



for every child



EXECUTIVE SUMMARY

UNICEF IN IRAQ

CLIMATE LANDSCAPE ANALYSIS

FOR CHILDREN AND

YOUNG PEOPLE IN IRAQ



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Executive summary

Iraq is ranked 61st out of 163 countries on UNICEF's Children's Climate Risk Index,¹ and the United Nations Global Environment Outlook 6 (GEO-6) ranks it the fifth most vulnerable country to water and food shortages and extreme temperatures.² These rankings reflect the significant climate change risks faced by children in Iraq.

With nearly 60 per cent of Iraqis under the age of 25,³ it is imperative for all stakeholders to work to mitigate the impact of climate change on children and young people's health, education and protection, and empower them as agents of change to secure a prosperous future for the country.

To advance Iraq's efforts to mitigate and adapt to climate change, UNICEF recommends implementing bold measures in support of the Government of Iraq to **PROTECT** children and young people against climate change impacts, **EMPOWER** them to take a leading role in climate change action and **ENACT** climate, environment, energy and disaster risk management interventions that are gender-sensitive and inclusive of the most vulnerable Iraqis.

Iraq has an area of 437,072 square kilometres and a short coastline of 58 km along the Arabian Gulf. Its fertile land, and most of its population, is concentrated between the Tigris and Euphrates rivers. The north is mountainous, while the south consists of marshlands. The country has three climate

zones (desert, semi-arid steppe and Mediterranean) characterized by cool winters and dry, hot summers, with seasonal rainfall and dry, hot winds occurring during specific periods of the year.

In 2020, Iraq had a population of 40 million, with 28 per cent residing in rural areas. The government's primary source of revenue comes almost exclusively from oil.⁴ According to a 2022 analysis, the proportion of Iraqis living below the poverty line increased from one-fifth in 2012 to 30 per cent following the COVID-19 pandemic.⁵ Children are more likely to be affected by multidimensional poverty and a significant number of them belong to female-headed households. Years of instability and insecurity have led to extensive infrastructure damage and a considerable population of displaced people.

Iraq's per capita CO₂ emissions amount to 4.9 metric tonnes per year, with the energy sector responsible for nearly three-quarters of this total.⁶ This does not account for greenhouse gas emissions from the substantial oil and gas produced in Iraq and exported. The energy sector is the main source of in-country greenhouse gas emissions. Most electricity is generated through burning fossil fuels (81 per cent), while hydroelectric power accounts for 19 per cent.⁷ However, electricity demand outstrips power generation, and many rely on diesel generators to compensate for the shortfall.

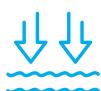
Persistent and event-based hazards in Iraq related to climate, energy and environment



Higher temperatures: Temperatures in the country are rising up to seven times faster than the global average.



Precipitation changes: Iraq's mean annual rainfall is projected to decrease by 9 per cent by 2050, while intensity is expected to increase⁸ resulting in prolonged dry periods interspersed with intense rainfall events.



Water scarcity: Iraq is among the world's most water-scarce countries. The groundwater level has fallen dramatically, with borehole depths increasing nearly threefold since 1996. River discharge rates have decreased while rising temperatures are increasing evapotranspiration.



Desertification: Changes in water availability is affecting the native ecosystems, resulting in the depletion of wetlands and decline of vegetation, ultimately turning semi-arid areas into deserts. As of 2020, desertification affected 53 per cent of the country, with 92 per cent of the population being affected by or vulnerable to its consequences.⁹



Coastal degradation: The coastal wetlands suffer from severe environmental degradation. Over the past four decades, water bodies have shrunk to a quarter of their original size and arid zones have tripled. This decline has severe implications for biodiversity, fisheries, marine ecosystems and local livelihoods.

CLIMATE, ENERGY AND ENVIRONMENT (CEE) CONTRIBUTE TO THE INCREASED FREQUENCY AND INTENSITY OF EVENTS THAT AFFECT CHILDREN'S WELL-BEING. IN IRAQ, THESE ARE LIKELY TO INCLUDE:



More frequent heatwaves: Iraq is in the highest category globally in terms of child exposure to extremely high temperatures, as all 19.6 million children in the country were exposed in 2020.¹⁰ The impact of heatwaves in Iraq extends beyond the health risks for children, affecting various aspects such as agricultural productivity, evaporation rates and occurrence of wildfires. Additionally, heat waves are associated with increased water and energy consumption as households strive to maintain a comfortable temperature.



More dust storms: Lack of vegetation and drought conditions contribute to loose soil, which can be lifted by the wind, causing dust storms. Between April and May 2022, nine dust storms swept through the country, resulting in thousands of hospital admissions.



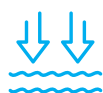
Increasing air pollution: In 2022, Iraq ranked second-worst out of 118 countries assessed in terms of air quality.¹³ Emissions from industry, transportation and electricity generation are the leading sources of air pollutants and are contributing to climate change.



More flooding: Increased rainfall intensity and reduced vegetation heighten the risk of flooding. Many Iraqi cities are particularly vulnerable to this hazard.



More water pollution: Two-thirds of industrial and household wastewater is discharged untreated, and around 6 million cubic metres of untreated sewerage is dumped into Iraqi rivers daily. Half of household water supply and 40 per cent of water sources test positive for E.coli. Insufficient water quality for irrigation along with mass fish deaths and animal diseases have also affected the region, especially in the southern marshes and surrounding farming communities.^{14,15,16}



Frequent drought: It is projected that six out of nine Iraqi governorates will experience water shortages at least once a year by 2050.¹¹ The governorate of Basra, in the south, is expected to be the most adversely impacted.¹²

The water, health and agriculture sectors face significant exposure to climate change, energy and environment hazards, making them particularly vulnerable. Water scarcity and drought greatly threaten water and agriculture, with knock-on impacts on food security and health. It is estimated that half the population will lack sufficient water, by 2060,¹⁷ while

climate change threatens 92 per cent of agricultural land. The health system has limited adaptive capacity to address future climate change impacts on health. It also lacks monitoring, early warning or emergency preparedness for malnutrition, thermal stress, vector-borne diseases, injuries or airborne and respiratory diseases.

Iraqi children's vulnerabilities to climate change, energy and environment

Children's vulnerabilities to climate change, energy and the environment are increased by inadequate health, education, protection and water, sanitation, and hygiene (WASH) services. These vulnerabilities

are exacerbated by gender-related discrimination. Essential services are also affected by climate change, necessitating support to build resilience and protect children's rights and well-being.



Water, sanitation and hygiene: Reduced water availability can cause competition and social instability among communities. As water quality declines due to limited water flows, people experiencing poverty and marginalization are more likely to use unsafe water sources, contributing to illness and death. Only 60 per cent of households in Iraq have access to safely managed water sources, with large geographical disparities. Vector-borne and WASH-related diseases pose growing risks, i.e. *Escherichia coli* (E. coli) and cholera. Girls and

young women, who typically bear significant caregiving responsibilities and have specific hygiene needs, are particularly affected.



Health and nutrition: Children in poor health and those who do not receive adequate nutrition in early childhood, are significantly more susceptible to environmental stresses. Iraq's already weak health system increases vulnerability, particularly among children with disabilities and adolescent girls. In addition to water-borne and vector-borne diseases,

dust storms pose risks of respiratory and cardiovascular diseases. Air pollution is a major threat to child health, while extreme weather events put children at risk of physical harm and have mental health impacts. Climate change also impacts food availability and quality, posing risks to health and development.



Education and learning: Education can be an opportunity to build knowledge and resilience to climate change if children are able to access it. Education is also the foundation which enables children and young people to be agents of change and participate in the green economy. Extreme weather events can interrupt education for extended periods, leaving children at a life-long disadvantage and reducing their likelihood of returning to school. In Iraq, 48 per cent of schools already lack access to basic water services.¹⁸ This disproportionately affects girls whose attendance is impacted by access to water for hygiene and sanitation. Children whose education is interrupted are also vulnerable to negative coping practices, such as child labour or child marriage.



Social and child protection: Climate change exacerbates the vulnerability of already marginalized populations. Families in poverty have less resilience to climate change impacts, experience food insecurity, and may

resort to negative coping mechanisms such as child labour and child marriage. Nearly one in two children in Iraq live in multidimensional poverty, while two out of five Iraqi children face monetary poverty due to the COVID-19 pandemic.^{19,20} This contributes to 7 per cent of children and adolescents aged 5 to 17 years engaging in child labour and 28-per cent of girls married before reaching 18 years of age.²¹ Stress and shocks correlate with higher rates of gender-based violence and the agency of girls and women is undervalued. Iraq already ranks 154th out of 156 countries on the Gender Inequality Index, with an estimated 1.32 million people (75 per cent women and adolescent girls) at risk of various forms of gender-based violence (GBV). Around 77 per cent of GBV incidents are linked to domestic violence, which reportedly increased during the COVID-19 pandemic.^{22,23} Around 200 grave violations against children were recorded in 2022.²⁴ Displaced families, who already have low resilience, are more vulnerable to secondary displacement due to climate change hazards. As agricultural livelihoods and food security are affected by climate change, rural-urban migration is already occurring. The World Food Programme (WFP) reports that before the COVID-19 pandemic, a daily wage could buy 31kg of wheat flour, which has now dropped to 18kg.²⁵

Institutional arrangements, priorities, policies and programmes

Following the ratification of the Paris Agreement in 2021, the Iraqi government has accelerated the development of adaptation and mitigation strategies to access climate finance. The Ministry of Environment is the national focal point for climate change and the environment, overseeing the Climate Change Directorate. Additionally, a special adviser to the prime minister on climate change has been appointed. United Nations agencies, international finance institutions, multilateral climate funds, development partners and civil society support Iraq's efforts to address water scarcity and climate change.

Key policies and programmes pertaining to climate change are not child-centred, and child-focused social sector plans and policies have little acknowledgement of climate change impacts on children.

However, there are opportunities to involve children and young people in the development and revision of government plans and strategies, including the Nationally Determined Contributions (NDCs), the green paper on climate change and the National Adaptation Plan (NAP), and COP28 and subsequent discussions. Similarly, there are opportunities to integrate climate change into social sector strategies that are currently under development or scheduled for review.

Recommendations for **stakeholders** to reduce children's vulnerabilities and build resilience to climate change risks in Iraq

To reduce children's vulnerabilities and build their resilience against climate change risks, UNICEF provides guidance to governments, the United Nations system, civil society and children and young people as agents of change, striving to achieve the objectives of PROTECT, EMPOWER and ENACT.

Fostering gender-responsive and inclusive climate policy development, delivery and reporting at the national level will require a particular emphasis on children and young people with disabilities. This focus is particularly crucial for girls, given their heightened vulnerability to various social and economic risk factors, such as poverty and unemployment, which further exacerbate their susceptibility to adverse impacts.



PROTECT



Water, sanitation and hygiene

Plan, design, innovate and **implement** initiatives to address water scarcity encompassing water use and reuse, and rain catchment.

Improve access to equitable and inclusive water-efficient WASH facilities in schools and health facilities.

Develop consensus on equitable and inclusive water governance and resource management frameworks, actively engaging young people.

Build in-country capacity on water governance, natural resource management and climate change response.



Health and nutrition

Increase focus on health risks and impacts on mothers, newborns, children and young people due to climate change, including investments in surveillance and measures for diseases associated with Iraq's climate risk profile.

Monitor health risks to ensure an early and effective response, especially for mothers, children and young people.

Improve the resilience of health facility infrastructure, including solarization and the use of renewable energy.



Education

Solarize learning facilities and incorporate disaster risk reduction in their design.

Integrate meaningful climate change learning and gender-responsive disaster risk reduction in schools and in life skills curricula, including pedagogical studies for teachers and school administrators.

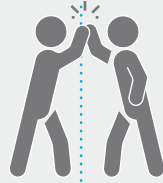
Teach skills in secondary and higher education which will enable young people's participation in the green economy and enable them as agents of change.



Child and social protection

Integrate climate change into social protection policies and programmes that reflect the evidence on children and young people's vulnerabilities to climate risk, i.e. early marriage, poverty, gender-based violence, etc.

Train family and child care workers to monitor the impacts of climate risk on vulnerabilities and support improved gender-responsive and inclusive social policy schemes to reduce vulnerability.



EMPOWER



Social and behaviour change and the genuine engagement of children and young people as agents of change

Prioritize children and young people in strategies, policies, and programme design, planning, innovation and implementation.

Enhance public understanding and change behaviours around climate change through gender-transformative programming, acknowledging that 60 per cent of Iraqis are under the age of 24.

Recognize young people as agents of change in climate change action; build their ideas, innovations and actions for adapting to and mitigating climate change impacts into sectoral strategies, policies and programmes.



Data and evidence

Generate evidence with the active involvement of children and young people concerning the intersection of children, young people and climate change. Evidence can be used to **inform** mitigation and adaptation measures, recognizing the variability in vulnerability to climate risks among children and young people.

Utilize participatory research methodologies involving children, young people and climate-affected populations.

Monitor gender-related indicators and their correlation with climate risks.



ENACT



Climate-sensitive operational procedures and practices

Effectively **use** private sector corporate sustainability to finance renewable energy solutions; address water scarcity, desertification and other climate risks.

Promote sustainable energy through sustainable procurement and climate safeguarding for programmes, including, but not exclusive to, construction, supply chain transport, warehousing and other organizational operations of vendors that impact emissions.

Shape local renewable energy markets by promoting local procurement; **facilitate** access to regional and global markets for the Iraqi renewable energy private sector.

The United Nations and its partners **promote** green premises management to reduce emissions and improve internal water management, sanitation, energy consumption and other measures.

PROTECT



1

Institutionalize data generation, analysis and use regarding children, young people and climate change to mitigate and adapt to climate risks

PROTECT and EMPOWER

2

Empower young people as agents of change in school, universities, work and communities to design and implement sustainable climate policies, innovations, and investments for Iraq



PROTECT, EMPOWER and ENACT



3

Improve water quality and sanitation and address water scarcity for human consumption

4

Advocate for renewable energy financing mechanisms and implement renewable energy solutions to mitigate and adapt to climate risks for children and young people; and strengthen local markets

Principles:

- Gender-sensitive and inclusive of the most vulnerable Iraqis
- Evidence-informed
- Child rights-based
- Economically, socially and behaviourally sustainable and
- Ethically accountable via safeguarding our operations and partnerships

Recommendations for UNICEF in Iraq to enhance its climate change response

Based on the UNICEF Strategy for Climate, Environment, Energy and Disaster Risk Management (2022–2030), and the global action plan for climate change action, UNICEF identifies six priorities and

areas of comparative advantage supported at regional and global levels to PROTECT, EMPOWER AND ENACT for children and young people.



PROTECT



Generate data and evidence

Conduct analysis and **generate** accurate and relevant information to enable us and our partners to effectively prioritize children most in need, in the most efficient way.

Incorporate climate considerations into the Multiple Indicator Cluster Survey (MICS) 2023 and **integrate** the collected data into the new country programme processes.

Develop climate rationales in support of Iraq in addressing climate-related challenges.

Build internal capacity to monitor environmental and social safeguarding and climate change impacts.



Implement resilient services at scale and deliver supplies

Demonstrate effective and efficient water and sanitation interventions, **reduce** household water consumption, and **implement** innovative solutions to reduce water scarcity.

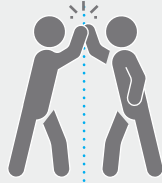
Design integrated programmes that reflect the WASH-climate change shift, **document** environmental sustainability, and **evaluate** WASH pilots.

Support school curricula, pedagogical studies, and life skills within the green economy.

Develop and **implement** effective social and behaviour change interventions targeting young people and decision-makers.

Monitor the impacts of climate on children's health, **adapt** guidance and **build** skills to ensure appropriate coverage and access to health services.

Implement clean energy in schools and health facilities.



EMPOWER



Strengthen capacity of partners

Work with communities, governments and public and private institutions to better understand climate risks, the green transition, and strategies for **building resilience** to disasters and longer-term climate and environmental shocks.

Engage climate change specialists, including those within the Ministry of Education, Ministry of Youth and Sport, Ministry of Construction, Housing, Municipalities and Public Works, and collaborate with partners, including the Ministry of Labour and Social Affairs, Ministry of Planning, Ministry of Justice, Ministry of Health and other relevant areas.

Engage with youth-led groups to build their capacity to enact inclusive, gender-responsive climate plans and promote job opportunities in the green economy.



Advocate for children and young people

Utilize UNICEF's voice and credibility so that decision-makers act in the best interests of children, and establish an enabling environment that directs climate and environmental policies toward children and secures sustainable financing.

Develop, implement and monitor an inclusive and gender-responsive climate change advocacy strategy that actively addresses key areas of UNICEF intervention.

Lead advocacy efforts for children and young people as agents of change with partners in government, academia, non-governmental organizations and the United Nations.



Support children and young people

Ensure that the voices, perspectives and ideas of children and young people are heard at the highest levels and that they get the education and skills necessary to act as agents of change in their communities.

Collaborate with green youth-led organizations, including women and girl-led organizations, schools, vocational and university programmes, and youth advocates to promote their active engagement in national policymaking processes.

Create pathways for young people to become more effective champions for sustainability, including through facilitating youth's access to green economy jobs.



ENACT



Develop and shape markets

Convene and foster new partnerships between the private and public sectors to create shared value and sustainably provide goods and services. Mobilize the broader business community to contribute to addressing climate and environmental risks and disasters.

Green contracting, green facilities management, green staff operations and safeguarding, with emphasis on the renewable energy sector.

The UNICEF country programme's current contributions to reducing children's vulnerabilities and building their resilience to climate change risks in Iraq

PROTECT



Water, sanitation and hygiene

Providing clean and safe water and sanitation to vulnerable populations, bridging between humanitarian support for populations affected by conflict and building resilience against water scarcity, particularly in the southern regions. Climate-resilient WASH systems and services have been piloted in partnership with local governments and water authorities.



Health and nutrition

Building resilient and climate-smart health facilities, reducing vulnerabilities through immunization reforms, supporting maternal, newborn and child health, providing nutrition assistance and strengthening health systems including integration of solar power in healthcare facilities and cold chain management. A gap remains in terms of response to emerging health risks caused by climate change.



Education

Supporting resilient and sustainable education systems including education sector planning, ensuring access to learning, enhancing the quality of education through community oversight and teacher development plans; promoting school solarization and access to water. A gap remains in incorporating climate change and disaster risk reduction in curricula and in school design, site selection and construction.



Child protection

Improving institutional frameworks for child protection, increasing gender-sensitive child protection services, promoting attitudinal and behavioural changes regarding violence against children and women, and identifying and protecting the most vulnerable children and young people.



Social policy

Establishing shock-responsive social-protection systems supported through technical expertise and multi-sectoral partnerships that build capacity and support household adaptation strategies, and advocate for targeted food distribution and fortification.

EMPOWER



Adolescent development and participation

Supporting youth engagement through integrated cross-sectoral approaches enabling young people to become climate and environmental agents of change.



Social behaviour change and community engagement

Developing a comprehensive social and behaviour strategy related to climate change, aiming to facilitate longer-term social change and generate demand for climate-safe practices.



Advocacy and communication

UNICEF's advocacy strategy aims to engage young people, sensitize the public to ask for climate change action, and advocate for inclusive child- and youth-sensitive policies on water management and climate change adaptation.

ENACT



Green safeguarding

UNICEF incorporates green safeguarding measures in its contracting processes to reduce carbon footprints and promote environmentally friendly practices.

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