



# Climate Change and Children

unite for  
children

unicef 

## UNITED NATIONS MILLENNIUM DEVELOPMENT GOALS

By 2015, all United Nations Member States have pledged to:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

### ACKNOWLEDGEMENTS:

Special thanks to: United Nations Development Programme, United Nations Environment Programme, United Nations Framework Convention on Climate Change and the World Health Organization

Front cover: © UNICEF/HQ02-0511/Ami Vitale

© United Nations Children's Fund (UNICEF)  
December 2007

United Nations Children's Fund  
3 United Nations Plaza  
New York, NY 10017, USA  
Email: [pubdoc@unicef.org](mailto:pubdoc@unicef.org)  
Website: [www.unicef.org](http://www.unicef.org)

Commentaries represent the personal views of the authors and do not necessarily reflect positions of the United Nations Children's Fund.

ISBN 978-92-806-4222-3





# Contents

Foreword from Ann M. Veneman, UNICEF Executive Director	2
Voices of the Children	3
Climate Change and Children: What are the Risks?	4
Natural Disaster	6
Disease	8
Water	10
Food Security	13
Trees	14
Energy: Challenges and Opportunities	17
Action and Advocacy	18
Endnotes/References	20

# Foreword

**“We call on all members of society to join us in a global movement that will help build a world fit for children through upholding our commitments to the following principles and objectives...**

**“Protect the Earth for children. We must safeguard our natural environment, with its diversity of life, its beauty and its resources, all of which enhance the quality of life, for present and future generations. We will give every assistance to protect children and minimize the impact of natural disasters and environmental degradation on them.”**

**— A World Fit for Children, 2002,  
para. 7, section 10, UN General Assembly  
Special Session on Children, 2002**

Young people today are aware of the need to protect the environment. When they are asked to list the issues that most concern them, one issue that features highly on their agenda is climate change.

They are right to be concerned. While we still have a lot to learn about the consequences of climate change, economic and social development cannot be sustainable unless we deal decisively with this issue. It has the potential to add to the insecurity faced by some of the most vulnerable people in some of the most vulnerable countries.

New figures released earlier this year show solid progress on child survival, including a decline in the annual number of under-five deaths. Global child deaths have reached a record low, falling below 10 million per year to 9.7 million, down from almost 13 million in 1990.

Millions of young lives have been saved by the expansion of such basic services as primary health care, nutrition programmes, and adequate water supply and sanitation, showing that progress for children is possible.

But the loss of 9.7 million young lives each year is unacceptable, and we need to continue and accelerate this progress. This task must not be threatened or undermined by short-sighted decisions that cause permanent damage to the environment.

This publication gives children a voice on climate change. In 2006, child delegates to the 4th World Water Forum in Mexico City challenged leaders and policymakers, saying, “We, the children of the world, are ready to work with you. Are you ready to work with us?” The answer must be a resounding “yes” because what is good for children – reducing pollution, safeguarding education and health, preserving environmental diversity, protecting water supplies, increasing access to proper sanitation – is also good for the planet.



Ann M. Veneman  
Executive Director, UNICEF



© UNICEF/H038-0197/Noorani

## Voices of the Children

*This is a summary of comments and letters from children and young people from all over the world, collected from UNICEF Voices of Youth, child delegates to the 2007 UNEP African Regional Children's Conference for the Environment and the 2007 World Scout Jamboree in cooperation with the United Nations Development Programme.*

Our countries and communities are at risk. Every day we see forests burning and people throwing chemicals into the water and cutting trees. In many countries, children and young people face very poor sanitation, health care and environmental conditions. When we build indiscriminately, dump our garbage into waterways, slash and burn our forests, and practise unsustainable agriculture, these actions lead to floods, soil erosion, landslides and desertification.

**WE NEED TO DO SOMETHING TO SAVE OUR ONLY PLANET EARTH!**

Pollution has been a problem for centuries. What are we waiting for? Even since climate change came to light, water sources have been polluted, forests have been wiped out, animal species have disappeared and people's health has been jeopardized because of the pollution we create.

We emphasize the value of education in the context of a sustainable environment and energy supply. Young people at every stage of their education should be informed about the dangers of environmental degradation, overuse of fossil energies and the prospects of renewable energy. Therefore we urge educators to include environment and energy-related topics in the curricula.

The decisions made today will have a significant impact on our lives. We will live the consequences. We will breathe the air and drink the water you leave us. Young people need to be given a greater voice on climate change issues. We need a platform from which we can express our demands. We want to work with governments and communities to help design and influence the policies that will affect our lives, now and into the future.

We would like to move forward with a multi-generational, multidisciplinary vision: Working together, leaders and youth can redesign how society operates. Together we can lobby for a holistic education and climate-change curriculum so that today's youth are not only climate-change literate but are equipped with the tools to act.

We are willing to make a difference.

# Climate Change and Children: What are the Risks?

**“The environment is precious, and we should protect it like a mother hen protects its chicks. We should prevent deforestation, find solutions/actions that will prevent air pollution and promote awareness to the people, particularly young people, who are tomorrow’s future.”**

**— Sarah Baikame, age 17, Cameroon**

**“As teenagers, we are glad to devote ourselves to protecting our Mother Nature. By connecting the international and local communities, and joining this conference, we hope to generate a global vision and reduce the damage of natural disasters... and help to decrease injuries. We strongly believe that... sharing our local experiences will ensure future peace for the whole earth.”**

**— Natural Disasters Youth Summit Declaration, 2006**

Rising sea levels and melting ice caps ... severe weather events ... drought and flooding. With its dramatic and harmful effects on the environment, climate change threatens the basic elements of life for people throughout the world, harming health and the environment and limiting access to water, food and land.

As such, it will potentially make every one of the Millennium Development Goals less achievable, slowing efforts to eradicate poverty, improve health and protect the environment.

Evidence is growing that climate change is contributing to the burden of disease. According to the World Health Organization, in 2000, climate change was estimated to be responsible for approximately 2.4 per cent of worldwide diarrhoea and 6 per cent of malaria in some middle-income countries<sup>1</sup> – diseases that disproportionately affect young children in developing countries.<sup>2</sup>

As the world warms, people could suffer hunger, water shortages and coastal flooding. As rains fail, crops will wither and livestock will die, exposing children to starvation and diminishing water supplies for drinking and hygiene.

Today’s evidence suggests that developing countries – which are mostly located in warmer regions and whose major source of income is agriculture – will be worst hit by changes in rainfall patterns, greater weather extremes and increasing droughts and floods. Change in precipitation patterns is likely to affect the quality and quantity of water supplies, thus compounding the impact of poor water and sanitation, as well as malnutrition. Weather-related physical hazards such as hurricanes and flooding are likely to intensify, resulting in more deaths, injuries and trauma.

Without action today, the costs and risks of a 5°C–6°C warming – which is a real possibility for the next century – will be equivalent to losing at least 5 per cent of global GDP each year, now and into the foreseeable future. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20 per cent of GDP or more.<sup>4</sup>

By 2020, climate change is projected to expose an estimated 75 million people in Africa<sup>5</sup> alone to increased water stress. Towards the end of the 21st century, a projected sea-level rise will affect low-lying, heavily populated coastal areas. Adaptation costs could amount to at least 5–10 per cent of GDP. New studies confirm that Africa is particularly vulnerable to climate variability and change due to its multiple stresses and low adaptive capacity.<sup>6</sup>



In general, developing countries – in particular the poorest – depend heavily on agriculture, the most climate-sensitive of all economic sectors, and suffer from inadequate health care and low-quality public services.

As with any complex global phenomenon, the effects of this mounting crisis are far-reaching and interconnected. The droughts that decimate a village's food and water supply create aching hunger, to be sure – but hunger alone is just one facet of this terrible story. A hungry family may not be able to send their children to school or afford health care. Hunger may drive families out of their homes, creating an environment that fosters crime.

Climate change has evolved from an 'environmental' issue into one that requires collective expertise in sustainable development, energy security, and the health and well-being of children.



# Natural Disaster

The frequency and severity of natural disasters have been increasing, and experts point to climate change as one of the culprits. While an average of 12 disasters took place per year in the first half of the 20th century, that number reached an astounding 350 in 2004.<sup>7</sup>

The human suffering caused by natural disasters is most profoundly felt in developing countries, particularly poverty-stricken nations that lack the resources to cope with their aftermath. Countries with a low Human Development Index ranking suffer higher mortality rates from disasters.<sup>8</sup>

In addition, catastrophic disasters often result in enormous economic damage, sometimes exceeding the gross domestic product of low-income countries.

While natural disasters are devastating for anyone who experiences them, children are the most vulnerable, due to their small size and relative inability to care for themselves.

Children are more likely than adults to perish during natural disasters or succumb to malnutrition, injuries or disease in the aftermath. Natural disasters may force children out of their homes – or even their countries. They may become orphaned or separated from their families, and may be preyed upon by opportunistic adults.

## Emergency Preparedness and Risk Reduction

Children must be the first priority in risk-reduction efforts. Specific risks that exist for children and their caregivers, and the actions that might be taken to counter those risks, should be determined in addition to risk-reduction strategies for populations at large.

Risk-reduction initiatives should be designed to educate families and children about simple and practical actions that can protect life and personal property in the event of natural disaster. Effective awareness programmes in schools, homes and communities can create a culture of prevention and empowerment.

To ensure effective, timely and dependable responses, emergency preparedness measures, oriented specifically to children and women, must be in place. Children, families, communities and basic-service providers must be ready to meet health, nutrition, education and security needs when a disaster occurs.

Since poverty often prevents people from taking preventive measures – and given that it is not the disaster alone but also vulnerability levels that determine the impact of any crisis – the underlying vulnerability of families must be reduced through poverty reduction and other measures.

As disasters have the greatest impact on the vulnerable, their needs must be specifically addressed by response strategies, and vulnerable people should participate in preparing these strategies to ensure their relevance.







## Natural Disasters Global Safety Map – A Local Initiative

*Hurricanes, floods and the severe effects of natural disasters cause loss of life and economic instability in small island states each year. This disaster risk-reduction project, initiated by a young man from Trinidad and Tobago who was a delegate to the 2nd Children's World Water Forum at the 4th World Water Forum in Mexico, is making a difference both locally and globally.*

“The International Education and Resource Network, Trinidad and Tobago Global Disaster Safety Map Project allows students to learn about disasters and the state of disaster management in their communities. It also empowers them to take measures for mitigation and preparedness. Many factors that exacerbate the impact of natural disasters are easily identifiable and avoidable, including indiscriminate dumping into waterways, improper or illegal land development, and unsustainable agricultural practices.

“Therefore, national reforestation and watershed rehabilitation programmes are aimed at managing surface and groundwater resources and protecting watersheds to maintain an adequate level of water supply. The process is implemented by students, who create maps of their communities with specific measures for mitigation and preparedness. These community disaster safety maps are then joined to form a national safety map, which in turn is combined with other nations' maps to create a global safety map.

“Programmes in schools train teachers to empower students with environmentally friendly habits.”

– Abraham Fergusson, age 16, Natural Disasters Youth Summit Ambassador, Trinidad and Tobago

## Healthy Environments, Healthy Children: Commitment For Action

"We, the researchers, health care professionals and environment specialists, university educators, representatives of governmental and non-governmental organizations have gathered at the 2nd International Conference on Children's Environmental Health in Buenos Aires, Argentina, from the 14th to the 16th of November 2005 to consider the environmental influence on children's health and propose actions.

"We, the participants, hereby affirm our will to define and promote actions so that the children and adolescents of the world grow, play, learn and develop in healthy, clean and safe environments that protect their health and future, and assure the full development of their capacities....

"We recognize that: ... An increasing number of paediatric diseases and developmental problems are linked to pollutants in water, air, soil and food, to traffic, to noise and radiation, to injuries, to zoonosis<sup>9</sup>, to chemicals and also to climate change, uncontrolled urbanization and adverse social conditions...."

## Disease

By altering weather patterns and disturbing ecosystems, climate change has significant implications for human health. Many of the main global killers of children, including malaria, diarrhoea and malnutrition, are sensitive to climatic conditions such as flooding.<sup>10</sup>

The effects of global climate change are likely to be most pronounced in those areas bordering current disease transmission zones.<sup>11</sup> Temperate countries including Armenia, Azerbaijan, Tajikistan and Turkmenistan have lately seen evidence of a resurgence of malaria.

In addition, factors that play a role in climate change, such as emissions from vehicles and factories, significantly harm children's health. Deaths from asthma, which is the most common chronic disease among children, are expected to increase by nearly 20 per cent by 2016 unless urgent action is taken.<sup>12</sup>

Since many aspects of the physiology and metabolism of children differ markedly from those of adults, some of the health impacts of climate change are also likely to differ.







# Water

Parched, cracked earth cannot nourish a child. When an already impoverished nation experiences drought, its ramifications are severe and far-reaching: barren fields, dying cattle, skeletal children, empty classrooms.

Throughout the globe, a decline in global freshwater resources profoundly threatens health and livelihoods. Increasing contamination, over-pumping of aquifers and degradation of freshwater catchment areas is exacerbating an already precarious situation.<sup>13</sup> Fierce competition for a shrinking water supply has resulted in over-extraction for industry and agriculture, falling groundwater levels and failing domestic water sources. At the same time, pollution from industry, agriculture and improper management of human waste threatens previously safe water sources.

In already dry regions such as North Africa and the Eastern Mediterranean, climate change is expected to exacerbate the decline in water quality and quantity.<sup>14</sup>

Careful management of water and sanitation services is key. New groundwater sources may have to be developed with the anticipated behaviour of aquifers in mind, and new methods and technologies should be developed to safely exploit and protect water resources. Water recycling and reuse may become not only more cost-effective, but imperative.

Protecting and managing the water environment is an enormous task, requiring commitment, effective monitoring, changing practices, and specific interventions at regional, national, intermediate and community levels.

## Alizeta's Story: "My mother is very poor because of the drought."

*Alizeta Ouedraogo is a 16-year-old girl from Burkina Faso selected to be a delegate to the BioVision Children's Forum, part of the BioVision 2007 World Life Sciences Forum in Lyon, France, March 2007. The Children's Forum tackled the issues of water, agriculture, environment and energy, providing a platform for young voices to be heard by leaders in science and industry. Alizeta's story, below, illustrates the harrowing effects of climate change on human security and development.*

"Burkina Faso is a country of the Sahel, and 90 per cent of its inhabitants are farmers. Ranching and agriculture are the main sources of family income. In times of drought, or if the crops are not good, animals do not have anything to eat.

"As far as my own family is concerned, the crops are always bad, and we don't have enough food.

There isn't enough money to buy school supplies for me and my brother, or medicine when we are sick. My mother is very poor because of the drought.

"For the community, it is even more serious since everything is bought with money from agricultural products. When the crops are bad, there is no money to spend. Every year, there is a food shortage. Children quit school because they cannot afford supplies and school fees, or because they have nothing to eat during the school day. Some of these children beg or steal; old people beg, too.

"Girls sometimes prostitute themselves with shopkeepers and may end up with an unwanted pregnancy or a sexually transmitted disease.

"People do not go to health centres, and some contract diseases caused by a lack of hygiene."



© UNICEF/H006-0203/Kambier

"My community was affected by drought which caused our crops to die and there is no more food security. People died, our cattle died and the land became a desert."  
— Kamdoun Nouayou, age 11, Cameroon

"We here in our community are suffering from a lack of potable water. Where safe water is available, it is too far away; most times we have to walk 10 to 15 minutes to places where we can access potable water. I think the solution would be for us to recycle our waste water, as I am told has been done in some countries of the world."  
— Rasheeda, age 13, Nigeria



© UNICEF/H036-019/Moerani



# Food Security

Climate change threatens the nutrition and health of the world's poor. Changes in weather patterns can lead to flooding and drought – both of which can decimate a region's food supply.

Scientists project that rising temperatures and shifting rains are likely to reduce crop productivity in many vulnerable regions. In developing countries, this will likely leave hundreds of millions without the ability to produce or purchase sufficient food.

In regions where livelihoods depend upon rain-based agriculture and animal husbandry, droughts and floods – and the crop failures that result – seriously undermine the survival and nutrition of children and mothers. Changes in climate will also affect land areas suitable for farming and crop yields. In addition, climate-related ecosystem changes are making it harder to find some wild sources of food, as people's knowledge of where and when to hunt, fish and gather food plants becomes less reliable.

## In Niger, Community Gardens Nourish Hope

Niger is struggling to cope with a nutrition crisis. But in the village of Alikinkin, community gardens are an oasis of beauty and a source of food, helping children avoid the worst effects of the crisis. In Alikinkin's gardens, donkeys, goats and birds flourish among the grasses, bushes and palm and date trees. Neatly planted rows of crops are irrigated with fresh water pumped from wells – a stark contrast to the situation in other parts of the country.

In Agadez, a town near Alikinkin, 50 community gardens ensure that village children have access to nutritious foods. The gardens produce tomatoes, onions, carrots, peas, beans, cabbage, potatoes and wheat.

When the project began in 2002, the women who grew and harvested the vegetables drew water from the wells by hand. To help with irrigation, they were offered a choice of camels or motorized pumps. The off-season garden harvests help families through the long hunger season. Children have first call on the harvested vegetables, but when the gardens yield an excess, the vegetables are sold in the market, and the money is saved in the women's community bank account.

The money helps to buy medicine, pay for school fees and uniforms, and buy basic staples like millet or sorghum that cannot be grown around Agadez.



© UNICEF/H005-0999/Norani

# Trees

**“Planting trees on top of mountains without watering them and nurturing them is like expecting a baby to be born from a mother taking contraceptives.”**

**— Girl, age 16, Harar, Ethiopia**

**“Logging is getting out of control; all over the place there are big patches of bare earth and I don’t like it! Come on, we need trees to breathe – you would think we could use another source of material to build things!”**

**— Natalie, age 16, Canada**

*“When we plant trees, we plant the seeds of peace and seeds of hope.”*

*— Prof. Wangari Maathai, 2004 Nobel Peace Prize Laureate*

Trees shade us from the heat of day, bear fruit for our tables and add beauty to the landscape. From an environmental perspective, they are even more essential: The life-giving oxygen produced by trees removes air pollution, lowers temperatures and adds moisture to the air. By holding the soil in place and reducing run-off from streams, trees prevent soil erosion, control avalanches, mitigate desertification, protect coastal areas and stabilize sand dunes.

Birds and other wildlife need trees for shelter and food – and so do children. Indeed, trees form the foundations of many natural systems. Forests are the most important repositories of terrestrial biodiversity, sheltering up to 90 per cent of known species.

Trees absorb carbon dioxide and form vital carbon sinks.<sup>15</sup> The UN Environment Programme estimates that the world’s forests store 283 gigatonnes of carbon in their biomass alone and that the carbon stored in forest biomass, dead wood, litter and soil together is roughly 50 per cent more than the carbon in the atmosphere.

Environmental conservation through tree planting is one of the foundations of development. According to recent reports, as part of Ethiopia’s millennium celebration, the Ethiopian Government increased its commitment to a greener environment by setting the goal of planting 20 million trees. UN agencies worked closely with the government to mobilize the public, especially children and young people, to take part in the challenge. The programme, which taught

children and youth the basics of planting and nurturing seedlings, played a key role in raising public awareness about environmental conservation.

The loss of natural forests across the globe contributes more to carbon emissions each year than the transport sector. Curbing carbon deforestation is an effective way to reduce emissions.<sup>16</sup>

Cutting down trees for fuel leads to deforestation and desertification and is linked to greenhouse gas emissions and climate change. In addition, it is a gender and health issue. Women and girls spend increasing numbers of hours each day fetching wood for fuel, and they are disproportionately exposed to indoor smoke from cooking fires.

## Planting Trees of Hope

The United Nations Environment Programme has launched a major worldwide tree-planting campaign called ‘Plant for the Planet: Billion Tree Campaign’, which encourages people, communities, business and industry, civil society organizations and governments to enter tree-planting pledges online. The objective is to plan at least 1 billion trees worldwide during 2007.

UNICEF supports the Billion Tree Campaign by making possible the participation of children in youth and education programmes in developing countries and through programmes sponsored by National Committees in industrialized countries.









# Energy: Challenges and Opportunities

Worldwide, 1.6 billion people lack access to electricity, and 2.4 billion people lack modern fuels for cooking and heating. Four out of five people with no access to electricity live in developing countries and in rural areas, mainly in South Asia and sub-Saharan Africa.

This lack of adequate energy infrastructure forces more than a third of humanity – 3 billion people – to cook and heat their homes by burning wood, dung and crop waste. These families face an impossible dilemma: Cook with solid fuels and suffer the health consequences, or don't eat a cooked meal.<sup>17</sup>

Smoke in the home leads to the deaths of nearly 800,000 children each year. Newborns and infants are often carried on their mother's back while she is cooking, or kept close to the warm hearth. As a result, they spend many hours breathing polluted air during their first year of life – just when their developing airways and their immune systems make them particularly vulnerable.<sup>18</sup> Climate and weather influence the concentration of these materials in the air.

Shifting from solid fuels to cleaner energy – for instance, liquified petroleum gas, biogas or solar power – can potentially yield the largest reduction in indoor air pollution levels while minimizing the environmental impacts of energy production and consumption.

Access to modern energy services improves a child's access to education and helps retain girls and boys in school – especially girls, who traditionally fetch the firewood or other biomass fuels for cooking and heating.

In China, programmes support affordable solar energy for pumping water, generating electricity and heating water for household use in rural areas. Additionally, the government is promoting household biogas plants to treat human excreta and pig manure through anaerobic digestion to generate methane – a greenhouse gas that becomes 'green' when burned – for cooking and lighting in rural households. The well digested sludge from the biogas latrine is used as organic fertilizer in the field.



**“It’s an eye-opening experience to realize that there are so many things I can do for the earth and our future. I’ll do my best to save energy and water and to recycle as much as I can. It would be great to help many children in the world by energy saving and wise consumption.”**

**— Yerin Kim, age 12, Republic of Korea**

**“Yes, I do agree that trees shouldn’t be cut down unnecessarily, but we should think about those people who have to cut down trees so that they may survive. The major cause of excess tree abuse is the cutting of trees for fuel. People around the world lack basic necessities such as fuel and need to chop down trees if they want heat and warmth. Every government needs to make an effort in providing alternative resources for our mission to succeed.”**

**— Amre, age 18, Somalia**



© UNICEF/HQ95-0323/Chanton

## Action and Advocacy

While the accelerating deterioration of the global environment has its most profound effect on children and young people, environmentally aware and empowered children and adolescents are potentially the greatest agents of change for the long-term protection and stewardship of the earth.

More than 46 per cent of the world's population is now younger than 25 years old – 3 billion individuals in all.<sup>19</sup> The decisions they make can and will shape the future of our world. The next 10 years are crucial, and they offer an amazing window of opportunity.

Young people's knowledge of water, environment and health is a largely untapped resource. They are the next generation of water users and environmental stewards in households and communities. The capacity of these young people to live in harmony with nature and to manage and maintain local water, air and land resources effectively is absolutely vital.

Community-based monitoring and advocacy activities in selected countries have begun to create opportunities for young people to participate in actions that reduce the incidence of water-related disease and deforestation, as well as clean up degraded community environments and watershed areas to improve living conditions for themselves and their families.

Children's participation in these activities has succeeded in raising awareness about their role as agents of change. But experience tells us that more must be done to influence the opinion of adults so they regard children as partners in a shared mission.

Based on the premise that what children learn today will shape the world tomorrow, instilling environmental awareness at a young age is an effective way to

protect the environment. Programmes that improve the availability and quality of environmental education are key interventions for long-term change. While schools – and especially primary schools – are ideal platforms for increasing children's environmental knowledge, the most effective learning programmes go beyond schools and into local communities.

But increasing children's and young people's environmental awareness is not enough. For them to become effective agents of change, avenues must exist for their knowledge to be translated into advocacy and action. Programmes that promote children's participation in local environmental initiatives, that strengthen children's clubs and networks, and that provide a voice for children in local, national and global development processes are all



**“Personally, I am a radio moderator, and every radio programme we do has a special time for environmental affairs/practices. We can sensitize the public or make them aware of the bad effects of various practices which pollute the environment.”**  
— Abdoulie, age 13, the Gambia

**“I can buy less things, buy a reusable bag so that I don't get plastic and paper bags from the shops. Recycle if possible! Switch off lights and those that are not being used! And buy things in a large container – instead of buying six small cans of milk, we can buy a big one.”**  
— Darkme, age 14, Oman

ways to help realize the potential of children to shape their own world.

To this end, the UN Environment Programme and UNICEF are developing an Environmental Education Resource Pack for Child-Friendly Schools, which will offer comprehensive solutions designed to empower children. The Pack will support risk-mitigation efforts and disaster risk reduction and promote an understanding of one's physical surroundings, self-image, health and capacity to learn.

Protecting the environment while providing for the health and development of children are mutually inclusive goals. Almost any action taken to enhance environmental quality also helps to meet the basic needs and rights of children.



© UNICEF/H002-0239/Pirozzi



© UNICEF/H002-0239/Pirozzi

**"I come from the island of Crete, known for its breathtaking natural wealth and beauty. A few weeks ago, I was approached by a young girl, not more than 10 years of age, who asked me, 'Dora, what can I do to save the planet?' The simplicity of her question, yet the complexity of the answer required, struck me. The simplest answer I could give was, 'You and your family need to change the way you live – your daily routines.'"**  
— Statement by HE Mrs. Dora Bakoyannis, Minister of Foreign Affairs of the Hellenic Republic, at the UN High-Level Event on Climate Change, 'The Future is in our Hands: Addressing the Leadership Challenge of Climate Change', 24 September 2007, New York

**"Youth carry out initiatives for sustainable development that not only enlarge our capacities to face environmental, social and economic challenges in the future, but also contribute today to the improvement of our communities. We want the capacity to generate creative and effective solutions."**  
— International Youth Declaration, UN Framework Convention on Climate Change, Conference of Parties 10, December 2004, Buenos Aires

**"I think the best way young people can contribute is by trying to generate an environmental conscience in older people... Man's use of resources has been rather careless, and it was not so many years ago that we began to face the consequences. I think it is a responsibility for the youth to generate an environmental conscience."**  
— Marielle, age 17, Mexico

# ENDNOTES

- <sup>1</sup> World Health Organization, *World Health Report 2002: Reducing risks, promoting healthy life*, WHO, Geneva, 2002, p. 72.
- <sup>2</sup> Gordon, Bruce, Richard Mackay and Eva Rehfuess, *Inheriting the World: The atlas of children's health and the environment*, World Health Organization, Geneva, 2004, p. 20.
- <sup>3</sup> Ibid, p. 46.
- <sup>4</sup> HM Treasury, 'Stern Review: The Economics of Climate Change Summary of conclusions', London, p. vi.
- <sup>5</sup> Some estimates place the number as high as 250 million.
- <sup>6</sup> Intergovernmental Panel on Climate Change, 'Impacts, Adaptation and Vulnerability', Fourth Assessment Report, Working Group II, Summary for Policymakers, New York, April 2007, p. 13.
- <sup>7</sup> United Nations Children's Fund East Asia and Pacific Regional Office, 'Emergencies: Refugees, IDPs and child soldiers; natural disasters', UNICEF EAPRO, Bangkok, 2005, p. 6.
- <sup>8</sup> United Nations Development Programme Bureau for Crisis Prevention and Recovery, *A Global Report: Reducing disaster risk – A challenge for development*, UNDP, New York, 2004, pp. 39-40.
- <sup>9</sup> Zoonosis refers to any disease that can be passed from animals to humans.
- <sup>10</sup> World Health Organization Regional Office for Europe, *Floods: Climate change and adaptation strategies for human health*, WHO, Copenhagen, 2002, p. 21.
- <sup>11</sup> World Health Organization, *Climate Change and Human Health: Risks and responses*, Chapter 7, WHO, Geneva, 2003, p. 19.
- <sup>12</sup> World Health Organization, *Asthma*, Fact Sheet N 307, August 2006.
- <sup>13</sup> Bartram, Jamie, and Richard Ballance, eds., *Water Quality Monitoring: A practical guide to the design and implementation of freshwater quality studies and monitoring programmes*, United Nations Environment Programme and World Health Organization, Nairobi and Geneva, 1996, p. 1.
- <sup>14</sup> Campbell-Lendrum, Diarmid, Carlos Corvalán and Maria Neira, 'Global Climate Change: Implications for international public health policy', *Bulletin of the World Health Organization*, vol. 85, no. 3, March 2007, pp. 235-236.
- <sup>15</sup> Carbon sinks are forests, oceans or other natural environments that have the ability to absorb carbon dioxide from the atmosphere.
- <sup>16</sup> United Nations Environment Programme, 'The Billion Tree Campaign: Facts and figures – Questions and answers', <[www.unep.org/billiontreecampaign/FactsFigures/index.asp](http://www.unep.org/billiontreecampaign/FactsFigures/index.asp)>, accessed 27 October 2007.
- <sup>17</sup> Rehfuess, Eva, *Fuel for Life: Household energy and health*, World Health Organization, Geneva, 2006, p. 22.
- <sup>18</sup> Ibid, p. 20.
- <sup>19</sup> United Nations Population Database, 2006.

# REFERENCES

- Adeel, Zafar, et al., 'Overcoming One of the Greatest Environmental Challenges of Our Times: Re-thinking policies to cope with desertification', Policy brief based on the Desertification and the International Policy Imperative joint international conference, Algiers, United Nations University, Hamilton, Ontario, 2007.
- Campbell-Lendrum, Diarmid, Carlos Corvalán and Maria Neira, 'Global Climate Change: Implications for international public health policy', *Bulletin of the World Health Organization*, vol. 85, no. 3, March 2007.
- Gordon, Bruce, Richard Mackay and Eva Rehfuess, *Inheriting the World: The atlas of children's health and the environment*, World Health Organization, Geneva, 2004.
- Intergovernmental Panel on Climate Change, 'The Physical Science Basis', Fourth Assessment Report, Working Group I, Summary for Policymakers, New York, February 2007.
- , 'Impacts, Adaptation and Vulnerability', Fourth Assessment Report, Working Group II, Summary for Policymakers, New York, April 2007.
- , 'Mitigation of Climate Change', Fourth Assessment Report, Working Group III, Summary for Policymakers, New York, February 2007.
- Landrigan, P.J., and A. Garg, 'Children Are Not Little Adults', Chapter 1, *Children's Health and the Environment: A global perspective – A resource manual for the health sector*, edited by J. Pronczuk de Garbino, World Health Organization, Geneva, 2004.
- McMichael, A.J., S. Bunyavanich and P. Epstein, 'Global Environmental Change and Child Health', Chapter 16, *Children's Health and the Environment: A global perspective – A resource manual for the health sector*, edited by J. Pronczuk de Garbino, World Health Organization, Geneva, 2004.
- Orlando, Brett, et al., *Carbon, Forests and People: Towards the integrated management of carbon sequestration, the environment and sustainable livelihood*, World Conservation Union (IUCN), Gland, Switzerland, and Cambridge, UK, 2002.
- Prüss-Ustün, A., and C. Corvalán, *Preventing Disease through Healthy Environments: Towards an estimate of the environmental burden of disease*, World Health Organization, Geneva, 2006.
- Rehfuess, Eva, *Fuel for Life: Household energy and health*, World Health Organization, Geneva, 2006.
- Reiter, Paul, 'Climate Change and Mosquito-Borne Disease', *Environmental Health Perspectives Supplements*, vol. 109, no. S1, March 2001.
- Stern, Nicholas, *The Economics of Climate Change: The Stern Review*, Cambridge University Press, Cambridge, 2007.
- Sutherst, Robert W., 'Global Change and Human Vulnerability to Vector-Borne Diseases', *Clinical Microbiology Reviews*, vol. 17, no. 1, January 2004.
- United Nations Children's Fund, *Progress for Children: A report card on water and sanitation, Number 5*, UNICEF, New York, September 2006.
- United Nations Children's Fund East Asia and Pacific Regional Office, 'Emergencies: Refugees, IDPs and child soldiers; natural disasters', UNICEF EAPRO, Bangkok, 2005.
- United Nations Development Programme, *Human Development Report 2006: Beyond scarcity – Power, poverty and the global water crisis*, UNDP, New York 2006.
- , *Human Development Report 2007/2008: Fighting climate change – Human solidarity in a divided world*, UNDP, New York, 2007.
- United Nations Economic and Social Council, 'UNICEF Water, Sanitation and Hygiene Strategies for 2006-2015', E/ICEF/2006/6, UNICEF Executive Board first regular session 2006, ECOSOC, New York, 15 November 2005.
- United Nations Environment Programme, *Africa Environment Outlook 2: Our environment, our wealth – Executive Summary*, UNEP, Nairobi, 2006.
- , *Melting Ice – A Hot Topic?*, UNEP, Nairobi, 2007.
- United Nations International Strategy for Disaster Reduction, '2006–2007 World Disaster Reduction Campaign: Disaster risk reduction begins at school,' UN/ISDR, Geneva, 2006.
- World Health Organization, *Ecosystems and Human Well-Being: Health synthesis*, Millennium Ecosystem Assessment, WHO, Geneva, 2005.
- , *Global Environmental Change and Health: Risks and responses*, WHO, Geneva, 2003.
- , in collaboration with United Nations Environment Programme and World Meteorological Organization, *Climate Change and Human Health: Risks and responses – Summary*, WHO, Geneva, 2003.
- , *World Health Report 2002: Reducing risks, promoting healthy life*, WHO, Geneva, 2002.



**“The participation of children and young people in local actions addressing health, agriculture and environment as it impacts the survival and development of children involves a partnership across the generations within an atmosphere of mutual trust and the development of shared goals.**

**“We are not asking for the moon. We are simply asking to be considered as partners in development efforts to ensure healthy food, safe water and sanitation to all children and to live in a world of peace.”**

**— BioVision Children’s Call for Action, Lyon, France, 14 March 2007**

**“We see the protection of the environment as:**

- **Conservation and rescue of natural resources**
- **Awareness of the need to live in environments that are healthy and favourable to our development**
- **Accessible surroundings for children with special needs.”**

**— Excerpt from A World Fit for Us, drafted by young people at the UN Special Session on Children, 2002**



United Nations Children's Fund  
3 United Nations Plaza  
New York, NY 10017, USA  
Email: [pubdoc@unicef.org](mailto:pubdoc@unicef.org)  
Website: [www.unicef.org](http://www.unicef.org)

