

Climate change, children and ESD: An educational approach to adaptation



OECD Meeting on Education for Sustainable Development

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Paris, France | September 12, 2008

Convention on the Rights of the Child

Millennium Development Goals

Healthy Environments for Children Alliance (HECA)

UNICEF Education Strategy, Child Friendly Schools

Agenda 21

Decade of Education for Sustainable Development (DESD)

A World Fit for Children

Education for All (EFA)

Aarhus Convention

UN Framework Convention on Climate Change

Article 6 of the UNFCCC

New Delhi Work Programme

Nairobi Work Programme

The Hyogo Framework for Action 2005-2012

Bali Roadmap

World Fit for Children

Principle # 10



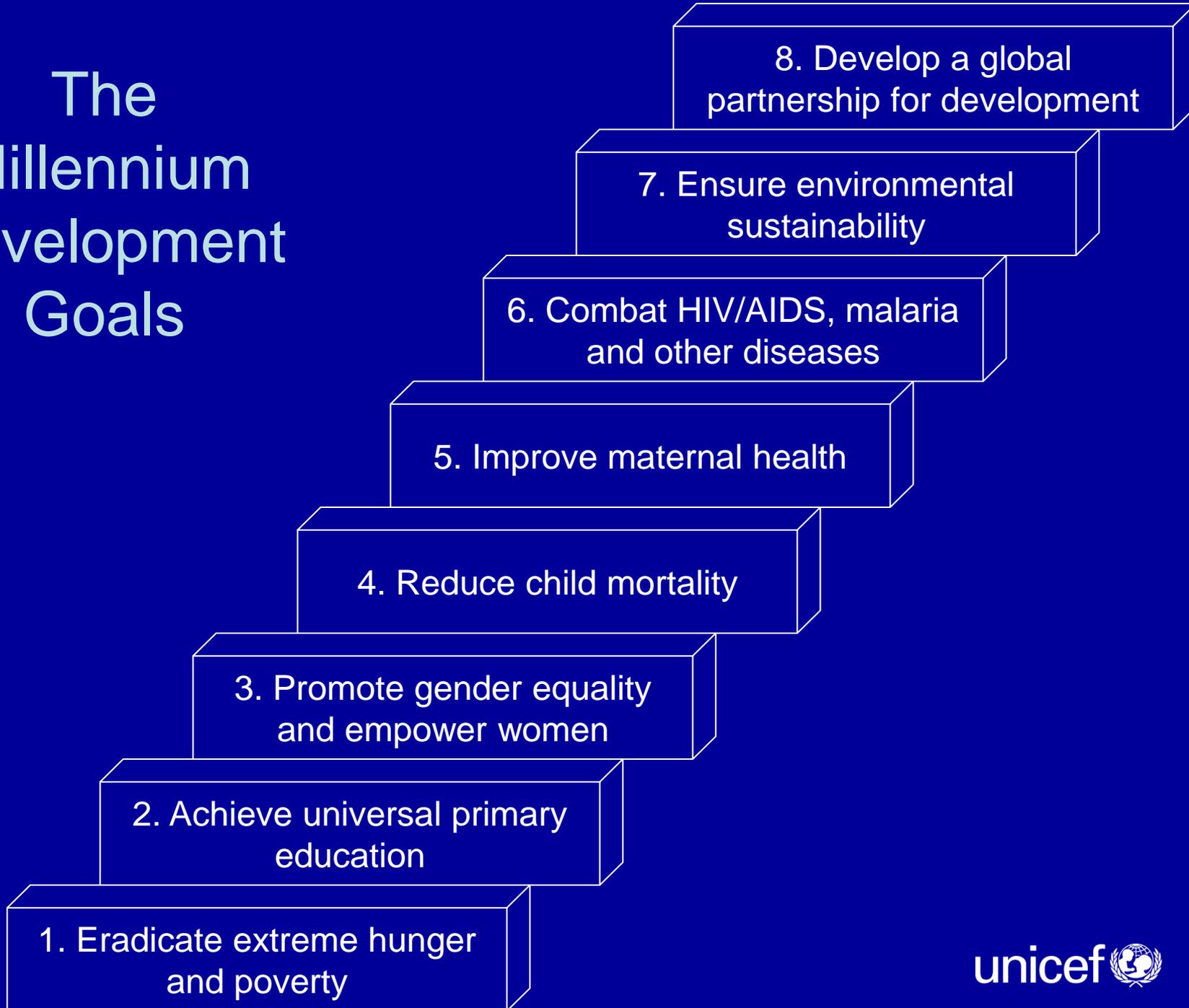
“We will give every assistance to protect children and minimize the impact of natural disasters and environmental degradation on them”

“[Climate change is] slowing progress towards the MDGs and deepening inequalities within and across countries. Left unattended, it will lead to...



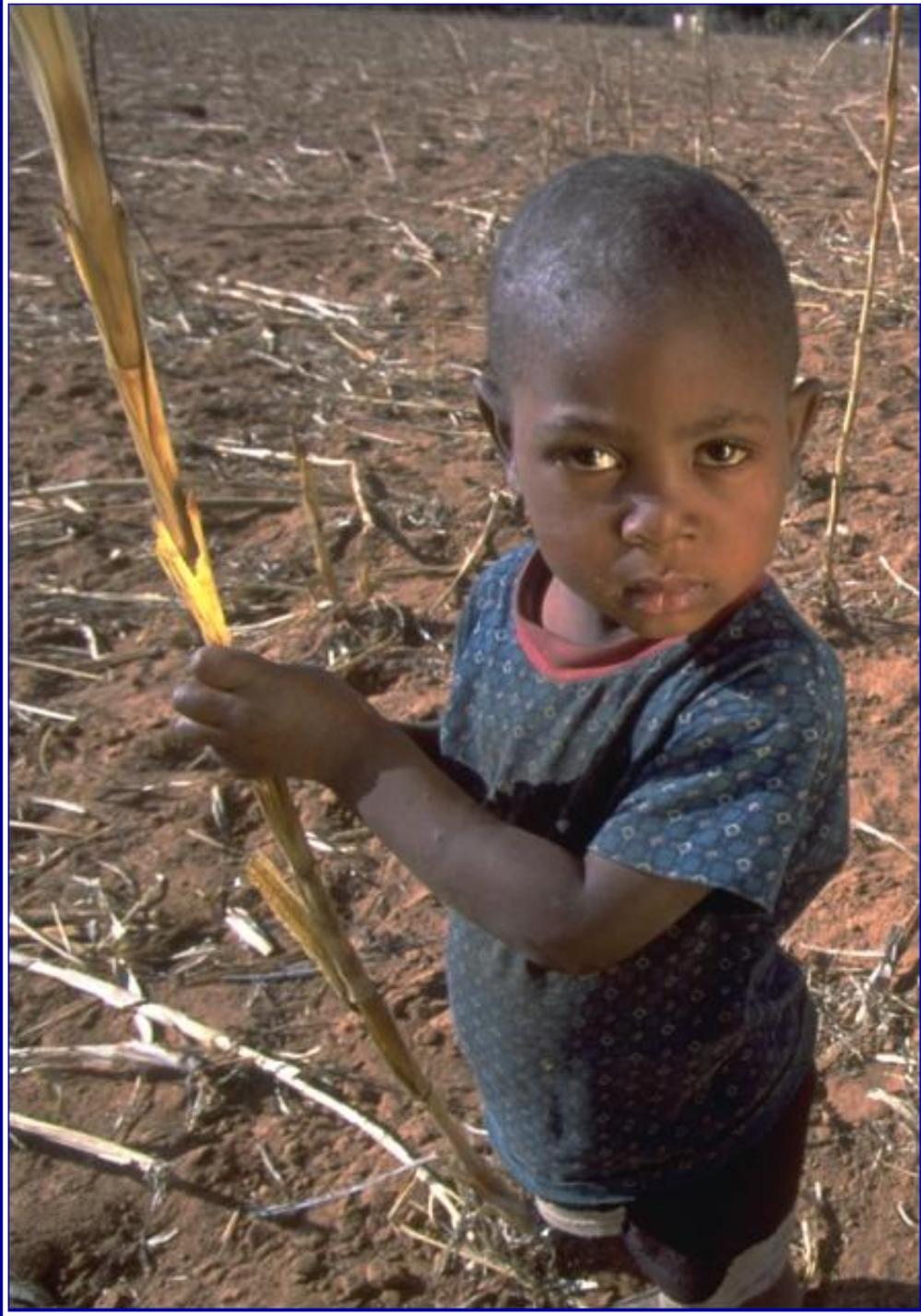
**...human
development
reversals
throughout
the 21st
Century.**

The Millennium Development Goals



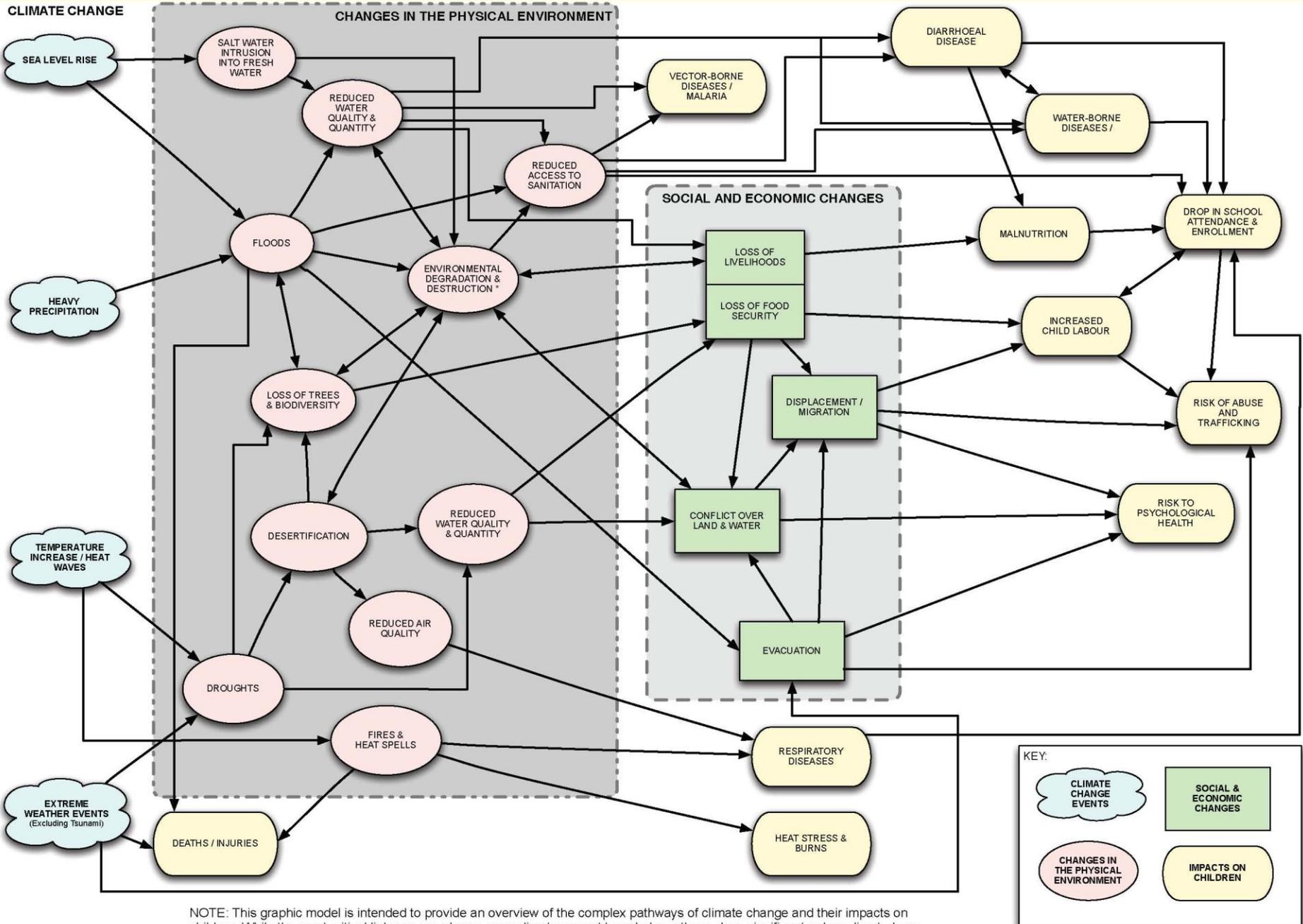
Children are central...

- Barrage of threats to health, education and survival
- Unique vulnerabilities
- The world is young
- Worst victims of armed conflict
- Protagonists for change

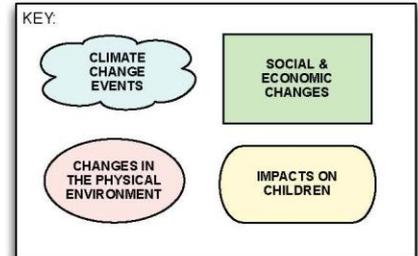


IMPACTS OF CLIMATE CHANGE ON CHILDREN

CLIMATE CHANGE

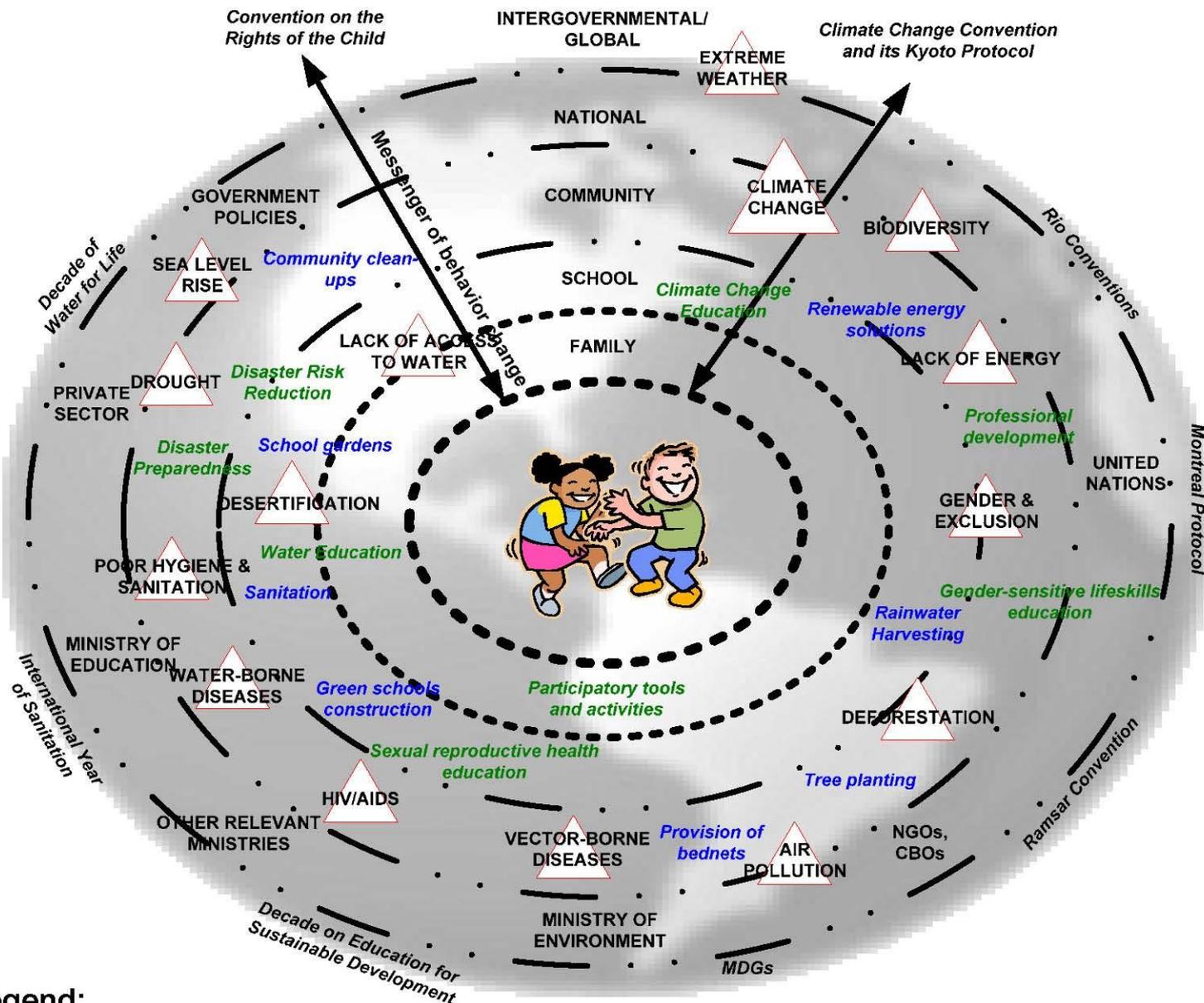


NOTE: This graphic model is intended to provide an overview of the complex pathways of climate change and their impacts on children. While the most critical linkages are shown, according to current knowledge, others - less significant or less direct - have been omitted with a view to readability.



Child Friendly Schools and Learning Spaces

- Pathway to Quality Education
- UNICEF CFS: from 33 countries in 2004 to 52 countries in 2006
- Dynamic interaction between: ***theory*** (ideology/concepts/principles) and ***practicalities*** (resources/capacities/ opportunities)
- Multi-dimensional, school as entry point to community
- Child-centred pedagogy, participatory lifeskills-based approach, building knowledge for empowerment
- E-learning and capacity building resources
- Monitoring and evaluation



OUTCOMES

- Environmentally-aware and empowered children
- Children, families and communities prepared for environmental emergencies
- Healthy/sanitary environments support improved learning capabilities
- Gender equality
- 'Green' schools
- Reduced vulnerability to climate change related risks
- Restored watershed areas
- Reforested, stabilized environments

Legend:

- Triangle: Threats
- Software/participatory solutions: Green
- Hardware/environmental solutions: Blue

Environmental Education Resource Pack for Child Friendly Schools and Learning Spaces

- Provides guidance and support to policy-makers, teachers, youth facilitators and students
- Integrates facilities based solutions with child-centred skills-based curriculum and participatory tools to support empowerment and community-based action
- Addresses issues of environmental degradation, desertification and climate change through restoration of school and community environments.
- Promotes children's environmental health awareness and outreach



Girls in South Sudan, generating a map of their community to identify issues and discussing solutions

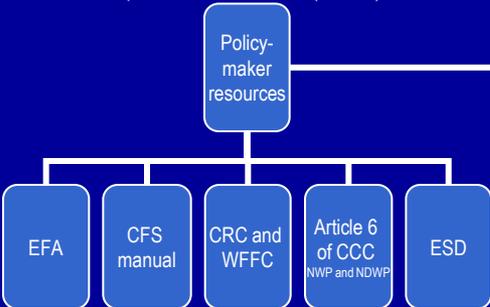
Human Rights approach causality analysis root, underlying and immediate causes of environmental degradation and climate change. National legislative and policy guidance for inclusion of the rights, for use in development of National Adaptation Plans for Action (NAPAs).

Climate Zone

Identical modular structure for each of four climate zones (highland/mountain; flood plains and SIDS; rainforest; and dryland/desert), many activities are interchangeable within e-learning format.

Each lesson represents a 4 week (minimum) unit with opportunity for expansion to 6-8 weeks or longer, depending on time per week.

All are knowledge and skills based, inclusive of issues of: environmental health, conflict resolution/consensus building, safety and protection, food and water security, access to energy, risk reduction and preparedness



Guidelines include: bridging sectors for quality education, justification for addressing environment in Education, ie: better prepared communities, reduced vulnerability, coordinated UN support, links to National frameworks and goals in literacy, mathematics, science.

Lesson One is introductory and exploratory with need for national govt inputs

Lesson One: Where I live



Facilities based guidelines

Guidelines to include simple method to quantify cost-benefit of intervention in child-centred terms; ie: health, gender, socio-economic, environmental



Lessons to include child-centred participatory activities, aligned with curriculum areas to enhance understanding and empowerment



ie: why do we need this solution? How does it work? How will it be maintained and monitored? What is the role of kids? Community? Administration?

Each unit within the lesson has gender component and explains links to environment and the child with skills-based activities toward empowerment

Lesson Two: Risks and opportunities

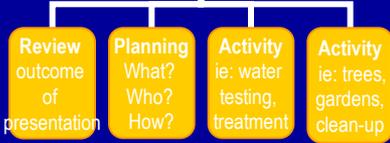


Lesson Two is to understand challenges and opportunities. We now know what it was like before (survey from older generations) and what is happening now. How is the current situation affected by climate change? Look at current situation and build consensus toward solutions. Collect data on risks most challenging to our community.

Please note: Orange indicates that Lessons 3 and 4 are Phase II of development

Lesson Three: Plan and Action

Lesson Three is action learning with participatory elements; advocacy, planning, behaviour change and activity.



Lesson Four: Monitoring Evaluation Outreach

Lesson Four addresses follow-up, including teacher-specific guidance for evaluation and participatory monitoring of facilities and on-going activities (ie: gardens, evacuation plans). There is a community engagement component and also information for understanding how these locally sustainable actions make a difference to the global community. Guidelines for possibility for district-level programme for child-to-child sharing, peer mentoring and intergenerational dialogue.



Welcome to the technical guideline notes on Environmentally friendly facilities in child friendly schools

First decide in which climate zone you live
(by moving the cursor over the pictures you will see some explanations)
Enter the climate zone by clicking on the text
and discover the guideline notes by just clicking through them.



Highland climates



**Flood plains
and SIDS**

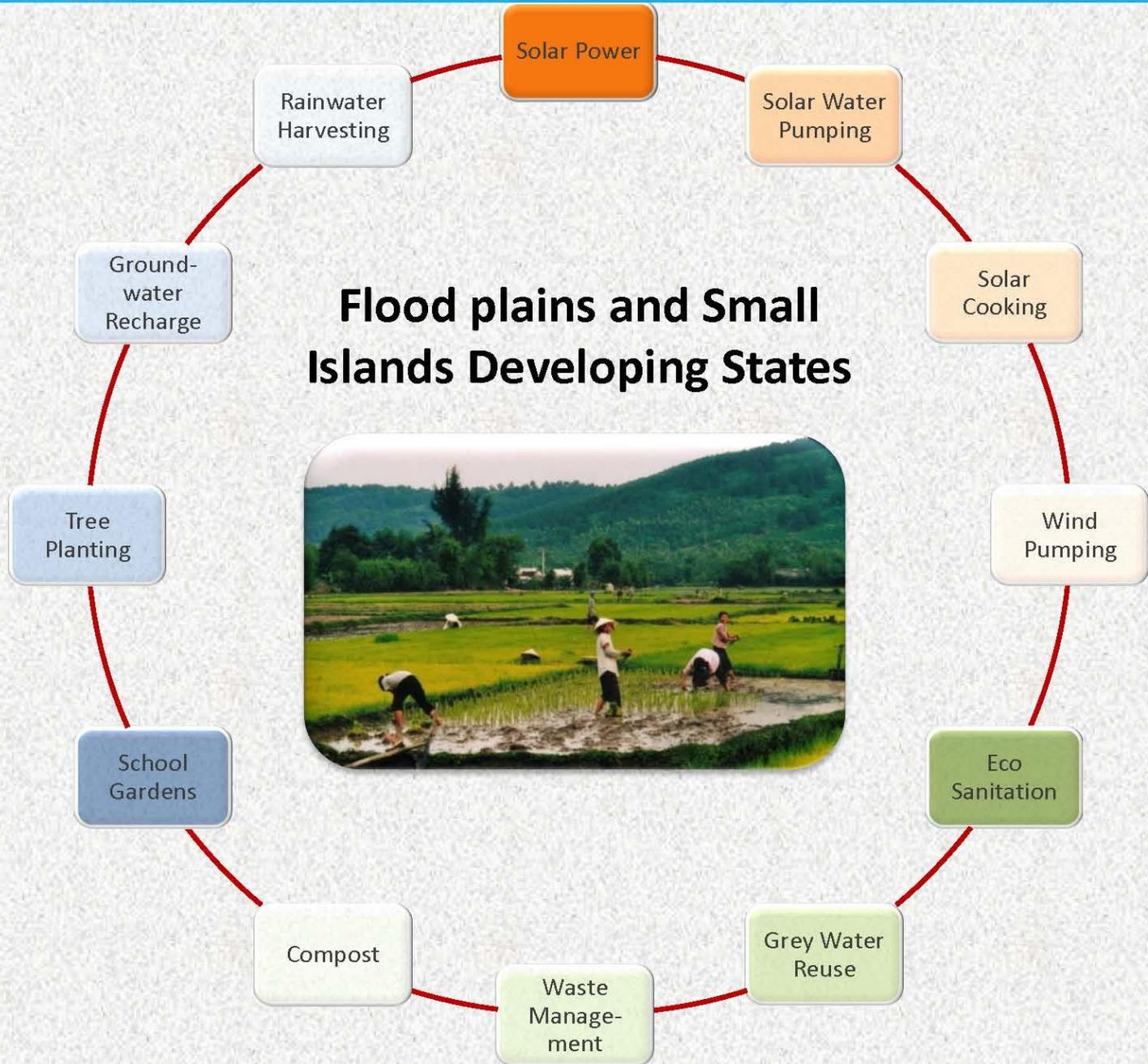


**Drylands and
desertification**



**Tropical rain
forests**

Flood plains and Small Islands Developing States



School garden

School gardens offer children the opportunity to grow fruits and vegetables, and learn firsthand about different foods; it is also a way to teach about sustainable agriculture, ecology, the origin of food, and respect for living systems.

School gardens are important for

- **Nutrition and food security**

Fresh food from the garden improves the nutritional value of school meals. Gardening techniques learned at school can be replicated at home, i.e. in the household gardens or family farms, hence improving household nutrition and food security in the home.

- **Education**

Children have the opportunity to gain practical experience in producing, harvesting, processing and preparing food, to learn about ecology and natural resource management, while applying the knowledge learned in their study of natural science. In a team, children learn to work together and share responsibilities. If garden products are sold, proceeds can be used to provide scholarships and to purchase school supplies and children can apply these skills to mathematics and money management.



Source: City Farmer, Canada's Office of Urban Agriculture www.cityfarmer.org



[Plant parts and plant life cycle](#)



[What plants need to grow](#)



[Gardening methods](#)



[How to set up a garden](#)



Go to

Garden

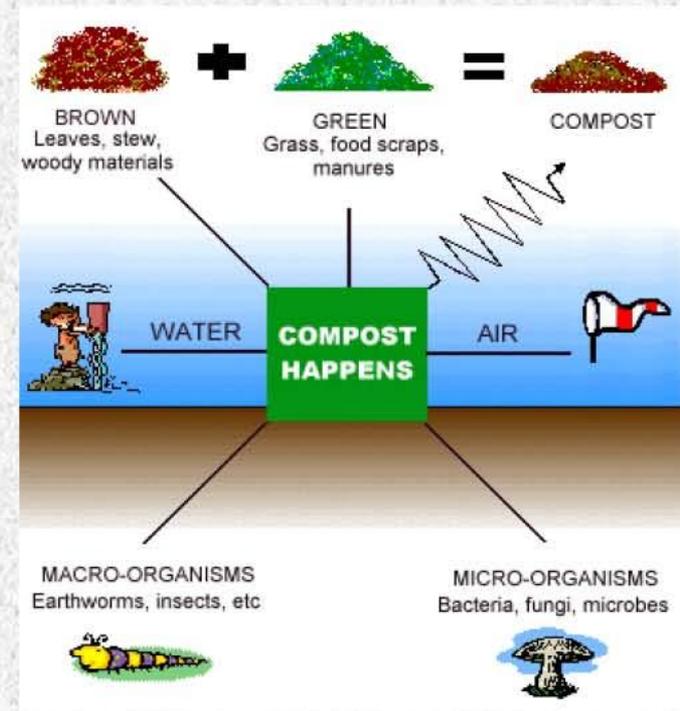
Climate

Teachers Module

Composting

Composting as a science project

Designing successful composting systems requires an understanding of certain biological, chemical, and physical processes such as the movement of air, uptake of carbon and nitrogen, and heat production and transfer. Students can be a part of the process of obtaining scientific information about composting, whether their results are applied in their own home, school, or by industry. At the same time, students engage in hands-on, minds-on composting activities with an opportunity to improve their understanding of many scientific processes and disciplines. If you have a [school garden](#) the compost can be used on site



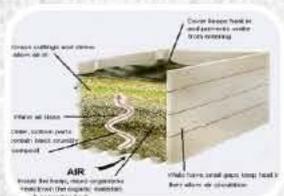
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Go to

Compost

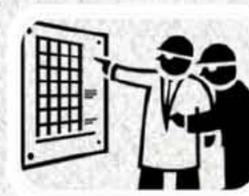
Climate

 Teachers
Module


What is composting?



Holding units


 Basic school
composting recipe

 Planning a
composting project

Use of solar power

If there is no electricity grid near your school, solar power can be used as stand alone application .

Together with a storage battery, photovoltaics have become widely used for [low-power DC applications](#).

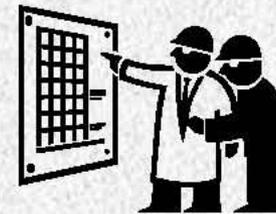
Alternatively, if your school has electricity supply from the grid, the solar power can be used to supplement the power supply from the grid and even to feed back into the grid. In some countries the sales of energy to the power company can serve as income generation.

In this case the DC power needs to be [converted into AC power](#).

Solar Power is also used to drive [solar water pumps](#)



(SolarAid)



Planning a solar system is highly technical

It is advisable to search expert advise

The UNICEF Supply Section might be helpful in finding the right specialists

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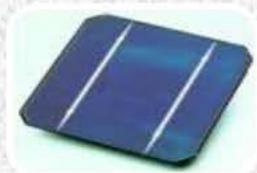


Go to

Topic

Climate

Teachers Module



Solar Cells



Solar Energy Potential



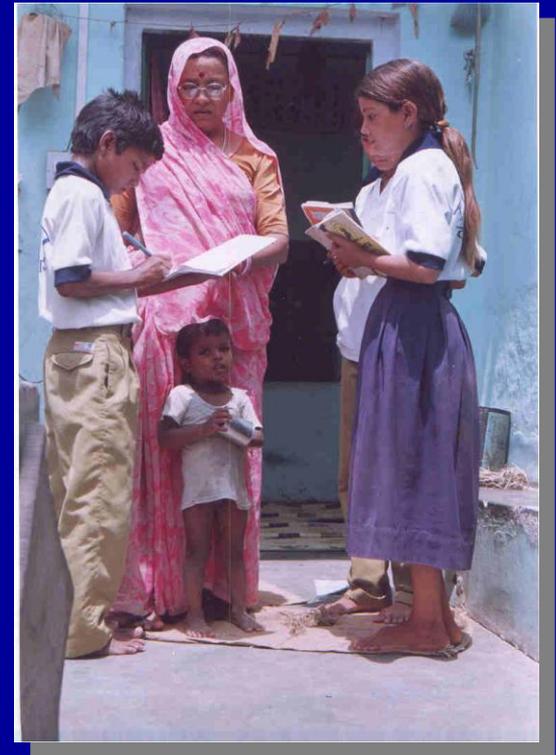
Advantages and Disadvantages



Uses of Solar Energy

Natural disaster risk reduction and emergency preparedness

- Support for Governments and partners to improve national preparedness and adaptation plans
- Involving young people in community mapping, planning, monitoring and evaluation
- Education for emergencies



UN IAC-DESD, A System-wide approach

- **UNEP:** MESA, Ozzy Ozone, Youth Exchange, children's environmental health
- **UNESCO:** DESD, Upstream policy guidance, Drylands
- **UNDP:** Renewable energy guidelines, SGP, Youth Environment Corps
- **WHO:** Children's Environmental Health
- **FAO:** School gardens, YUNGA
- **WFP:** Solar cookers, nutrition and sustainable school feeding
- **UNFCCC:** Article 6, YUNGA
- **UN Habitat:** Urban slums, values-based water curriculum
- **WMO:** School weather monitoring
- **UNCCD:** Drylands, Desertification Kit
- **UNU:** RCEs and EHS, country level support

NGOs, Civil Society, Private Sector:

- **Youth organizations** (YMCA, YWCA, WAGGGS, WOSM, IAA, IFRC): Non-formal education
- **ISDR:** Riskland game, disaster preparedness
- **SolarAid:** solar solutions with/for schools in Africa
- **Children and young people themselves!!!**

Empowered young people: protagonists for change



“Young people are a source of creativity, energy and initiative, of dynamism and social renewal. They learn quickly and adapt readily.”

-‘We the Peoples’:
The Role of the United Nations
in the 21st Century, 2000

Conclusions and recommendations

1. **The complexity of the global environment and climate change calls for an integrated approach involving and addressing children.**
2. **A Human Rights Based Approach necessitates inclusion of children's issues within all international and national efforts to address climate change and its human security aspects.**
3. **Children's genuine participation in local adaptation is not only useful, but also necessary for sustainable solutions**
 - **Participatory approaches to community development include water and energy stewardship, environmental education, disaster risk reduction and preparedness**
 - **Participation creates economic opportunity, reduce vulnerability and empower the most marginalized citizens**
4. **Increased support from the global community is needed for regional and national capacity building to ensure allocation of resources to local adaptation in poor communities which engage with women and children**
 - **Partnerships are key**

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

~ Biovision Children’s Call for Action, March 2007



Thank you!

