IMPACTS OF CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION ON CHILDREN AND YOUTH IN NEPAL

PLAN INTERNATIONAL

Save the Children

unicef for every child

World Vision

EXECUTIVE SUMMARY

CLIMATE CHANGE IS HERE

We recognize it in the form of intensifying heatwaves, droughts, floods, crop failures, wildfires, and landslides. These ongoing crises produce resource depletion, unemployment, hunger and displacement among humans, while the natural environment suffers the loss of habitat, loss of biodiversity, and loss of functioning ecosystems.

In many countries affected by these intensified heatwaves, droughts, floods and wildfires, children and youths are disproportionately affected by the shocks and stresses of recurring climate disasters. Too many children are experiencing more than one disaster simultaneously or multiple disasters arriving in quick sequence.

Children and youths around the world are aware of the future they are facing.[1] After 25 years of promises made and promises broken, the world's young people have had enough of nations and their international negotiators talking about climate change and avoiding meaningful actions. While vested interests protect their quarterly returns, the prospect of a better future for today's young people is fading fast. A livable future for most of the world's youngest children is in serious question.

Researchers tell us that if we abide by the 2015 Paris Agreement promises, children born in 2020 face seven times more scorching heatwaves during their lives than those born in 1960. These children – now taking their first steps – will live through 2.6 times more droughts, 2.8 times as many river floods, almost three times as many crop failures, and twice the number of wildfires as people born 60 years ago.[2] Those odds are the global averages. Poorer and less-advantaged countries and economic classes will experience more of those life crises, while the richer ones will fare better. For instance, children in Afghanistan could face up to 18 times as many heatwaves as their elders experienced in their lifetimes.[3] Meanwhile, no country is meeting their Paris Agreement goals, except for the Gambia.[4]

Fortunately, some governments and non-governmental actors are recognizing the rights and capacities of young people to help tackle these threats and influence decision-making about their own futures in a changing climate.[5] When children and youths are empowered with knowledge and means and supported by adults, they are better prepared to protect themselves and others when disasters strike and promote climate resilience among their families and communities.

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1 *Thompson, T. (2021). Young people's climate anxiety revealed in landmark survey. Nature.* https://www.nature.com/articles/d41586-021-02582-8

2 *Thiery, B. W., Lange, S., Rogelj, J., Schleussner, C. F., Gudmundsson, L., Seneviratne, S. I., ... & Wada, Y. (2021). Intergenerational inequities in exposure to climate extremes. Science, eabi7339.*

3 *Save the Children International. (2021). Born into the Climate Crisis: Why we must act now to secure children's rights. Authors: Ryan, Erin; Luthen, Siri; Wakefield, Jack. London. Press Release:* https://www.savethechildren.net/news/climate-crisis-%E2%80%93-children-face-life-far-more-heatwaves-floods-droughts-and-wildfires

4 *Borenstein, S. (2021). Gambia the world's only country on track to meet its Paris agreement goals. National Observer. September 15th 2021. (AP) https://www.nationalobserver.com/2021/09/15/news/Gambia-Paris-agreement-goals-curb-warming. Data from:* https://climateactiontracker.org/countries/gambia/

5 *UNICEF (2021), The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index* https://www.unicef.org/reports/climate-crisis-child-rights-crisis

THE CLIMATE CRISIS IN NEPAL

Nepal, a landlocked country reaching from braided floodplains up to the world's tallest mountains, contributes only 0.06 percent to the world's total global greenhouse gas emissions. However, it is one of the most vulnerable countries to climate disasters, which impedes Nepal's development agenda. Nepal currently ranks 142nd on the Human Development Index, with nearly one-fourth of its population living below the poverty line.[6] Agriculture is the main economic sector, employing about two thirds of the country's workers.[7] The pervasive poverty, dependence on climate-dependent agriculture, and difficulties presented by its challenging terrain account for Nepal's high vulnerability to climate change.

Climate disasters in Nepal – devastating storms, extreme floods, landslides, heat waves, and outbreaks of water and vector-borne diseases – aggravate risks to already-fragile water resources, sanitation systems, energy reliability and food security, which further intensify the country's vulnerability to future climate hazards.

6 *UNDP. (2020), Human Development Report 2020: The Next Frontier—Human Development and the Anthropocene, United Nations Development Programme. New York. http://hdr.undp.org/en/2020-report; http://report.hdr.undp.org/.*

7 *Bastola, Thaman P.,(2020) "The Determinants of Sectoral Employment in Nepal" Masters Theses. 4837. Eastern Illinois University, USA. https://thekeep.eiu.edu/theses/4837 Data garnered from WDI: https://databank.worldbank.org/source/world-development-indicators*

RESPONSE FROM CIVIL SOCIETY

In Nepal, four non-governmental organizations – Plan, Save The Children, UNICEF and World Vision – formed a Child-centred Disaster Risk Reduction and Climate Change (CDCC) consortium working on resilience to climate change. The CDCC consortium advocates for the fulfillment of the rights of children and youths and supports developing and implementing sustainable solutions that will benefit children and their communities by improving education, healthcare systems, child protection, food security and livelihoods. The CDCC consortium devised and commissioned a study to survey, analyse, and report on how young people in Nepal and their families cope with climate-induced disasters and adapt to the changing climate.

The CDCC consortium recognizes that children and youths, especially those from marginalized groups, bear a high level of climate and environmental risk. However, they also recognized the need for solid evidence on how climate crises and associated environmental degradation influence young people's lives. To remedy this shortcoming, the focus of the research study was to identify – in consultation with children, youths, parents and caregivers – their climate-induced physical, social, economic and psychological risk factors. The research explores how climate crises and environmental degradation affect young people's lives in ways that would prevent them from learning and being protected and what practices they and their families follow to cope with ongoing pressures and to survive. The scope of environmental degradation covered in the research spans conditions affecting agriculture and food security, energy, water, forestry, sanitation, waste management and health.

RESEARCH METHODOLOGY

The CDCC consortium members have been supporting the Government of Nepal at all levels on developing guidelines for local disaster and climate-resilience planning, in addition to building capacity in disaster risk management and climate change adaptation. During a decade of work, CDCC members confirmed that young people in Nepal, especially from marginalized groups, are particularly vulnerable to ongoing climate crises and related environmental degradation.

However, there was inadequate information about the specific impacts of climate crises and environmental degradation that threaten young people in Nepal's diverse landscapes and unplanned settlements. With CDCC's support, a research team designed and developed a methodology to collect evidence that could inform appropriate strategies for climate-resilience programmes focusing on young people. Beginning with an examination of the state and trends of the changing climate and related environmental impacts in Nepal, the review also covered socioeconomic statistics and related legislation on rights and accountabilities. Based on geographic and socioeconomic characteristics, communities in six specific districts were selected as field study locations. The project then deployed field teams in those districts, responsible for gathering information through household surveys, focus group discussions and key informant interviews. Covid-19 response protocols applied sporadically in the field study areas hampered this information collection phase significantly. The researchers then analysed the material and extracted salient points relevant to the original research objectives. These findings then led to recommendations to address specific issues related to building climate adaptation capacities for young people and their families and communities. This resulting report provides information and explanations that can support the case of advocates convincing decision-makers to adopt a climate-resilient approach in their plans and policies that focus on children and youths in Nepal.

The research had three main objectives to address the evidence deficiency: to record the experiences of the most vulnerable households facing challenges from the changing climate, to discover what coping strategies and adaptation practices are in use, and to make recommendations on how to help young people and their communities face the changes to come. Using this approach, the analysis can document the past, recognize the present, and prepare for the future.

Formally, the objectives were:

To identify the effects of changing climate on the lives of children and youths, their parents/caregivers and relevant stakeholders. The focus is on the children and youths whose families are highly reliant on their immediate natural environments and are likely to face livelihood difficulties when those ecosystems are lost or damaged.

To analyse and determine whether the coping strategies and adaptation practices aimed at alleviating these pressures can threaten children's futures or not. This determination will inform an understanding of how resilient children and their families are in the face of such losses and damages.

To recommend effective adaptation strategies and measures to key stakeholders based on needs determined from perceptions and experiences of young people and their communities. These adaptation strategies and measures can be promoted and adopted through the involvement of children and youths as effective communicators and change agents.

Questions asked in the household surveys, group discussions, and key interviews explored community members' perceptions, particularly of young people, about how climate change is affecting them and their lives and aspirations. The surveys, discussions and interviews asked:

- What are the specific impacts of the climate crisis and environmental degradation – in terms of energy, water, sanitation, forest and land – on the lives of children and youths of marginalized and deprived communities?
- What are the underlying causes and factors – in terms of exposure, vulnerability, policy, capacity, resources, economy, and social aspects – of the climate crisis and environmental degradation effects on children and youths?
- What are the ongoing adaptation measures – in terms of energy, water, sanitation, forest and land – practiced by children, youths and their families?
- What could be potential adaptation measures to reduce climate crises and environmental degradation impacts on children and youths of marginalized and deprived communities?

FINDINGS

Climate change and environmental degradation affect children and youths both directly and indirectly. As household members, young people are affected when the adverse effects of climate hazards limit their family's access to money, food, water, energy and livelihood resources. Parents and elders frequently expect young people to meet labour demands added when disasters strike. Young people also take extra jobs, sometimes out-of-county, to provide additional income for their families. Added chores and responsibilities, especially outside the home, increase young people's exposure to climate hazards. More time spent in additional labour and income-generating activities means less time for proper education and good physical and mental health development.

Over half of those killed or injured by climate hazards are children and youths. Children suffer from stunted growth and malnutrition in some regions due to local agricultural production and food availability reductions. Children are particularly susceptible to sickness – such as diarrhoea – after a flood event. Limited access to basic services such as education, health, water and sanitation in rural areas has further aggravated the impacts of climate change on children and youths. When basic services are already located far from communities, once climate crises further reduce those communities' time and financial resources, the possibilities of accessing services diminish further. Even when services such as schools are located nearby, when disasters strike communities, school buildings become emergency shelters, disrupting the continuity of young people's educational progress.

Female children and youths suffer the impacts of climate crises most acutely. They are the first to receive shifted responsibilities for household labour, the first to receive reduced portions of food, water or money when those resources become scarce. They are also the first to lose out when education and leisure activities are no longer affordable or available. Finally, they are passed off in marriage when families face economic constraints.

Children and youths face additional challenges from the climate crisis. Climate disasters impede the safety of outdoor activities for children and youth. As well, community lands used as playgrounds and sports fields and damaged by floods and landslides often stay damaged, limiting children and youths' outdoor activities.

The climate crisis is already infringing on the human rights of young people:

- Right to Survive: Over half of those killed or injured by climate hazards are children and youths.
- Right to Growth: Among those who receive less food after a climate-induced disaster, nearly two-thirds are children, and a quarter of them are youths. Among those who get sick, two-thirds are young people. These impediments lead to stunted growth. Children and youths form the vast majority of those who suffer the effects of climate events on education. As well, many young people undertake additional work responsibilities that interfere with their educational progress. Furthermore, academic progress and physical growth are constrained by reduced resources in the households.
- Right to Protection: The climate crisis drives some children into domestic labour in others' houses. Any additional work outside the home exposes children and the youth to further environmental and social hazards for which they are not prepared and protected. Children collecting valuable fungus in extremely cold environments in the high mountains or working as unskilled low-wage labour are exposed to novel and more climate hazards. Children left behind when guardians migrate for income are likely to suffer inadequate or no parental protection. Even if parents or guardians are at home, they often compromise their childcare time to cope with climate-induced crises.
- Right to Participation: Currently, children and youth represent extremely small proportions of participants in community organizations. Very few young people participate in child and youth clubs. This low participation rate is matched in decision-making at the community level. They have very little representation in determining their own interests and issues. The situation is compounded by having to spend their time responding to crises and helping their families cope.

Our findings identified several factors contributing to young people's vulnerability to the adverse impacts of the climate crisis and environmental degradation.

Extreme climate events are increasing in intensity and frequency. The risk and exposure of children and youth to adverse impacts are growing.

Household income is low and is highly vulnerable to climate change. Significant sources of livelihood are dependent on agriculture, which is extremely sensitive to climate hazards and environmental degradation. Underlying causes for the agricultural sector's vulnerability to the climate crisis include lack of appropriate climate change and environmental policies, practices, knowledge, capacity, technologies and other resources to adapt and respond at the local and household levels, particularly for children and youth.

The lack of opportunities for diversified income generation at the community level impairs coping and adaptation. When the agricultural sector is affected, adult family members often leave their homes to look for work elsewhere. Their absence can further increase the household's vulnerability and exposure to potential climate risks.

No local government policies are in place related to child and youth development or to support them in climate change adaptation. While federal-level climate change policies delegate responsibilities for reaching out to children and youth to the local level, there were no programs for climate change adaptation at the time of this research in the research communities. This lack of engagement on climate change issues results in low levels of knowledge and awareness among children and youth, especially around possible measures for adaptation.

The participation of children and youth in local committees is negligible. These committees include Forest User Groups, Community Disaster Management Committees, Savings and Credit, Mother Groups, Community Level Climate Change Committees, and Local Governments. This lack of participation of young people in local organizations means that their interests and concerns are not addressed by plans and policies of local decision-making bodies.

Children and youth seldom have access to financial resources both within or outside their households. Their dependence on parents or others to finance any activity that addresses their needs and interests for climate change adaptation makes them vulnerable.

Most adaptation measures practiced by children, youth and their families are reactive and response-based measures pursued after the disaster strikes. Such adaptation measures are autonomous and are immediate coping tactics, such as recovering property, infrastructure or income that has been affected.

Gaps in resources, knowledge and skills for adaptation dominate the findings because a significant number of households do nothing at all in the face of climate crises. Such inaction will likely lead to cumulative effects from ongoing climate crises that ultimately result in unmanageable loss and damage. On the other hand, households appear aware of the acute impacts felt by their children and youth, with many providing additional care and support to younger family members when this was possible.
When households do respond, adaptation measures vary by sector and community capacities:

- In agriculture, communities prioritize installing and managing irrigation systems, followed by changing crop species and varieties and increasing the use of chemicals to maintain the yield.
- In forestry, communities' priority is improving forest management, followed by new plantings on community and private lands. Since the government controls forest areas, the communities can do little to access forest resources beyond their entitlement areas.
- In energy, communities first minimize the use of fuelwood and animal dung. When available and affordable, households turn to alternative energy technologies such as improved cookstoves, biogas, electricity, LPG, and solar.
- In water and sanitation, households and communities try to collect water from alternative sources further away, followed by minimizing water use.
- In waste management, many families burn their waste, followed by throwing it in rivers and burying it. These practices are inevitable when communities lack access to waste management systems and knowledge about organizing these systems.
- Communities do not have strategic adaptation plans based on anticipated risks and impacts of climate change, although some communities have plans for urgent and immediate needs.

None of the information collection methods received suggestions on possible adaptation measures from surveys, discussions or interviews. However, as presented in the IPCC risk framework, potential adaptation measures should focus on risks and impacts with three primary objectives:

- reduce hazards
- reduce exposure
- reduce vulnerability

Effective application of the risk framework should result in an integrated adaptation approach at the community level

RECOMMENDATIONS

FOR GOVERNMENT

- Ensure that the community and school management committees, including teachers, parents, children, and youths, lead the development of environment and climate-friendly plan at the local level, its integration in municipal planning and school improvement plans and implement them according to government policies and guidelines. Community and school management committees should ensure the meaningful participation of children and youths in planning and implementing environment- and climate-friendly activities.
- Prioritize establishing and scaling up the child and youth-friendly alternative technologies in water management, agriculture and forest management that are resilient to climate impacts. Promote labour-saving technologies that are specific to sectors, local context and community. Possibilities include water pumps to deliver water at home, improved cookstoves to reduce fuelwood consumption, gravity goods-ropeways to minimize travel time, and improved livestock sheds for efficient feed and fodder management to reduce fodder waste.
- Develop climate change adaptation, environment-friendly and economic resilience policies at the local level in line with the National Climate Change Policy and Agriculture Development Strategy to ensure the problems and needs of children and youths are addressed through integrating them in annual and periodic plans of local governments.
- Establish and strengthen environment, climate change adaptation and disaster risk reduction section/unit/committees at the local and province level in accordance with the Local Governance Operation Act, 2017 and the National Climate Change Policy, 2019 and the officials and members train on climate-related problems and the needs of children and youths. Local and provincial governments should ensure representation of children and youths to such sections/committees.
- Establish and strengthen climate risk-management information systems at local, provincial and federal levels that are accessible to children and youths. Municipal governments should make informed decisions to allocate resources for child- and youth-led climate change adaption and environment management.
- Revisit the Act Relating to Children, 2018 and the National Youth Council Act, 2015, to align with the federal governance system and address the problems and needs of children and youths stemming from climate change. Ministry of Women, Children and Senior Citizen and Ministry of Youth and Sports need to take the lead for this action. The legal instruments have not paid attention to ensuring the children's rights from a climate change perspective.
- Allocate adequate financial resources to child- and youth-led climate change adaptation and environment sustainability practices that aim to reduce the impact of climate change. The National Planning Commission should ensure that adequate climate funds are allocated for child- and youth-led climate change programmes by decentralizing the government's climate change financing framework and annual planning and budgeting at the local government level.

FOR DEVELOPMENT PARTNERS

- Support civil society groups to enhance their influential skills on climate change adaptation, environment management and disaster risk reduction
- Assist local and provincial governments to enhance their capacity on risk-informed development policy and planning
- Support the Curriculum Development Centre to develop and implement courses on climate change in school-level education. Lower secondary levels should learn about climate change basics while risk assessment, adaptation and mitigation courses suit higher secondary levels.
- Provide additional resources on climate change adaptation programming to implement national climate change policy and the Paris Agreement.
- Support local governments to address underlying climate risks by expanding and improving alternative and renewable technologies and promoting safer and green school concepts, climate-adaptive water and sanitation systems, and resilient livelihoods, as well as tackling discrimination against children, women, minorities, and socially excluded castes.

FOR DONOR PARTNERS

- Invest adequate financial resources in child- and youth-led climate change adaptation and environment-friendly local governance technologies and practices as envisioned by the Paris Agreement.
- Invest resources to enhance the capacity of government at all levels to promote climate-resilient infrastructure development and sustainable practices. The focus should be on technologies that address key problems like reductions in quantity and quality of water. The quantity of water can be enhanced through collection and storage and access to additional water sources. Measures for water collection may comprise the construction of ponds and tanks for rainwater and runoff water collection. Context-specific technologies for hills, plains, and different soil textures are available for groundwater recharging. Regarding access to new water sources, the use of solar pumps is effective for both drinking and irrigation purposes.
- Promote alternative and clean energy sources and services such as solar, hydroelectricity, biogas, improved cookstoves and extension services. Build capacity of youth and community people in manufacturing, marketing, repairing and business development for these technologies in coordination with the government's Alternative Energy Promotion Centre and Nepal Agriculture Research Council.

CLUBS FOR YOUNG PEOPLE

- Be organized to further strengthen children and youth clubs/organizations at school, community/ward, municipal, provincial and federal levels to influence child and youth-friendly climate change and environment policies and programming.
- Work closely with local government, civil society organizations, and development partners to be engaged in decision making through planning and budgeting process on climate change and environment programming.

CIVIL SOCIETY

- Sensitize the local and provincial governments and officials on the roles of governments for child- and youth-led climate change and environmental management policy, planning and programming.
- Train child and youth clubs and child rights committees to develop child- and youth-led climate change adaptation and environmental management plans and programmes and support them to deliver at the local level.
- Empower young people's clubs to enhance their advocacy skills that will enable them to raise their voices and influence government policies and the policies of other stakeholders related to climate change adaptation and environmental management and to leverage resources from governments, donors, the private sector and development partners.
- Address household needs through promoting diversified livelihood options based on a gender-balanced, young people's needs assessment and participatory planning. Financial needs escalate at both household and community levels when they are affected by climate change.
- Influence government-relevant ministries, particularly the Ministry of Forests and Environment, for ongoing national adaptation plan-formulation processes to pay adequate attention to differential problems and needs of children and youths.
- Influence the Ministry of Women, Children and Senior Citizen to develop child- and youth-focused legal instruments and policies on climate-induced disaster risk management and adaptation plans so that they can pay adequate attention to differential problems and needs of young people.
- Support young people's clubs advocate to leverage resources from local, provincial and federal governments and resources from in-country bilateral and multilateral donors to meet a child- and youth-led climate change adaptation deficit.
- Support local governments to develop and implement a child- and youth-led climate change adaptation and environment programme and advocate for its integration with overall climate change adaptation plans and policies.

FURTHER RESEARCH

The impacts of climate change on children and youth are multidimensional and broad. Yet, there is limited research regarding these issues in Nepal.

Future studies should focus on particular aspects, such as the physical, health, education, or psychological effects of climate crises on children and youths, by considering the gender, social, economic and geographical dimensions. Such research will reveal a more specific and deep understanding. It is also essential to focus on climate events such as floods, landslides, or heatwaves that affect multiple dimensions of young people's lives.

It is recommended to conduct further studies involving children and youth groups from different social and economic strata. These studies could allow insights into the comparative effects of social and economic status on the vulnerability of young people to climate change. A study focused on children and youths from the most vulnerable communities could produce an understanding that would inform policies and practices to build resilience among the most vulnerable populations of young people.

CONCLUSION

Despite the challenges added by the Covid -19 pandemic to a project based on conducting face-to-face surveys, discussion and interviews in six distinct districts scattered over the country, the methodology for the study worked out quite well. The process can be refined and used for further studies to investigate more nuanced aspects – ¬¬¬such as gender, socioeconomic status, geographic location, and education level. An understanding of the factors that encourage or hamper adaptation and resilience in young people could enable customized delivery of courses or training through schools, clubs, or extension services.