boys also face similar challenges. Floods were identified as a specific factor affecting children’s education, with 66.9% of respondents reporting that floods could prevent girls from attending school or reduce their school attendance. For boys, a slightly lower percentage (60.5%) shared the same sentiment. Additionally, 37.8% of surveyed children believed that droughts could hinder girls’ education or reduce their school attendance, and a similar 38.2% agreed that droughts also affect boys’ education.

Regarding the displacement of children and its effect on school attendance, 22.1% believed that girls are affected, while 27.8% believed the same for boys. When asked about the average number of days children missed school, the survey indicated that girls missed an average of 2.8 days per month, while boys missed an average of 3.06 days.

**Table 2** Children's perception of climate change's impact on education.

Total Sample		(%)
		N=172
Perceived impact of climate change on education	Extreme weather events prevent girls from going to school or decrease their school attendance	73.7%
	Extreme weather events prevent boys from going to school or decrease their school attendance	67.3%
	Floods prevent girls from going to school or decrease their school attendance	66.9%
	Floods prevent boys from going to school or decrease their school attendance	60.5%
	Droughts prevent girls from going to school or decrease their school attendance	37.8%
	Droughts prevent boys from going to school or decrease their school attendance	38.2%
	Girls are displaced because of extreme weather events and miss school year or days	22.1%
	Boys are displaced because of extreme weather events and miss school year or days	27.8%
School days missed	Average school days missed for girls	2.83 ( $\pm 1.99$ )
	Average school days missed for boys	3.06 ( $\pm 2.27$ )

#### 4.1.4 Impact on food security and diet diversity

***“We notice some families pressuring their children to leave school because they cannot provide sufficient quantities of food or secure a livelihood.”*** 10-year-old girl, Ninewa.

Children described in interviews how droughts, floods, and other extreme weather events have ravaged agricultural lands, resulting in crop failures and reduced food production. Families now find themselves struggling to obtain sufficient quantities of food, leaving their children vulnerable to malnutrition and inadequate nutrient intake. *“In my community, there is a significant impact, as agriculture is the main source of livelihood,”* reports one 17-year-old girl from a rural community. A 10-year-old girl told us, *“We notice some families pressuring their children to leave school because they cannot provide sufficient quantities of food or secure a livelihood.”*

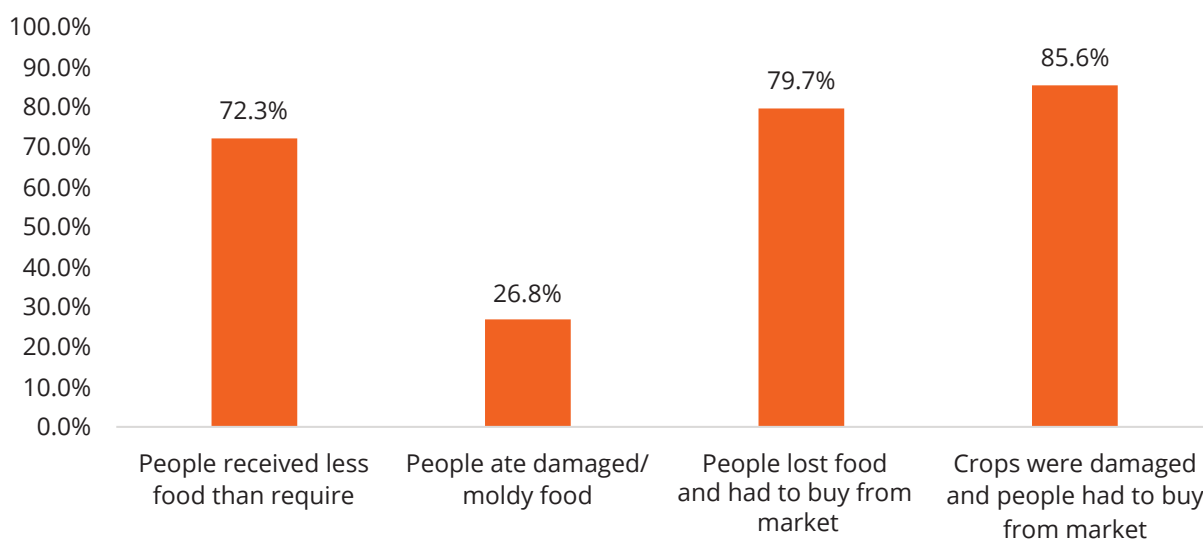
Indeed, the limited diversity in food options has emerged as a pressing concern. A 10-year-old girl shares, *“Climate change directly affects food security, especially with the shortage of food supplies and some parents struggling to afford vegetables and fruits.”* Climate change has disrupted the delicate balance of ecosystems, leading to the loss of crops and diminishing the variety of nutritious food sources. Consequently, children are being deprived of a diverse diet that is crucial for their growth and development. The monotony of relying on staple foods further exacerbates the nutritional deficiencies experienced by children in the community.



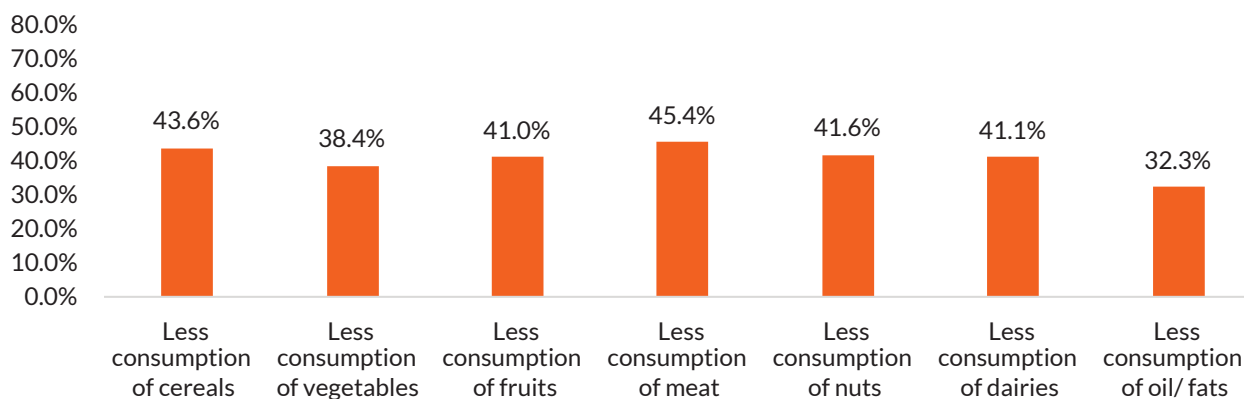
Children also mentioned the issue of spoiled or contaminated food. Fluctuating temperatures, inadequate storage facilities, and water scarcity have created an environment where food easily spoils and becomes unsafe for consumption. The potential health risks associated with consuming spoiled or contaminated food pose a grave concern for the well-being of the community's children. The potential consequences of such circumstances on their physical health and overall development are significant.

The survey data revealed that a large percentage of the surveyed children (85.6%) recognise that crops are being damaged, leading to a reliance on market purchases and increased cash expenditures. Similarly, 79.7% reported that people were losing food and having to purchase it from the market, and 72.3% expressed concerns about people receiving insufficient food. A lower percentage of 26.8% believed that people were consuming damaged and mouldy food (Figure 4). Around half of surveyed children indicated a decrease in dietary diversity, particularly in terms of meat, cereals, fruits, dairy, and nuts (Figure 5).

**Figure 4** Children's perception of climate change's impact on food security.



**Figure 5** Children's perception of climate change's impact on diet diversity.



#### 4.1.5 Perceived impact on access to water

***“The amount of water reaching our area is limited and not suitable for drinking. This forces people to purchase clean water, but not everyone can afford it.”*** 16-year-old girl, small town

Children’s and adolescents’ responses in interviews highlighted the impact climate change can have on water security for children in Ninewa governorate. Water scarcity emerges as a pressing concern, with some communities experiencing limited availability of water to meet their basic needs. The effects of climate change exacerbate this scarcity, particularly during certain seasons, further straining children’s access to clean water. A 10-year-old girl shares her community’s experience, *“Water scarcity, especially for drinking and bathing, is worse during the summer season. Also, the quality of water is not the best, and people’s wrong use of water makes things worse.”* Regional disparities in water access become apparent, with some areas facing severe water scarcity and poor water quality, while others have relatively better access to water resources.

Equally significant is the issue of water contamination, posing severe health risks to children. Communities grapple with the consequences of using water that may be unsafe for consumption and daily use. Inadequate water infrastructure was identified by participants as a contributing factor, as some areas lack sufficient water supply systems and suffer from improper water usage practices. These issues further limit children’s access to clean water, making it a considerable challenge for them to maintain proper hygiene and well-being.

The survey results revealed the perceived extent of the impact of climate change on water access. While 44% of children reported experiencing floods or droughts, more than half of them (61.3%) perceived an impact of flood or drought on their household water supply. Further analysis showed 90.7% of children affected by droughts or floods reported receiving less water than usual. Additionally, perceptions regarding the quality of the received water showed that, among those affected, 65.1% observed a difference in the colour of the water, 39.5% believed that the water they received had a bad taste, and similarly 39.5% noted a bad smell. To cope with these challenges, almost all of the surveyed children (95.3%) mentioned resorting to purchasing water bottles, while 90.7% resorted to also using water tanks as alternative water sources (Table 3).

**Table 3** Children’s perception of climate change’s impact on water security.

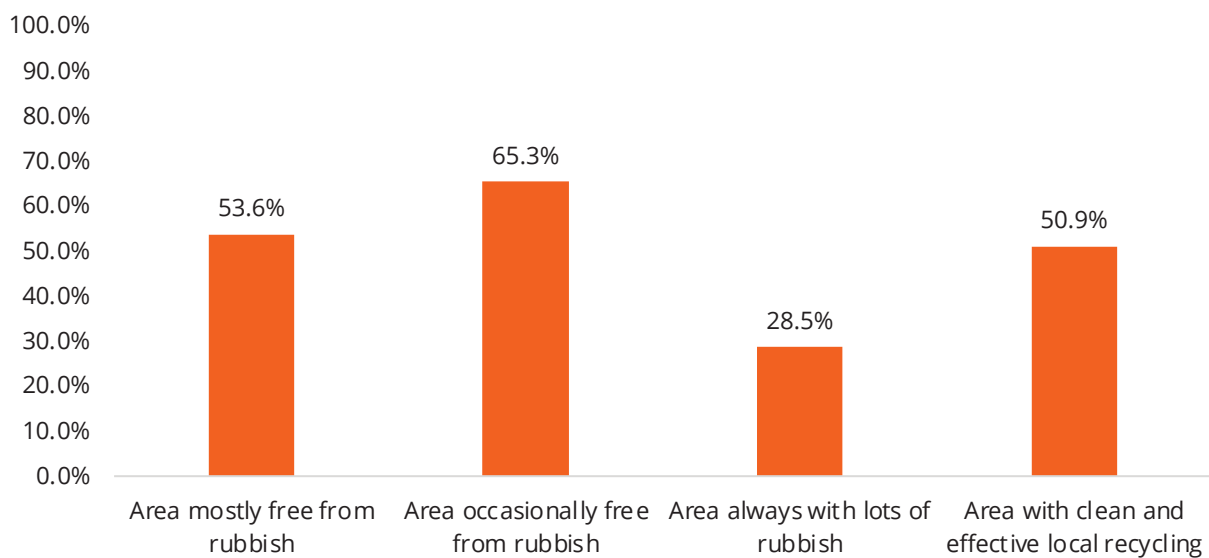
Total Sample		(%)
		N=172
Experience flood or drought	Yes	44.0%
	No	56.0%
Impact of flood or drought on Household water supply	Yes	61.3%
	No	31.7%
Type of impact	Received less water	90.7%
	Water had a bad taste	39.5%
	Water had a bad smell	39.5%
	Water had a bad color	65.1%
	People used water from untreated sources	48.8%
	People bought bottled water	95.3%
	People bought water tanks	90.7%

#### 4.1.6 Perceived impact on environmental sanitation and dignity

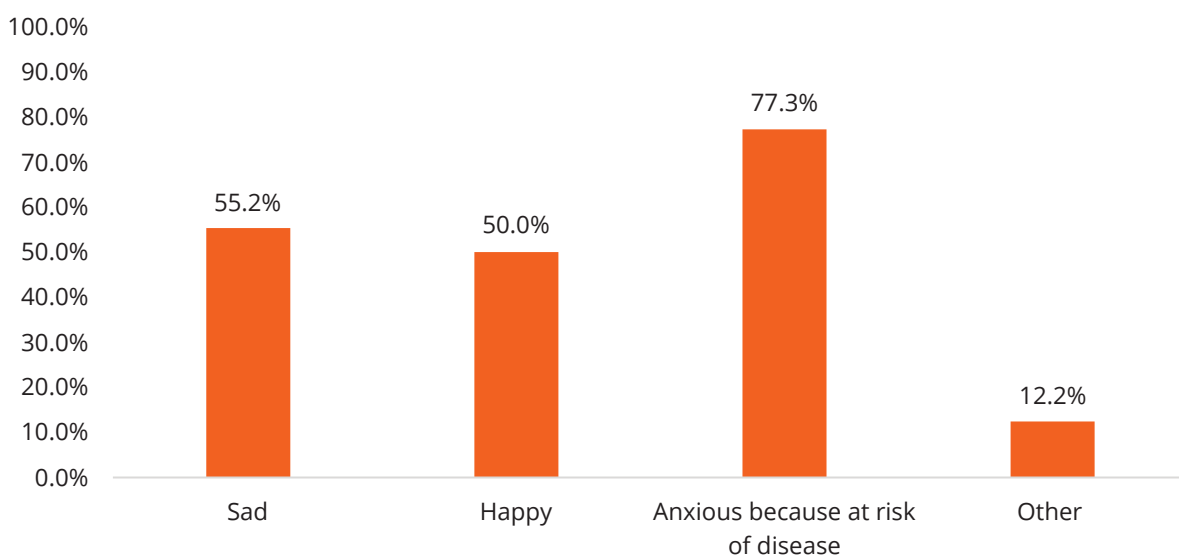
When it comes to environmental sanitation, the survey responses indicated that almost half of surveyed children believe that they reside in an area that is clean (53.6%), and that includes an effective recycling system (50.9%). However, 28.5% of surveyed children stated that the area is always filled with trash and 65.3% said that the area is occasionally clean only (Figure 6).

The previous findings have impacted surveyed children's emotions regarding the issue where a notable 77.3% stated that they feel anxious and worried about catching diseases or allergies, though half of the surveyed children are happy with waste management in their area (Figure 7).

**Figure 6** Children's perception of environmental sanitation.



**Figure 7** Children's feelings on waste and the environment.



#### 4.1.7 Perceived impact on health

***“I’ve noticed a big increase in diseases among children because of airborne viruses and water contamination.”*** 10-year-old girl, small town.

Children are conscious of the health impacts of climate change and are concerned about the impact on their lives of dust storms. Their impact on respiratory health is highlighted in many responses.

A 15-year-old boy said, *“When dust storms occur, there’s a rise in respiratory diseases like asthma, affecting lots of children.”*

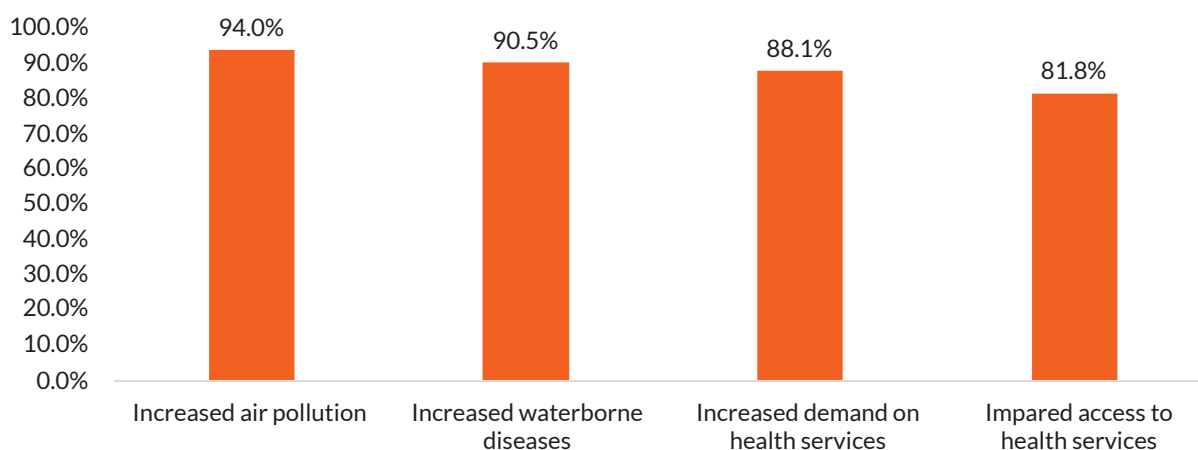
Another area of concern is the prevalence of waterborne diseases, attributed to the lack of access to clean drinking water. The responses indicate an increase in waterborne illnesses like diarrhoea and kidney-related diseases due to the contamination of water sources. A 10-year-old girl said, *“I’ve noticed a big increase in diseases among children because of airborne viruses and water contamination.”*

High temperatures and heat waves are a particular concern for those internally displaced and living in camps. The extreme weather conditions associated with rising temperatures pose a significant risk to their well-being and overall health. The scorching heat becomes a formidable obstacle for these young individuals, making it challenging for them to cope with the relentless heat and engage in their regular activities. Extreme weather events also pose a significant risk to the safety and well-being of children in the community. The responses mention incidents such as lightning strikes resulting in fatalities, indicating the direct impact of extreme weather on their lives.

Echoing the interviews, 55.2% of the surveyed children mentioned that they feel sad because of the risk of catching a disease. 94% believe that climate change plays a role in increasing air pollution and 90.5% of surveyed children agreed that climate change can lead to the increased development of waterborne diseases through different climate-related events such as flooding and weather instability.

When it comes to the healthcare sector, 88.1% of the surveyed children highlighted that climate change can increase the demand for healthcare services. Similarly, 81.8% believed that it might also lead to the impairment of access to health services (Figure 8).

**Figure 8** Children’s perception of the impact of climate change on health.



#### 4.1.8 Participation and mental health

***“Participating in climate discussions in my community and taking action makes me feel hopeful about climate change.”*** 10-year-old girl, small town.

Children’s emotional responses and attitudes towards climate change and its impacts are not uniform. While some individuals express a high level of concern and awareness about global climate issues, others exhibit limited concern or lack of awareness.

This can be linked to the recognition of other local impacts as we have already seen with waste management. Likewise, some responses shed light on the emotional toll that climate change-related weather events can take on children *via* their impact on education. Frequent school closures, likely driven by adverse weather conditions caused by climate change, create anxiety and concern among students, including the fear of failing exams. When schools are frequently closed, students may miss out on valuable instructional time, leading to worries about falling behind in their studies and academic performance. A 10-year-old boy said: *“I feel worried about failing exams due to recent bad weather conditions, and frequent school closures.”*

Responses indicate that global warming can evoke a sense of frustration and helplessness in some individuals, who recognise the severity of the issue and feel disheartened by the current state of affairs. Some express sadness when they feel unable to make a substantial difference in addressing climate change or when they face challenges in imposing their views on environmental preservation. A 15-year-old boy said: *“I am wholly convinced that the future of the Earth is destruction if the current situation continues.”* He added, *“I feel sad because I cannot persuade everyone regarding environmental preservation and pollution.”* Many respondents acknowledge the global concern surrounding climate change and recognise its far-reaching impacts on the environment and future generations. They express worry, fear, and anxiety when contemplating the consequences of climate change, demonstrating the significant emotional impact it can have on people’s mental well-being and outlook on the future.

*“I feel depressed when I think about the future of the planet,”* said a 15-year-old boy.

However, there are also those who express optimism and a belief in finding solutions to address climate change, suggesting a possible link between their level of hope and their participation in proactive approaches to mitigating its impact. Empowerment and improvement are mentioned by some participants when they engage in climate discussions and take action, indicating the potential positive impact of community engagement and social dynamics in addressing climate change. A 10-year-old girl said: *“Definitely, participating in climate discussions in my community and taking action makes me feel hopeful about climate change.”*

Survey responses help to flesh out this relationship. Over 92% of survey respondents are worried about climate change (Figure 9). The survey also explored the top concerns of participants regarding climate change.



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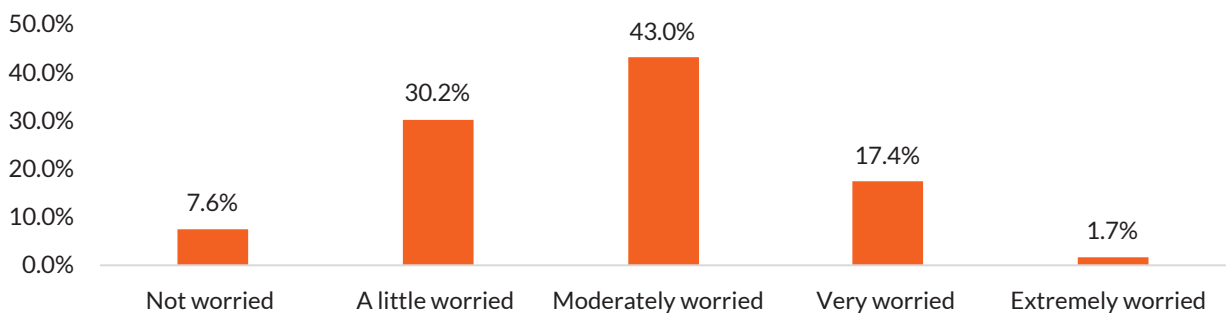
When asked to identify their main worry, children identified impaired access to education (50%), poverty (14.5%), air pollution (7.6%), and lack of clean water (6.4%) (Figure 10).

The survey delved into the range of emotions experienced by children concerning climate change. A significant number of surveyed children expressed negative emotions. While there may be no surprise that a high number (73.3%) would feel some measure of sadness, the complex range of emotional responses may point to a notable mental health impact: 81.3% experienced anxiety, 64.2% felt fear, then feeling down (54.8%), anger (49.1%), hurt (47.2%), helplessness (44.6%), powerlessness (38.3%), shame (37.7%), and guilt (32.5%).

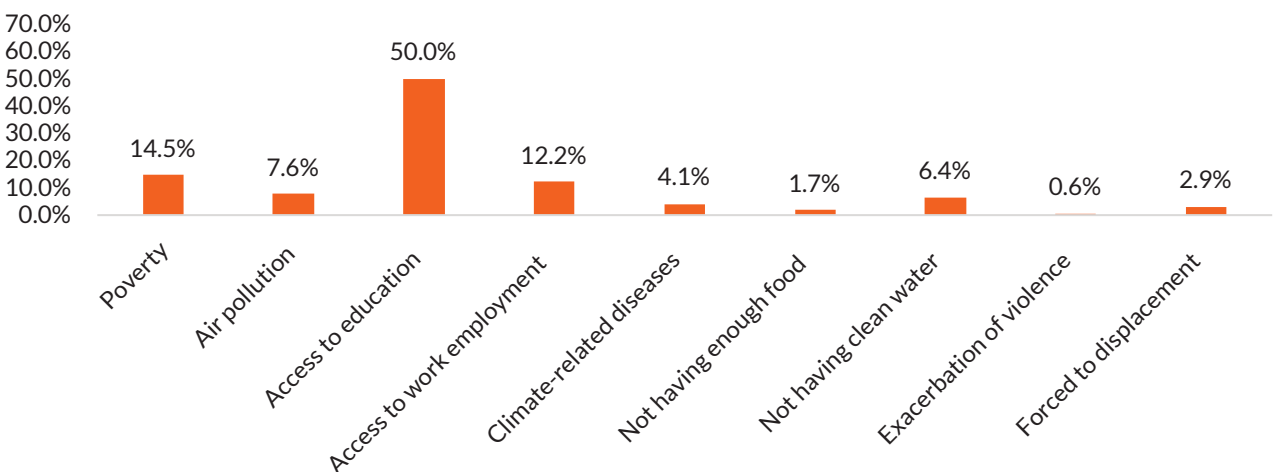
That said, almost half of the participants (40.9%) expressed optimism, indicating a sense of hope and belief in overcoming the challenges posed by climate change. It is also noteworthy that 24% of surveyed children displayed a lack of concern regarding climate change and its societal impact (Figure 11).

There was no statistically significant correlation between participation in climate response activities and negative emotions, however this does not disprove the hypothesis that participation in such activities can help to mitigate negative emotions. Negative emotions may indeed be a driver of participation, which, in turn, drives down negative emotions. Further research into this relationship may be illuminating.

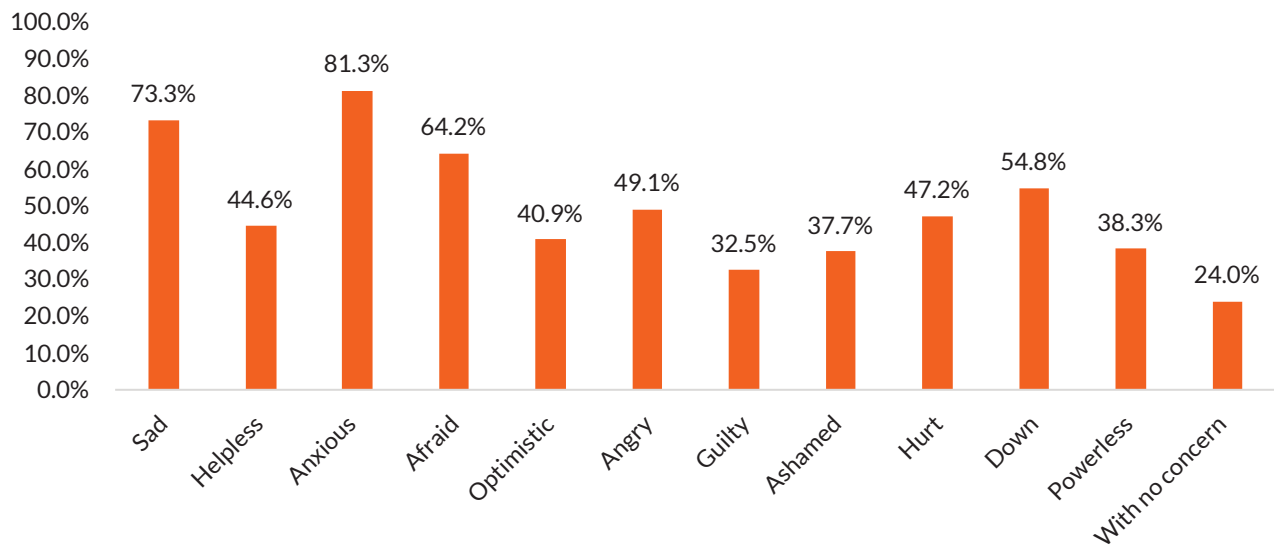
**Figure 9** Children's level of worries towards climate change.



**Figure 10** Children's first concern about climate change.



**Figure 11** Children's climate-related emotions.



#### 4.1.9 Gender, child rights and violence

***“Violence increases during periods of climate change, especially as unemployment rates rise and cases of poverty become more prevalent... Some people even resort to marrying off their underage daughters.”*** 16-year-old girl, small town.

Some interviewed children mentioned that girls are particularly vulnerable to the effects of climate change due to the lack of an environment conducive to their well-being and education. Climate-related factors such as droughts and extreme weather events hinder their ability to attend school, resulting in reduced attendance and disrupted education.

Asking children about gender-based violence and violence against children is sensitive and responses reflect varying levels of awareness and understanding. Some respondents acknowledge the presence of violence, particularly against children and girls, attributing it to a lack of awareness and cultural factors. They note that during periods of climate change, the incidence of violence increases, especially when unemployment rates rise and poverty becomes more prevalent. On the other hand, some responses deny the existence of violence or express uncertainty about its connection to climate change.

A 16-year-old girl said, *“There are various types of violence, such as physical, sexual, and emotional violence. Some people even resort to marrying off their underage daughters.”* A 15-year-old boy added, *“Girls are more susceptible to violence than others, in my opinion.”*

One prominent theme that emerges is the vulnerability of children, particularly girls and those with special needs, during periods of climate change. A 10-year-old girl said, *“The most vulnerable groups to violence during periods of climate change are children in general, girls, and individuals with special needs.”*

The impact of climate change on women and minority groups is also mentioned as another important aspect. These individuals are identified as particularly susceptible to violence, though the specific dynamics and challenges they face are not extensively elaborated on in the given responses.

The survey findings indicated that there is little recognition of girls' increased vulnerability to climate change compared to boys. While just over half of respondents suggest that girls may be more vulnerable than boys, fewer than half believe that girls are more likely to leave school to help their families recover from climate consequences affecting agriculture production, household food access, and household income. Approximately 42.5% of surveyed children perceive that girls are more likely to leave school to help the family recover when climate consequences affect agriculture production, while 31.4% believe the same when it comes to household food access. A minority believe that girls and women are more likely to skip meals if food availability is reduced (49.6%), take on the responsibility of fetching water (40.4%), face challenges related to poor sanitation and hygiene (49.6%), and experience increased risks during pregnancy (49.3%) (Table 5).

Surveys revealed that a smaller minority of children perceive specific risks associated with violence and physical abuse. Concerning water collection and fetching water, 15.5% of surveyed children believed that women and girls are subjected to physical abuse, while a lower percentage of 5.5% believe that boys and men are subjected to physical abuse while collecting water.

When it comes to food and water scarcity at home driving violence, 20.6% of surveyed children believe that women and girls are subjected to physical violence as a consequence, while 18.8% believe that men and boys are subjected to physical violence as well. In addition, 35.9% of surveyed children believe that women and girls are subjected to emotional or verbal violence, compared to 30.3% who believed the same for men and boys (Table 4).

Children were also asked if climate change can increase the occurrence of early forced child marriage. About one-third (32.5%) of surveyed children think that some girls are likely to get married early because of climate change, while a slightly lower percentage of 30.9% think it's the same for boys (Table 4).

**Table 4** Children's perception of climate change's impact on GBV and violence against children.

Total Sample	n(%)	
	<b>N=172</b>	
Perceived climate change impact on gender-based violence	Physical abuse (women/ girls) during water collection	15.5%
	Physical abuse (men/ boys) during water collection	5.5%
	Emotional/verbal abuse (women/ girls) during water collection	25.0%
	Emotional/verbal abuse (men/boys) during water collection	25.0%
	Physical abuse (women/girls) when food and water are scarce	20.6%
	Physical abuse (men/boys) when food and water are scarce	18.8%
	Emotional/verbal abuse (women/girls) when food and water are scarce	35.9%
	Emotional/verbal abuse (men/boys) when food and water are scarce	30.3%
	Girls marry early because of climate change	32.5%
	Boys marry early because of climate change	30.9%
	Girls forced to stop school because of climate change	45.4%
	Boys forced to stop school because of climate change	46.8%

**Table 5** Children's perception of gender vulnerability due to climate change.

	(%)	
Total sample	N=172	
Girls more vulnerable to climate change	Yes	50.6%
	No	49.4%
Girls are more likely to leave school to help the family recover when climate consequences affect agriculture production/farming	Agree	42.5%
Girls are more likely to leave school to help the family recover when climate consequences affect household access to food	Agree	31.4%
Girls are more likely to leave school to help the family recover when climate consequences affect the household income	Agree	47.1%
Girls and women are more likely to skip meals if climate change reduces the food availability	Agree	49.6%
Girls and women are more likely to fetch water when there is a need	Agree	40.4%
Girls and women are more likely to be affected by poor sanitation and hygiene	Agree	49.6%
Pregnant women are at increased risk as a result of climate change	Agree	49.2%

## 4.2 Impact of climate change on young people aged 18-24 in Ninewa governorate, Iraq

### 4.2.1 Socio-demographic characteristics

In addition to children and adolescents, this research also conducted interviews with four young adults, aged 18-24, two female and two male. Fifty-three people in this age group were surveyed with 49.1% being female and the other 50.9% being male. 83% of them were single while 17% were married. The majority of participants are Iraqi citizens (96.2%). A majority (81.1%) of the surveyed young adults reside in a small town, whereas 18.9% reside in a rural area. Over 40% (41.5%) of them live with a single parent, 32.1% live in a female-headed household, and 17% are members of a minority group. Some of these participants are residing with members who need special care, 26.4% live with chronically ill members, 13.2% include an elderly member in the household, 9.4% live with members with physical disabilities, 9.4% live with members with psychosocial disability. The survey data reveals that 24.5% of the participants currently participate in a youth group (Table 5).

When it comes to education, 47.2% are still pursuing their formal education while 52.8% are not. The highest level of education attained by the participants varies, where 24.5 finished high school, 24.5% pursued post-secondary or university, 17% are illiterate, 17% finished primary levels, 11.3% reached at least some secondary levels, and 5.7% pursued technical or vocational degrees. In terms of employment, the data indicated that 24.5% of these participants are currently employed while the rest (75.5%) are not (Table 6).

**Table 6** Socio-demographic characteristics of surveyed young people

Total Sample	N=53	
Sex	Male	50.9%
	Female	49.1%
Marital status	Single	83.0%
	Married	17.0%
Status in the country	Citizen	96.2%
	Citizen/host community	3.8%
Family situation	Single father/mother	41.5%
	Female-headed household	32.1%
	Members of minority groups	17.0%
	Unaccompanied minors	5.7%
	Members with physical disability	9.4%
	Members with psychosocial disability	9.4%
	Members with intellectual disability	1.9%
	Members chronically ill	26.4%
	Elderly members	13.2%
	Other	22.6%
Young adult Groups	Currently	24.5%
Community type	Rural	18.9%
	Urban	81.1%
Current enrollment in formal education	Yes	47.2%
	No	52.8%
Highest level of education attained	Illiterate	17.0%
	Primary	17.0%
	At least some secondary	11.3%
	Finished high school	24.5%
	Post-secondary/ university	24.5%
	Technical/vocational	5.7%
Current employment	Yes	24.5%
	No	75.5%

#### 4.2.2 Experienced and perceived climate change impact on young people and the community

The four interviews provide granular, if only indicative, detail about the diverse impacts of climate change on young adults, and begin to point towards variations in experience according to socioeconomic conditions and geographic location.

Notably, interlocutors observed that male young adults may experience particular pressure to leave education to pursue incomes that will assist their families in coping with the changing environment compared with young women who may tend to receive more support from their families to continue their education. A 24-year-old woman said, *“In my community, young people, especially males, leave their schools to help their families sustain a living.”* She added, *“When heavy rainfall and floods occur, or when the final exams season comes and the temperature is high in Iraq, it affects the students and young people in terms of delaying their lessons.”*



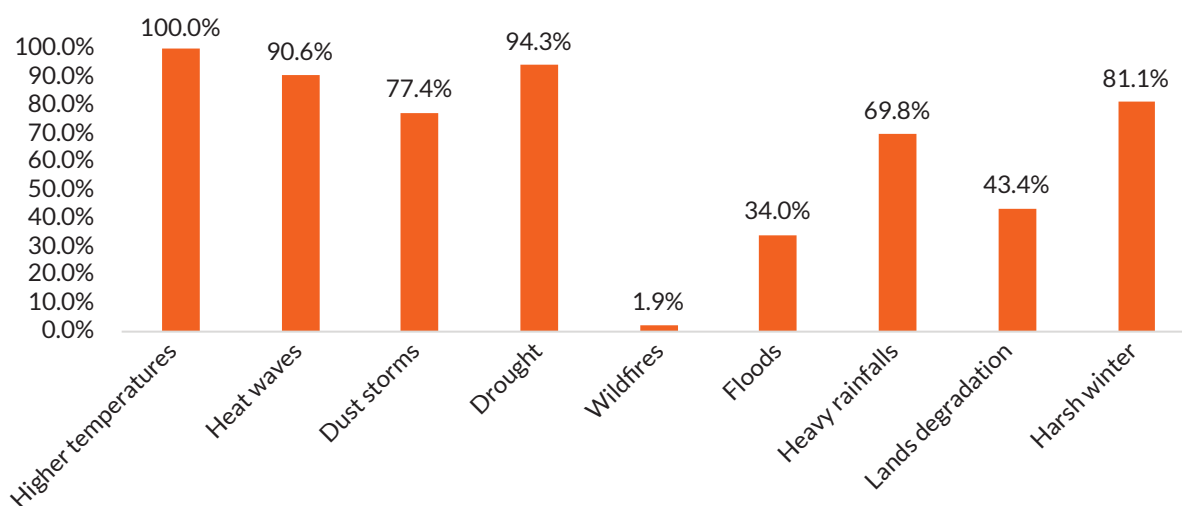
These interviewees also discussed the experience of internally displaced young people living in camps, upon whom the impact of climate change is significant, especially during extreme weather. Intense heat during the summer season poses challenges to their well-being and living conditions, leading to discomfort, health issues, and limitations in daily activities. Similarly, harsh winter conditions create difficulties in staying warm, accessing appropriate shelter, and engaging in outdoor activities during cold weather.

These interlocutors observed that extreme weather has far-reaching effects on young adults in the community due to fuel scarcity and electricity shortages alongside educational and occupational impacts, including decreased motivation and absenteeism. A 24-year-old woman said, *“The impact of climate change on young people is evident in various ways, affecting their motivation and attendance at school or work. The challenges go beyond the young people: the entire community is affected by electricity shortages and reliance on generators, which can be disruptive and harmful in residential areas. Moreover, the use of stoves and fuel during winter poses health risks, highlighting the need for sustainable solutions to safeguard the well-being of everyone in the community.”* (The generators she mentioned include large, noisy diesel-powered generators that emit acrid and harmful fumes in the middle of residential areas to maintain electricity supply to an entire neighbourhood.)

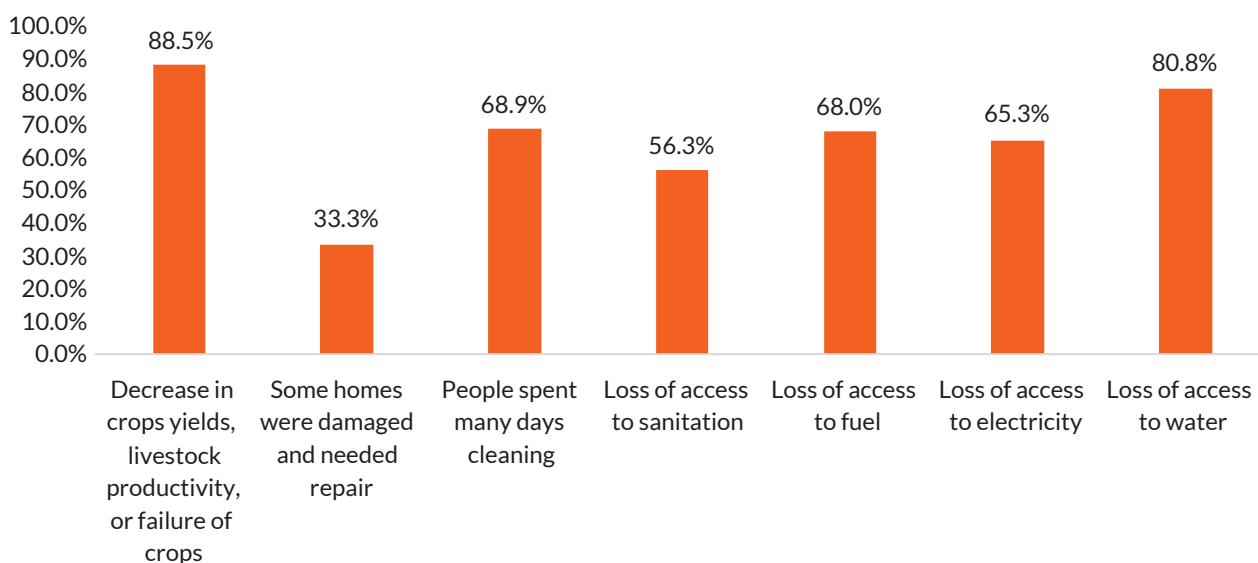
These perspectives are illuminated by survey data collected from young adults which highlight the severe consequences of climate change upon them. All respondents reported being exposed to increased temperatures, with 90.6% indicating their exposure to heat waves. Droughts were identified as a severe consequence affecting 94.3%, whereas dust storms and harsh winters were also identified as major consequences, impacting 77.4% and 81.1% of surveyed young adults respectively. An additional 43.4% of the participants experienced land degradation, 69.8% faced heavy rainfall, and 34% encountered floods (Figure 12).

In terms of the impacts on their community, 88.5% of the surveyed young people believed that climate change has resulted in a decrease in crop yields, livestock productivity, or even the complete failure of crops. Additionally, 33.3% observed damage to homes requiring repairs, while 68.9% mentioned that people in their community spend more time cleaning up after climate-related events. The effects on access to basic necessities were also pronounced, with 56.3% reporting a loss of access to sanitation, 68% to fuel, 65.3% to electricity, and 80.8% to water sources (Figure 13). When asked about the overall impact on people in their community, 73.1% considered climate change impacts to be negative.

**Figure 12** Experienced climate change consequences in young people’s communities.



**Figure 13** Young people's perceptions of the impact of climate change in their communities.



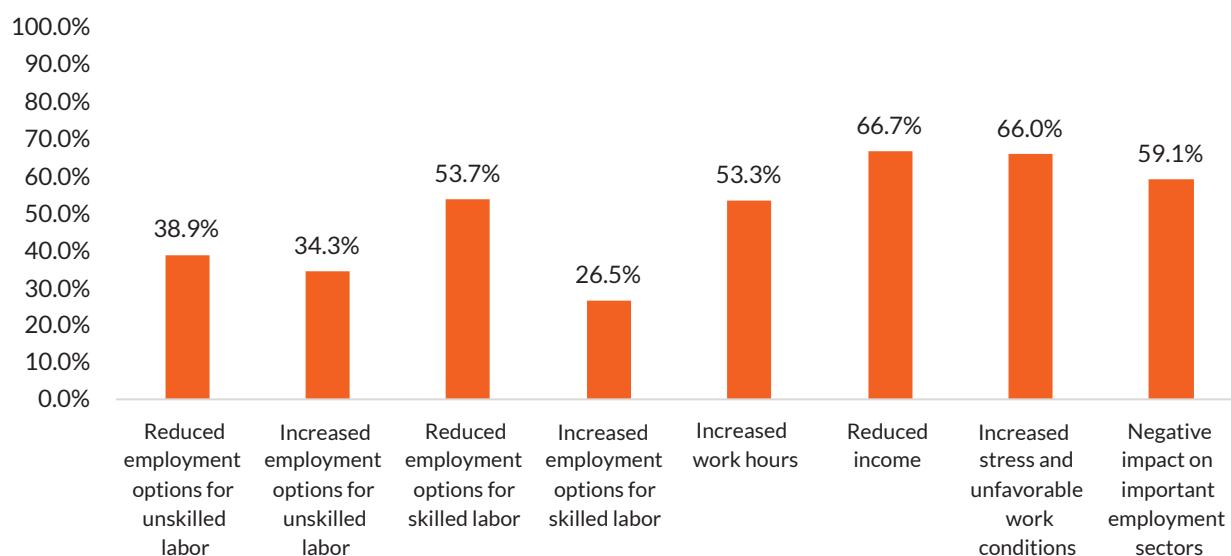
### 4.2.3 Perceived impact on employment

While young adult interviewees described the additional pressure on young men to create income due to the effects of climate change, these same effects are seen to be negatively impacting the availability of job opportunities and changing the nature of work.

The responses indicate that young adults are facing increased difficulty in finding suitable employment due to the scarcity of job opportunities and the competitive labour market, exacerbated by the effects of climate change. The nature of work is also influenced by climate change, as mentioned by a 24-year-old woman who highlighted that individuals in their society adapt to the climate change by working for shorter hours. This adaptation reflects the impact of climate-related factors, such as heat stress, on work capacity and health. The consequences of climate change are particularly pronounced in the agricultural sector, where changes in rainfall patterns and environmental degradation significantly impact productivity and by extension contribute negatively to the prospects of young adults seeking employment in this sector.

The survey data indicates that young people have varied perceptions regarding the impact of climate change on employment opportunities. A significant percentage of surveyed young people (38.9%) believe that climate change can reduce employment options for unskilled labour, while a higher percentage (53.7%) holds the same belief for skilled labour. Two-thirds (66.7%) believe climate change affects income levels, 66% believe that climate change can lead to increased stress and unfavorable working conditions, and 53.3% believe that it can increase working hours. Over half of surveyed young people (59.1%) think that important employment sectors can be negatively impacted by climate change (Figure 14).

**Figure 14** Young people's perception of the impact of climate change on employment.



#### 4.2.4 Perceived impact on mental health

***“Participation improves individuals’ behaviours, and people discover new talents to continue these efforts.”*** 27-year-old woman, small town.

As with children and adolescents, the responses from young adults regarding climate change reveal a spectrum of worries, emotions and concerns with varying degrees of intensity. A 20-year-old man opens up about his emotions, saying, *“Yes, I feel depressed.”* Climate change and its effects appear to be affecting young people’s well-being and outlook. The responses also reflect frustration and discouragement among individuals, who perceive the task of combating global warming and its impact on the environment as daunting. One person strongly emphasises the urgency of the situation, stating, *“If the world remains the same, it will lead to destruction.”*

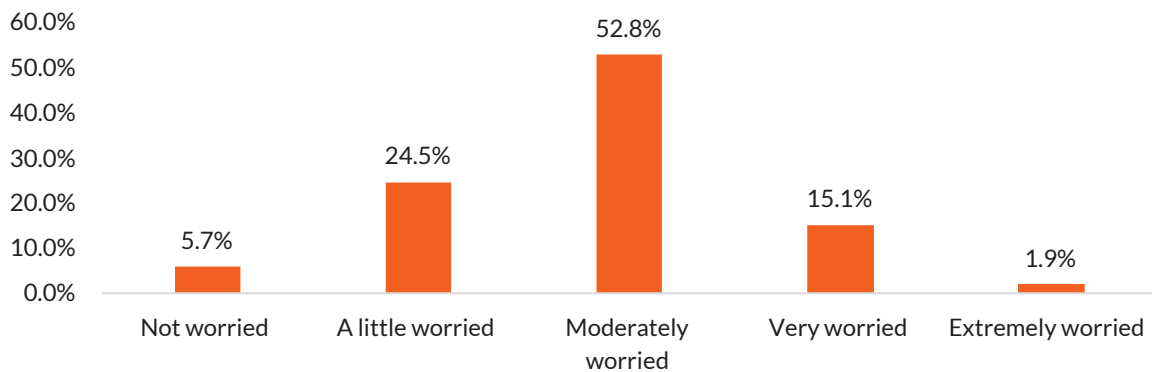
Some find solace in their faith and trust in a higher power. Or they maintain a sense of control over the situation, fostering a more optimistic outlook. A 27-year-old woman shares her belief that *“Everything is in the hands of God.”*

Amidst the challenges, there is a recognition of the importance of taking action. While some young adult respondents feel helpless about influencing others’ opinions, they also emphasise the significance of identifying and implementing effective means of action to address climate change. A 21-year-old man expresses his concern, saying, *“Yes, I feel pressure because I cannot control people’s opinions.”* Another woman, aged 24, adds, *“If there are means available, we should work on them rather than doing nothing.”*

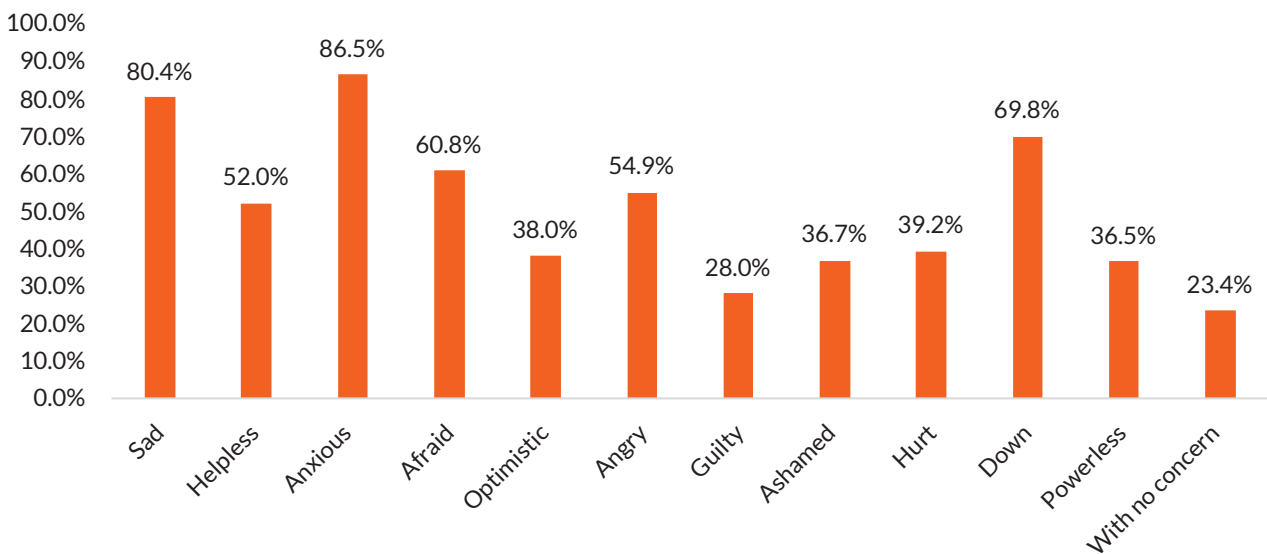
One interlocutor observed that participation in climate discussions and taking action is associated with a positive outlook on addressing climate change. A 27-year-old woman affirms this, stating, *“Yes, definitely. Theoretical and practical participation improves individuals’ behaviours, and people discover new talents to continue these efforts.”*

The survey data provided insights into the mental effects of climate change on young adults, revealing that the vast majority (94.4%) of participants are worried about climate change (Figure 15). A considerable percentage of participants reported experiencing other negative emotions associated with climate change, with 80.4% expressing feelings of sadness, 52% experiencing helplessness, 86.5% feeling anxious, 69.8% feeling down, 60.8% expressing fear, and 54.9% expressing anger (Figure 16).

**Figure 15** Young people’s level of worries about climate change.



**Figure 16** Young people’s climate emotions.



### 4.3 Children and young people as agents of change

#### 4.3.1 Motivation to engage in environmental activities

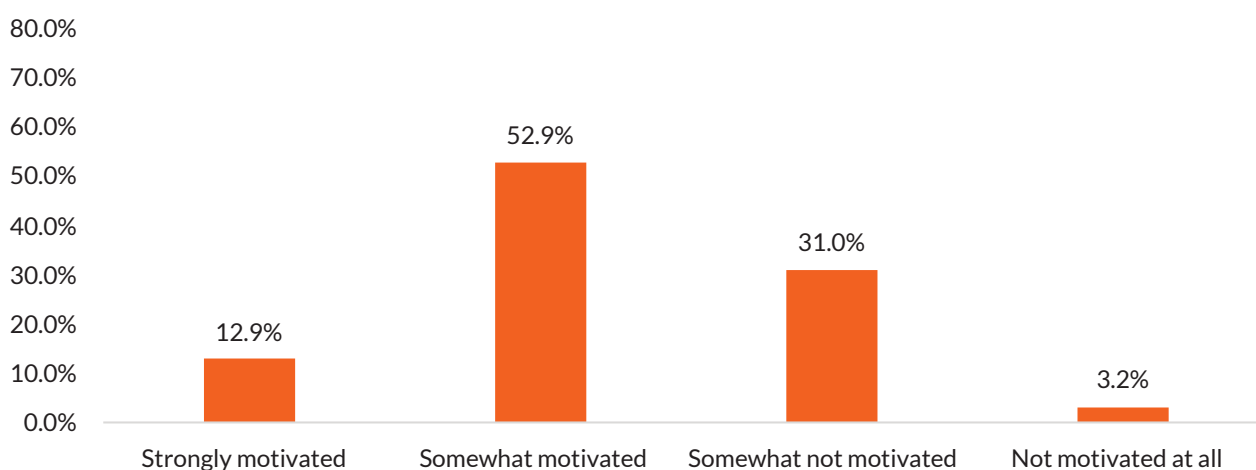
In examining the perspectives of children and young people regarding personal efforts to mitigate climate impacts, a diverse range of approaches emerges. Children, in particular, highlight their commitment to environmental responsibility and sustainability while acknowledging limits and barriers to their agency. One 10-year-old girl expresses her dedication to preserving the environment, stating, “I can only contribute by not littering in playgrounds and public areas and avoiding wildfires.”

And not all feel they can effect change. Another 10-year-old girl mentions, “I don’t take any specific steps as I’m busy with school and focusing on my academic responsibilities.” Age is also cited as a factor limiting the extent of personal actions. A 9-year-old boy admits, “Due to my young age, I am unable to take significant actions to mitigate climate impacts.”

On the other hand, some young people are actively pursuing knowledge and raising awareness about climate change. A 16-year-old girl shares, “I take educational courses on climate change and raise awareness about how to protect the environment.”

The survey data provided valuable insights into the motivation of children and young people to engage in environmental activities. The findings revealed that a significant percentage of surveyed children and young people, specifically 12.9%, expressed strong motivation and 52.9% reported being somewhat motivated to engage in environmental activities (Figure 17).

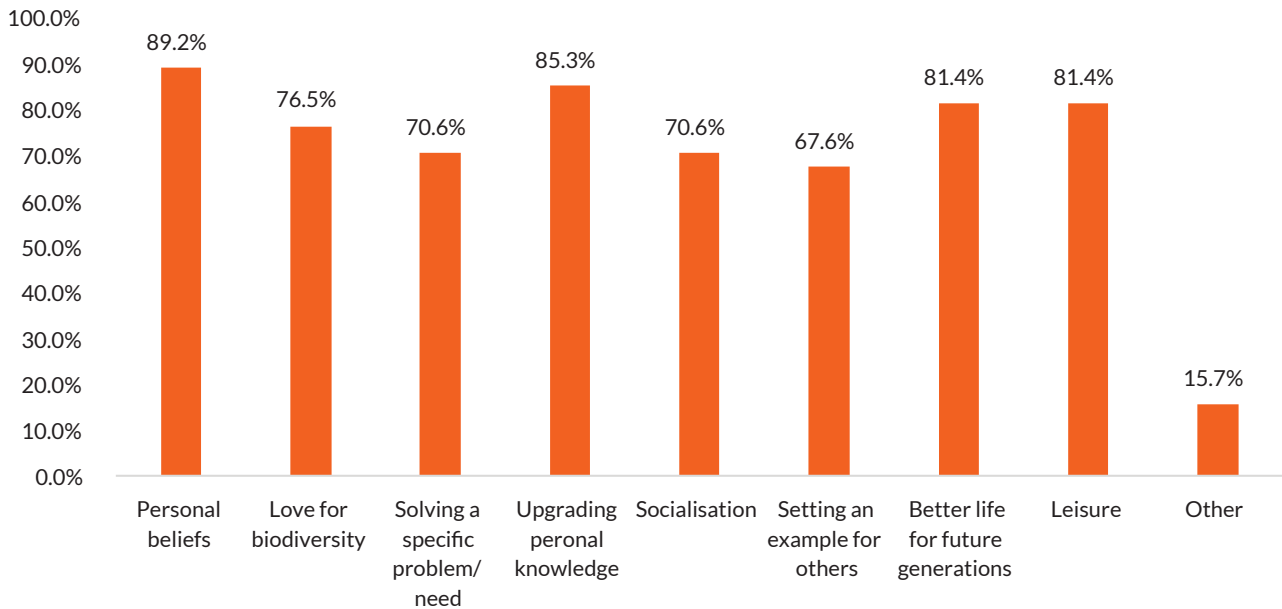
**Figure 17 Motivation to engage in environmental activities.**



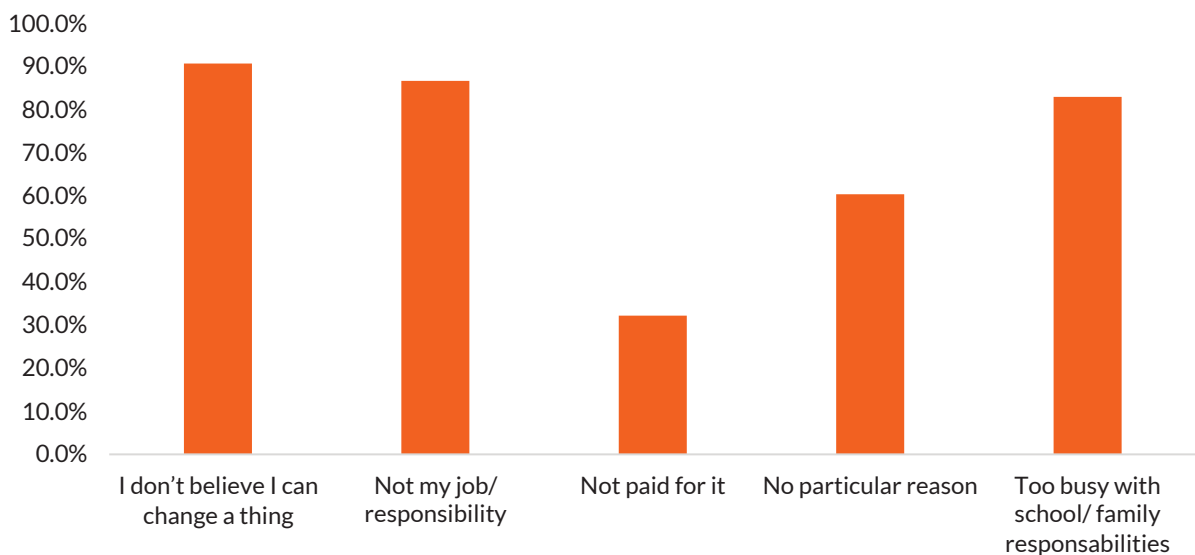
The survey further examined the sources behind the motivation. The reasons behind this motivation include personal beliefs (89.2%), love for biodiversity (76.5%), upgrading personal knowledge (85.3%), solving a specific problem (70.6%), socialisation (70.6%), better life for future generations (81.4%), and leisure (81.4%) (Figure 18). On the other hand, the survey also examined the reasons behind the demotivation of certain children and young people. The majority (90.6%) are demotivated because they don’t believe they can change anything. Moreover, 86.8% believe that they are demotivated because it is not their job or responsibility, whereas 32.1% believe that they are not paid to engage in environmental activities. Lastly, 83% of surveyed children and young people are demotivated because of being too busy with school and their social life (Figure 19).



**Figure 18 Sources of motivation.**



**Figure 19 Sources of demotivation**



### 4.3.2 Taking action and practising mitigation solutions

Almost 18% (17.9%) of surveyed children and young people say they actively engage in activities to protect the environment, while the majority (82.1%) say they do not currently participate in such activities. When asked about the types of activities they practice regularly, often, or sometimes, surveyed children and young people highlighted several common practices. Perhaps unsurprisingly, the most prevalent activity was walking, with 98.2% of them engaging in this environmentally friendly mode of transportation – while the majority do not recognise that this is part of sustainable living and part of combatting climate change. Paying attention to water consumption was also a highly common practice,

with 79.9% of surveyed children and young people actively making efforts to conserve water. Similarly, 77.5% of all young people expressed a conscious effort to reduce electricity consumption. Additionally, 48.4% of participants reported sorting waste, collecting garbage from public areas (42.1%) and not using plastic bags (51.9%). Engaging in activities such as donating clothes (69%) and discussing ecology with family and friends (80.9%) also showcased children and young people's commitment to promoting sustainability through personal actions and raising awareness within their social circles (Figure 20).

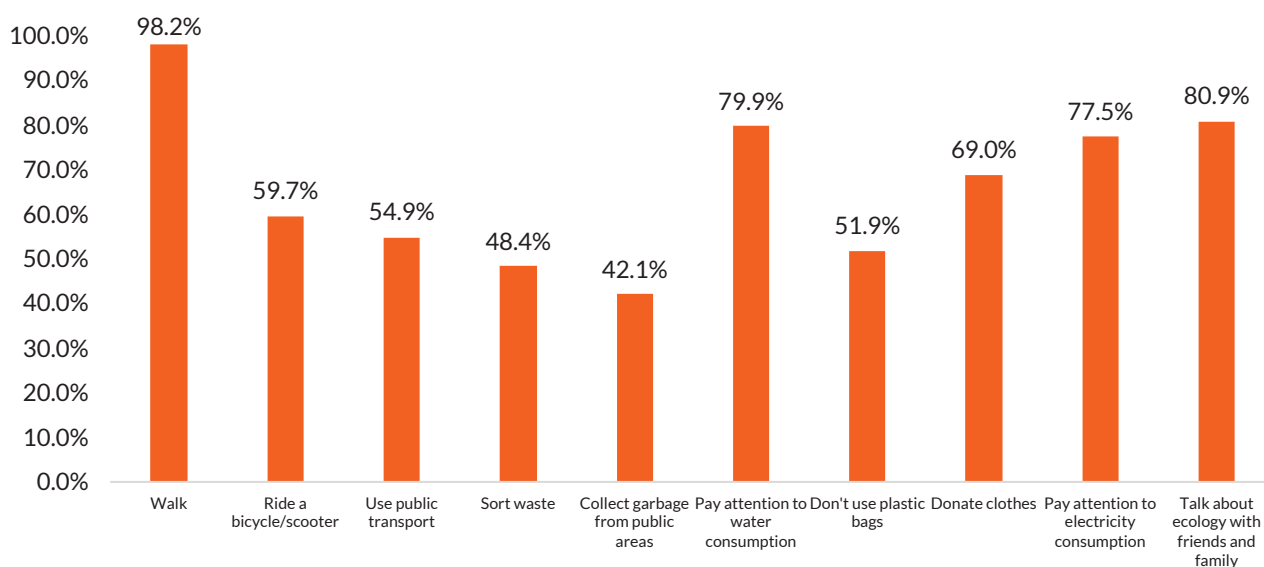
One 20-year-old man elaborates, *"We try to reduce fuel consumption by using it efficiently and minimise electricity usage."* Minimising plastic use and managing waste responsibly is another prominent practice. The same 20-year-old man shares, *"We make an effort to minimise use and avoid burning or discarding it."* Some respondents are taking practical steps toward sustainable transportation. A 24-year-old woman emphasises, *"I use a bicycle for personal errands and engage in tree planting activities at home."*

Another measure that young people note is afforestation, as emphasised by a 20-year-old man, *"Planting more trees and vegetation that contribute to cooling the environment and reducing heat can be an effective step."* Raising awareness within their communities is also prominent, as many young people highlight the lack of knowledge and understanding about climate change in their societies. *"Spreading climate awareness within my community is crucial because there is currently a lack of knowledge and understanding about climate change,"* said a 20-year-old man.

Furthermore, young people recognise the unique energy and dynamism of young adults, suggesting that young people can organise and lead campaigns to support vulnerable families affected by climate change. A 24-year-old woman believes that *"Young adults contribute by participating in afforestation campaigns if they are available in the area,"* showcasing their commitment to environmental conservation. Collaboration among young people is emphasised as a means to create safe environments free from conflicts. As a 21-year-old man highlights, *"I believe that young adults are less affected by climate change compared to children and older adults. Therefore, they can organise to collect funds for impoverished families to help them cope with climate change."*

By working together and fostering cooperation, young people can address climate change challenges more effectively, leading to innovative solutions and greater impact. However, economic constraints are acknowledged as potential barriers to fully implementing climate-friendly measures. A 24-year-old woman highlights, *"Limited financial resources hinder some actions we want to take at present or in the future."*

The responses from the children in the community showcase a remarkable level of awareness and understanding regarding the significance of their actions in mitigating climate change. One 10-year-old girl emphasised the importance of proper waste disposal and not littering in public places showcasing her awareness of the impact of waste on the environment and her determination to maintain cleanliness in her surroundings. Another nine-year-old boy mentions being mindful of water usage and using perfumes sparingly, indicating his consideration for conserving resources and reducing unnecessary consumption. A 16-year-old girl takes into account her energy, electricity, and water usage, indicating a conscientious effort to control her environmental footprint. Furthermore, a 13-year-old girl's engagement in tree planting activities demonstrates her proactive approach to combat climate change. The responses also highlight the positive influence of family and community on the children's actions. Some children mention learning responsible waste disposal practices from their families and relatives, indicating that environmental awareness is being instilled from an early age. The mention of voluntary community work and tree-planting projects demonstrates a collective effort to address environmental challenges and foster a sense of community responsibility.

**Figure 20** Type of activities practised regularly, often or sometimes

### 4.3.3 Preparedness for climate disasters

The data from the survey revealed that a considerable portion (63.6%) of children and young people did not engage in any preparedness plans for climate change in the past five years. However, 13.8% of the participants reported receiving education on potential disasters either at school or in young adult groups. Additionally, 11.1% of the participants stated that their families have an emergency plan in place to address climate-related disasters.

In terms of specific preparedness actions, the survey found that a smaller percentage of participants have practised an evacuation drill (5.8%) and prepared a disaster kit (7.6%).

### 4.3.4 Children and young people's perception of government responses to climate change

The KIIs provided valuable insights regarding the actions that young people and children believe national and international governments should take. One prominent theme mentioned by the interviewees was raising awareness and education. People want the government to prioritise climate awareness and education by promoting climate literacy. It is emphasised that the government should actively participate in raising climate awareness by conducting campaigns, providing education, and overseeing environmental practices in factories and workplaces. A 20-year-old man said, "Government should focus on climate awareness and spreading knowledge among society." A 10-year-old girl further highlighted "The government has an active and important role through awareness campaigns and educating citizens to understand their role and impact on climate change."

Moreover, the participants also highlighted the need for effective reforestation and waste management initiatives by these officials. There is a call for tree-planting initiatives and proper waste management practices, including avoiding burning waste and promoting recycling.

Additionally, there is a demand for the government to promote the use of renewable energy sources and discourage the burning of fossil fuels while ensuring a continuous supply of electricity to reduce reliance on generators. A 24-year-old woman shared, "Transition to renewable energy sources and promoting

*recycling are crucial.*" The interviewees urged the government to prioritise greening initiatives in streets and households, such as increasing the number of trees planted. *"Investing in green infrastructure, such as planting more trees, is essential,"* a 24-year-old woman mentioned.

When it comes to the perception of the government's response, children and young adults residing in Iraq hold mixed views about the effectiveness of the government's actions to address climate change. While a significant majority (62.4%) believe that the government is taking their concerns seriously, a notable 51.5% feel that the government disregards their distress. More than half (57.9%) of the respondents express trust in the government's efforts, though less than half (47.2%) believe that the government is actively working towards protecting children, young people, the planet, and future generations. Some (32%) believe that the government is not entirely truthful about the effectiveness of the actions they are taking and a similar 31.5% of the participants feel that the government is failing young people in their country. Almost a quarter of interviewees (23.9%) believe that the government is betraying children, young people, and future generations.

#### **4.3.5 Children and young people's perceptions of NGOs' role in response to climate change**

Interviewed children and young people expressed their views on how international organisations can engage them in discussions about climate change. One prominent theme that was mentioned was the use of surveys and questionnaires. Interviewees believe that surveys and questionnaires provide a structured and systematic way to collect data and insights from children and young adults. By designing age-appropriate surveys, organisations gather valuable information about their perceptions, concerns, and ideas related to climate change. These surveys can be distributed in schools, community centres, or online platforms to reach a diverse range of participants.

Young people expressed an interest in programmes specifically designed to enhance child and young adult participation in raising awareness and empowering them to take action in response to climate change. A 16-year-old girl mentioned, *"By supporting and nurturing the ideas and projects of children and young adults, we can harness their creativity and passion for addressing climate change."* Some young people proposed that NGOs should visit families and identify opportunities to enhance the sustainability of their homes as a complementary approach. Some suggested that NGOs should target solutions for vulnerable areas by identifying regions most affected by climate-related issues and offering simple, localised solutions, through which organisations can directly address the specific environmental health challenges faced by children in those communities. A 15-year-old boy further elaborated by saying, *"NGOs can play a role in providing necessary resources to vulnerable families, such as electric devices like heaters, to mitigate the impact of climate change."*

When it comes to the responsibilities of child-focused NGOs like World Vision, young people and children believe that they should first focus on raising awareness and providing educational workshops and courses, crucial for empowering children with knowledge and understanding about climate change.

Another suggested action was working towards improving environmental and agricultural practices. A 20-year-old man stated, *"Promoting tree planting and creating green spaces not only benefits the environment but also enhances the well-being of children."* Planting more trees and creating green areas like gardens can significantly contribute to carbon sequestration and enhance urban biodiversity. By involving children in tree-planting initiatives and promoting garden development, these organisations can instil environmental awareness and responsibility from an early age.



## 4.4 Intergenerational perception of climate change

### 4.4.1 Climate crisis responsibility and perception of intergenerational change

The perception of climate change impacts among caregivers in Iraq reflects a sense of responsibility and concern about the current state of the environment and its impact on future generations. Caregivers unanimously agreed that the responsibility for climate change lies with everyone, but especially with the older generation. One caregiver points out that climate change began around 50 years ago, coinciding with rapid industrialisation, and believes that the older generations between 1960 and 1990 bear significant responsibility for not acknowledging the severity of their actions, such as cutting trees and abusing natural resources.

Caregivers expressed pessimism about the world they are leaving for their children. They fear that if the current situation persists, their children will inherit a damaged and uninhabitable environment. Additionally, there is a concern about the lack of awareness and knowledge on how to protect the environment, especially in the context of Iraq, which further exacerbates the challenges posed by climate change. *“I am pessimistic because there is a lack of awareness for future generations on how to protect the environment,”* said a 55-year-old woman.

Differences between the older and newer generations are also noted by the caregivers. One caregiver believes that the older generation had healthier values and principles compared to the current generation. This highlights the perception that values and traditions have shifted over time, potentially contributing to changes in attitudes towards the environment.

Regarding their impact on social change, the caregivers’ opinions are divided. Some feel that their impact has been limited, as issues like equality and job opportunities continue to be problematic. However, others believe that they have made a positive difference, especially in areas like gender equality and technology.



Overall, the intergenerational perception of climate change among caregivers in Iraq showcases a shared sense of responsibility and concern. The caregivers acknowledge the importance of taking collective action to address climate change, especially in light of the potential consequences for future generations. They express hope for positive change while recognising the need for greater awareness and sustainable practices to protect the environment and ensure a better world for their children. As one 63-year-old man states, *“If humanity stays like this with the same style of living, we would be leaving our children with a damaged environment that isn’t suitable for living.”*

#### **4.4.2 Actions taken by older persons to address the current climate situation**

The actions taken by some of the older generations of caregivers in Iraq to combat climate change demonstrate a strong sense of responsibility towards protecting the environment and securing a better future for their children. Some actively support their children by providing advice and raising awareness about climate change and its impact on the environment. They encourage the younger generation to adopt healthier ways to protect the planet and actively engage in activities that will be beneficial for the upcoming years. A 55-year-old woman said, *“We support children by raising their awareness and advising them to use healthier methods to protect the environment.”*

Some caregivers are deeply committed to safeguarding their children’s future through various means. They focus on raising awareness about climate change and its consequences, advocating for environmentally friendly practices, and taking concrete actions like planting trees, using energy-efficient sources, and promoting responsible waste management. Their dedication to creating a sustainable environment for the next generation is evident in their daily actions and choices. A 59-year-old woman said, *“I try to engage them in activities that are beneficial for the climate.”*

Despite their efforts, caregivers face challenges in their pursuit of climate action. While they engage with friends and family to raise awareness and advocate for change, some caregivers expressed frustration with the lack of results when it comes to pressing politicians to act. They feel that their voices are not being heard and that their efforts to influence decision-making processes often go unnoticed.

The caregivers’ reluctance to use their rights to pressure politicians stems from a belief that they lack the necessary power and influence, and they have reservations about the effectiveness of the election process. This suggests a broader issue of political disillusionment and a sense of powerlessness in the face of larger systemic challenges. Nevertheless, the caregivers’ actions and advocacy play a crucial role in instilling a sense of responsibility and awareness among the younger generation. Their dedication to raising environmental consciousness and taking proactive measures to combat climate change sets an example for their children and the wider community.

Their actions serve as a reminder that addressing climate change requires collective efforts from all generations, and the intergenerational bond plays a vital role in shaping a more sustainable and resilient world.

### **4.5 Local initiatives and areas of support**

#### **4.5.1 Recognising the threat of climate change**

The stakeholders’ perspective on climate change is unanimous. They believe that it affects everyone, transcending borders and impacting all countries. The consensus is that climate change has severe effects on humanity as a whole. This understanding highlights the global nature of the issue and

emphasises the need for collective action and cooperation among nations to address the challenges posed by climate change.

#### 4.5.2 Specific goals, measures and successful initiatives

The expert stakeholders' perspectives on actions to combat climate change are diverse, encompassing various areas of focus and approaches. One common theme that emerges is the recognition of the agricultural sector's significance in addressing climate change. Stakeholders emphasise the importance of encouraging and improving agriculture to protect the environment. They see the potential for positive change through sustainable agricultural practices that preserve nature and promote ecological balance. One recommends, *"Encouraging and bettering the agricultural sector in order to protect the environment; using clean energy sources and improving it."*

Another key aspect that stakeholders support is raising awareness about climate change. They believe that communities need more information and engagement to find effective solutions to this global challenge. Moreover, stakeholders advocate for support from governmental and non-governmental organisations to enhance climate change initiatives and make them more inclusive. *"Communities are in need of more awareness and engagement to try and find a solution for this problem. Support from governmental and non-governmental organizations is needed."*

In the context of religious perspectives, some believe that cooperation between all religions is essential in climate-related initiatives, with others emphasising the role of religion in promoting awareness across all areas of life. This suggests that stakeholders recognise the potential for religious communities to play an active role in advocating for climate action and increasing environmental consciousness. *"There should be cooperation between all religions and engagement in such initiatives to improve it and raise awareness."*



### 4.5.3 Young adults involvement and gender needs

The stakeholders recognise the significant role of young adults in driving positive change and improvement, particularly in education and raising awareness. They firmly believe that young people should be given opportunities and support to pursue their goals and aspirations in life. By empowering young adults, stakeholders envision a brighter future where the energy and enthusiasm of young individuals can contribute to addressing critical issues like climate change. *“Youth are a crucial element in improving every aspect, in terms of education and raising awareness.”*

Stakeholders express a strong commitment to involving young people in official roles related to climate change. They advocate for prioritising young adult leadership in organisations and areas dedicated to climate change initiatives. By entrusting young adults with responsibilities, stakeholders believe that they can effectively contribute to finding solutions and making a positive impact. *“We should give youth the responsibility of leading organisations that work on improving this issue or any area related to climate change.”*

Regarding the effects of climate change on different genders, stakeholders share a belief in equal impact. They assert that climate change affects everyone in the community, regardless of gender, emphasising the importance of collective efforts to combat its negative consequences.

Stakeholders also prioritise inclusivity and considering everyone's needs. They recognise the significance of building successful relationships within the community to foster a healthy and supportive environment. For stakeholders, their main goal is to improve and guide the community as a whole, cultivating values that benefit all residents. *“Our main goal is to improve and guide the community as a whole and plant the right values between the residents.”*

### 4.5.4 Areas of support

Stakeholders emphasise the importance of raising awareness as a fundamental approach to support various areas related to climate change. They recognise that increased awareness about climate change and its impacts is crucial in driving positive actions and building a more sustainable future. *“Support through community awareness in schools and universities, introducing the importance of confronting climate change, and implementing governmental awareness programmes and supportive programmes in this field. We can support it in several ways, including research and development seminars, awareness seminars, financial, and moral support.”*

Moreover, stakeholders acknowledge the need for international assistance, particularly in terms of financial support, to address climate change effectively. They propose the establishment of specialised institutions focusing on climate change and fostering positive energies to bolster their country's efforts. *“We need financial support from all international and civil institutions, by establishing specialisations in this field.”*

Furthermore, stakeholders believe that their country's institutional capacity needs to be developed to adapt to climate change effectively. They emphasise the significance of raising awareness and promoting lifestyles that align with climate change challenges. *“We need to raise awareness and create lifestyles that keep pace with climate change.”*

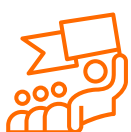
## 5. RECOMMENDATIONS

World Vision aims to protect and improve the well-being of children and young people, particularly in regions impacted by climate change in Iraq. The findings of this research point to seven ways local, national and international actors can work together to pursue this goal.



### **Enhance education and awareness programmes**

- a. **Who?** National governments (Government of Iraq (GOI) and Kurdistan Regional Government (KRG)), international donors, NGOs
- b. **What?** Resource and implement climate change education and awareness programmes with pathways to youth-led community environmental improvement.
- c. **Why?** To enhance young people's well-being and especially to address negative feelings, helplessness and depressed or pessimistic thinking reported by young people who are living with the effects of climate change; to capitalise on young people's high levels of motivation for impactful action; to enhance local environments and their resilience in the face of climate change.



### **Clearer national leadership**

- a. **Who?** National governments (GOI and KRG) with international support and NGO partners
- b. **What?** Enhance the communication of appropriate climate crisis adaptation and mitigation initiatives outlined below, with incentives and disincentives appropriate to a sustainable transition.
- c. **Why?** To address the trust deficit expressed by young people in government leadership in this area.



### **Promote sustainable agriculture**

- a. **Who?** National governments (GOI and KRG), international donors, local governments, NGOs, rural agriculturalists
- b. **What?**
  - i. Transition rural communities to climate change-adapted, sustainable agricultural practices that support food security and reduce vulnerability to droughts and seasonal weather variations.
  - ii. Urban projects should implement a Disaster Risk Reduction (DRR) approach to reduce the impact of heat waves and high temperatures by encouraging activities that reduce heat (shading, reflection).
  - iii. Agriculture projects must ensure inputs are not vulnerable to prolonged higher temperatures.
- c. **Why?** To address losses in food and crops, and consequent hunger and economic vulnerability experienced by children, and more broadly to protect children.



### **Promote water security**

- a. **Who?** National governments (GOI and KRG), international donors, local governments, NGOs, technicians
- b. **What?** Promote technologies and practices to minimise water waste and losses, and seek opportunities to rejuvenate water resources and build resilient water supply systems.
- c. **Why?** To address the failure of reliable and adequate water supply and to promote drought resilience.



### **Enhance the resilience of education**

- a. **Who?** National governments (GOI and KRG), international donors, governorate education departments, education practitioners, technicians, NGOs
- b. **What?** Support climate-resilient educational practices and infrastructure to ensure continuity of education during weather events.
- c. **Why?** To address the frequent losses in educational days to climate-related events.



### **Improve resilience to heat waves, dust storms, floods and droughts**

- a. **Who?** National governments (GOI and KRG), international donors, local governments, NGOs
- b. **What?**
  - i. Enhance climate-resilient infrastructure and landscapes, and establish and maintain community-based early warning systems for disaster preparedness and response.
  - ii. Promotion of DRR to reduce impacts of heat waves, dust storms, floods and droughts.
- c. **Why?** To minimise disruptions to essential services such as fuel, electricity, water and sanitation infrastructure, and housing, as indicated in this research.



### **Be sensitive to specific impacts on women and girls**

- a. **Who?** National governments (GOI and KRG), international donors, local governments, NGOs
- b. **What?** Systematic integration of gender indicators (measuring the specific impacts of climate change and programming responses for women, men, girls and boys) into government and non-governmental programmes.
- c. **Why?** To respond effectively to gender-based vulnerabilities exacerbated by climate change such as access to education, food, sanitation, and early, forced and child marriage.



## 6. CONCLUSION

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The research findings highlight the profound impact of climate change on the lives of children and young people in Ninewa, Iraq. Extreme weather events, disrupted education, compromised food security, and inadequate access to clean water are just a few of the challenges these vulnerable populations face daily. Climate change exacerbates existing vulnerabilities, deepening poverty levels, and threatening the well-being of future generations.

In response to these pressing issues, a comprehensive and integrated approach is required to address the complex interplay between various climate change effects. Collaboration across multiple sectors, including government, non-governmental organisations, communities, and international partners, is essential to create a unified and effective response. The collective efforts of all stakeholders will be crucial in building resilience and fostering sustainable solutions for the younger generation.

Empowering children and young people as agents of change is at the heart of this endeavor. Education and awareness-raising initiatives should be prioritised to equip them with the knowledge and tools needed to understand and address climate change. Engaging young adults in climate action projects and campaigns will harness their passion and creativity, driving positive change in their communities and beyond.

Furthermore, gender-sensitive approaches are vital to address the specific vulnerabilities faced by girls and boys in the face of climate change. Ensuring equal access to resources and opportunities will promote inclusivity and support the aspirations of all young people.

The urgent need to protect and improve the lives of children and young people in the context of climate change requires immediate and sustained action. World Vision, in collaboration with other stakeholders, has a critical role to play in advocating for policies that prioritise the well-being of future generations and investing in sustainable interventions that address the challenges of climate change head-on.

As the world grapples with the escalating impacts of climate change, it is essential to remember that the young generation holds the key to a more sustainable and resilient future. By nurturing their potential and providing them with the tools they need to thrive in the face of adversity, we can pave the way for a brighter and more equitable world for all. Together, we can create a lasting legacy of environmental stewardship and ensure that children and young people in Ninewa, Iraq, and beyond inherit a world that is conducive to their growth, development, and well-being.



