FINAL WORKSHOP REPORT
Saturday, November 7, 2009
Addis Ababa, Ethiopia

Population and Climate Change
Adaptation Workshop

P H E
ETHIOPIA
consortium

Population Action
INTERNATIONAL
HEALTHY FAMILIES HEALTHY PLANET

Population and Climate Change **Adaptation Workshop**

INTRODUCTION

The 15th Convention of Parties to the UN Framework Convention on Climate Change, known as the Copenhagen Climate Meeting, riveted world attention on the potential for a global deal on emissions targets. The meeting in Copenhagen has also drawn attention to the plight of countries that will bear the brunt of the effects of climate change. Those are the countries that had the least to do with the massive buildup of carbon in the atmosphere that is causing global warming. Copenhagen also included discussion on longer-term adaptation strategies that countries can engage in to increase resilience to changes in climate, and the funding mechanisms to support adaptation in developing countries.

The PHE – Ethiopia (Population, Health and Environment - Ethiopia), in collaboration with Population Action International (PAI), Ethiopia Civil Societies Network on Climate Change (ECSNCC), and Forum for Environment (FfE), Climate and Health Working Group (CHWG), Ethiopian Environmental Journalists Association (EEJA) convened a workshop to discuss population and climate change adaptation. Built around a study conducted in Ethiopia linking adaptation to climate change to population, fertility and family planning, the workshop explored a range of issues, including climate change and population, climate change and health and hopes for the upcoming climate meeting in Copenhagen. The agenda for the meeting is shown in Attachment 1.

The meeting was chaired by Professor Zerihun Woldu, PHE - Ethiopia Board Vice Chairman and Professor of Plant Ecology, Department of Biology, Addis Ababa University, and was opened by Dr. Abera Deresa, State Minister for Agriculture and Rural Development, was attended by 65 people, ranging from government officials to civil society groups working on projects integrating population, health and nutrition to donors. 9 journalists covered the meeting. *Attachment 2 includes the list of participants.*

Participants at the Population and Climate Change Adaptation Meeting.

OBJECTIVES

The meeting had four objectives:

- Increase the awareness of negotiators and other stakeholders on the link between health, population and climate change
- Create a platform for all stakeholders for appropriate adaptation strategies in relation to health, population and climate change
- Create stronger partnerships, strengthen coordination and collaboration of the members and partners involved in the network and other organizations
- Disseminate and receive comments on Miz Hasab and PAI Population and Climate Change Case Study

OPENING

"The current population will continue to have huge environmental problems....While our government is preparing for the negotiation to protect our economy, biodiversity, and livelihoods, it is my earnest hope that the ideas generated in this conference will contribute to reinforce our arguments and demands for an effective outcome [in Copenhagen]."

H.E. Aberra H.E. Aberra Deressa, State Minister, Ministry of Agriculture and Rural Development

H.E. Dr. Aberra Deressa, State Minister for Agriculture and Rural Development (MoARD), opened the meeting on behalf of the National Climate Change Forum, which is chaired by the Ministry of Agriculture and Rural Development and is comprised of members from the government and civil society organizations including Oxfam America and PHE - Ethiopia. He highlighted that the dynamic interaction between humans and climate affects all aspects of sustainable development. He noted that there are a number of factors that affect climate, but those factors related to human activities are important in developing countries, while greenhouse gas

emission and heavy industries that use fossil fuel to produce energy are important in developed nations. He noted that population effects on emissions are determined by consumption patterns of different social groups throughout the world and, ultimately, by models of civilization and that the vast majority in the developing countries are victims of the industrialized nations and yet are being forced to pay for their error. The current population will continue to have huge environmental problems. Hence, there is an urgent need to help communities that are vulnerable to climate change and increasing their capacity for adaption strategies. He stated that the Federal Democratic Government of Ethiopia is striving to keep the momentum of economic growth while at the same time engaging with climate change with full capacity by effectively responding to the risks of climate change.

H.E. Dr. Abera thanked the governmental and non-governmental organizations working on three important variables related to sustainable development, namely population, health and the environment, and their interaction. As natural resources have limited carrying capacities, any pressure exerted beyond the given capacity of the resource will result in significant effects. "World population experienced its fastest growth in history during the second half of the 20th century, swelling from 2.5 billion in 1950 to 6.1 billion in the year 2000."

H.E. Dr. Abera noted that while the government is preparing for the negotiations in order to protect Ethiopia's economy, biodiversity, and livelihoods, it is his earnest hope that the ideas generated in this conference will contribute to reinforce our arguments and demands for an effective outcome. He ended by congratulating Ethiopia's climate negotiators for their unreserved efforts and by thanking the meeting attendees for stepping forward to defend the environment and welfare of people. *The full text of H.E. Dr. Aberra Deresa is available in Attachment 3.*

PRESENTATIONS

Three technical presentations were given at the meeting, the first on population and climate change, the second on climate change and health and the third on a study of adaptation in Ethiopia. *Copies of the presentations are found in Attachment 4.*

Population and Climate Change. Dr. Terefe Degefa from the Institute of Population Studies, College of Development Studies, Addis Ababa University, discussed the debate about population and climate change explaining the views of neo-Malthusians, who advocate for slowed population growth as contributing to sustainable development and environmental protection and the views of opponents who consider population growth as positive for development. Dr. Degefa noted that these two opposing views have tended to polarize the discussion about population and that the polarization is affecting current scientific, programmatic and policy discussions about climate change. Dr. Degefa argued that rather than address consumption (related to people/population) that it will be important to address the means of production in order to reduce carbon emissions and slow global warming. Related to population issues, Dr. Degefa recommended:

- **Enhancing** the knowledge – base of the population to change individual lifestyles in order to mitigate and adapt to climate change.
- **Provision** of adequate need-based family planning services to allow couples to have wanted family sizes and also improve their reproductive health.
- **Facilitating** population mobility from risky areas.
- **Improving** educational and health sectors in order to deliver good services so as to build up human capital.
- **Improving** the asset portfolio of the vulnerable group of the population.

Climate change and health. Ms. Hiwot Teka from the Climate and Health Working Group, presented on the health impacts of climate change. She noted that the UN Humanitarian Forum Report estimated that 300,000 deaths occur every year due to climate change and that these deaths are mostly attributed to vector and water borne diseases. Ms. Teka explained that malnutrition, malaria, diarrhea, and heat stress were of particular concern in relation to rising temperatures associated with climate change, as are the health impacts of more recent weather-related disasters. Ms. Teka gave an overview of the Climate Change Working Group, which has as its goal, "To create a climate-informed health sector and beneficiary communities that routinely request and use appropriate climate information to improve the effectiveness of health interventions." The CHWG comprises 11 members, including government organizations, donors, academic institutions and civil society organizations. CWHC conducts workshops, fosters research, produces a newsletter and supports projects.

Study on Adaptation to Climate Change in Ethiopia. Dr. Karen Hardee from Population Action International presented results from a study conducted jointly by PAI and Miz Hasab Research Center. Copies of the report were distributed to participants. The rationale for this study was that In designing global, national and local strategies to promote adaptation to climate changes, it is critical to hear the voices of those most affected by these changes, along with those of community leaders, policymakers, government representatives and other leaders who are entrusted with designing programs to strengthen adaptation.

In the study, women and men from the Oromia and SNNP regions of Ethiopia spoke eloquently about the increasing challenges they face in adapting to climate change. They recounted how rising temperatures, more frequent draughts and, paradoxically, increased flooding, shrinking and increasingly degraded agricultural and grazing land and diminishing forests are making it more difficult for their families and communities to cope. From their own experiences, they link population pressure to the effects of climate change and report that families should consider having fewer children to avoid much hardship in making a living and in utilizing natural resources. Participants highlighted the particular vulnerabilities of women and children. They spoke of communities coming together to promote coping strategies and the increasing need for government and NGO assistance in the face of increasing frequency of adverse events caused by the effects of climate change.

Three recommendations emerged from the study:

1. **Support integrated approaches to climate change adaptation** that build on people's expressed needs, and strengthen community-based adaptation strategies to include expanding access to reproductive health and family planning services.

2. **Give more high-level policy support to Ethiopia's reproductive health and family planning programs** to reduce the high unmet need for contraception and to improve maternal and child health.

3. Researchers should **include population growth, fertility and access to family planning and reproductive health services in future studies** of impacts, adaptation and vulnerability to climate change.

Copies of the study report are available from PHE - Ethiopia **website www.phe-ethiopia.org and also online at** www.populationaction.org/ethiopiaccs

Karen Hardee, Population Action International, facilitating a discussion section.

GROUP DISCUSSIONS

"This was the best workshop I've attended in a long time." Workshop participant

The presentations engendered lively discussion. After the presentation on population, one participant asked, "Can we think of a third track (rather than the two sides of the debate on population)? Population is a resource—as long as it is balanced with availability of resources and economic development.

Another participant noted that population projections that show fertility declining actually have assumptions built into the projections that family planning programs will be strong and access to contraception will expand. Some people have mistakenly taken the population projections as proof that attention to family planning is no longer necessary.

A third participant said that development is the link between population and climate change – and when discussing building resilience to climate change by including access to family planning and reproductive health as a pillar of adaptation, as suggested in a recent UNFPA publication. Participants were urged to read UNFPA's State of the World Population Report for 2009, titled, *Facing A Changing World: Women, Population and Climate*.

A fourth participant said that while the West needs to play the major role in climate change mitigation by reducing emissions, Ethiopia should also take charge of its own issues. High fertility, particularly unintended fertility, is causing people to suffer, and should be addressed.

A participant explained the concept of "PHE" or population, health and environment projects that integrate these components in community-based projects. The PHE approach should be considered a model for adaptation to climate change.

Another participant noted that climate change will likely increase migration and that focusing adaptation strategies to include strengthening human capital, for example, though education, will help build people's ability to find employment as they migrate to urban areas.

1. What are the take-home messages from the

After the main discussion, participants were divided into groups to discuss and answer six questions.

1. What are the take-home messages from the presentations today and how do you (or do you not) intend to apply them to your work?
2. Is there a role for population and family planning interventions in climate change adaptation in Ethiopia? Why or why not?
3. What types of adaptation approaches are needed to address the conditions in countries, like Ethiopia, hardest hit by climate change? What types of interventions can reduce a community's vulnerability to climate change?
4. What types of activities can be done here to incorporate population into Copenhagen and future climate change discussions.
5. What kind of funding is needed from Copenhagen to support adaptation strategies for Ethiopia and how likely is it this funding will be made available? What types of flexible mechanisms will need to be built into such funding so as to meet Ethiopia's adaptation needs.
6. What is the likelihood of a deal being reached in Copenhagen? What will Ethiopia and other African countries get out of the deal?

presentations today and how do you (or do you not) intend to apply them to your work?

- Make climate change and family planning a point in funding requests and consider integrating programs more
- Learn how to integrate livelihoods and family planning interventions
- Give the situation a human face—including through the media
- Look at the whole picture of community challenges and not focus only on single sectors
- Be clear about assumptions behind data and projections
- Beware of your assumptions and try to understand those of others
- We can make climate change impact by addressing population pressure—we need to continue to stabilize this
- Storytelling is important to understand the needs of a community and the extent of an issue
- Need to have a sustained effort beyond Copenhagen
- Policymakers need to take ideas from grassroots and have a clearer communication with/from community based organizations
- Government commitment to alternative sources of energy power is needed

2. Is there a role for population and family planning interventions in climate change adaptation in Ethiopia? Why or why not?

A. Population – yes

- Agricultural productivity – malnutrition
- Health problems – sanitation and water stress
- Vulnerability to draught and flood increases
- Low resource conservation efficiency

1. Family planning interventions

- Reduce population growth and population pressure on environmental decline
- Increase resilience
- Better health, education = human capital
- Reduce burden on women and children

3. What types of adaptation approaches are needed to address the conditions in countries, like Ethiopia, hardest hit by climate change? What types of interventions can reduce a community's vulnerability to climate change?

A. National/macro level initiatives to control climate degradation.

- Industrial waste, etc. and related protection policy (environmental impact assessment requirements)
- Vehicle emissions/age control
- Plastic bags and other pollutants banned
- Alternative energy resources environmentally friendly
- Technology transfer – energy, agriculture, health, etc.
- Forest protection policy – tied to benefits to communities
- Water resources management policy – irrigation and waste management
- Land use policy to protect fragmentation and erosion
- Corporate social responsibility to be an obligation for investors

B. Community/national mitigation strategies

- Study causes for climate change in every eco-region
- Assess conditions in every area and design interventions
- Involve communities and use their indigenous knowledge to come up with interventions
- Community awareness, creation, and participation/ownership remedies (e.g. benefits from Forest Reserve)
- Integrated interventions – family planning services, soil erosion protection, intensive agricultural productivity, health interventions (e.g. Malaria protection)
- Assist vulnerable populations – food aid for draught stricken areas and rehabilitation with a long term view
- Study why draught is followed by famine – unlike other countries.

4. What types of activities can be done here to incorporate population into Copenhagen and future climate change discussions.

- Population as a determining factor to environment and climate change
- Starting from a more aggressive implementation of the National Population Program
- Have a well studied and well costed national adaptation strategy that will include:
  - Data generation and utilization
  - Integrates population concerns into develoment planning with focus on food security and livelihoods programs
  - Social safety net programs
  - Increasing access to family planning programs

5. What kind of funding is needed from Copenhagen to support adaptation strategies for Ethiopia and how likely is it this funding will be made available? What types of flexible mechanisms will need to be built into such funding so as to meet Ethiopia's adaptation needs.

- Needs are huge, but it is difficult to estimate costs. Not sure enough work on this has been done in Ethiopia
- What the funding goes for needs clarification – funding for what? Where? Why? How? Needs of regions differ
- Would be good to know limits of funds available. Will pledges be made in Copenhagen through a basket fund approach?
- Need to hold industrialized countries accountable for funding pledges
- Adaptation funding should be additional to development assistance.
- Types of funding need to be flexible to meet the needs of communities
- The current Global Environmental Fund (GEF) is too bureaucratic
- Need quota system so all poor countries get money – not have to compete for scarce resources by writing strong proposals for which the country does not have the capacity to write (e.g. if a funding mechanism like the Global Fund to Fight AIDS, TB and Malaria)
- A special agency is needed in Ethiopia to manage/allocate funding
- Need to ensure ease of accessing funds
- Government – NGO partnerships
- Need monitoring mechanism to ensure accountability of use of funds
- Need funding to understand climate science in the country and funding for documentation

6. What is the likelihood of a deal being reached in Copenhagen? What will Ethiopia and other African countries get out of the deal?

A. Positive

- If a political deal is reached
- African common position

B. Negative

- The possibility of the discontinuation of the Kyoto Protocol
- Financial mechanisms should be set (Accessibility)
- Involvement of America?
- For China, India and Brazil to have emissions targets?

CLOSING

"it is about time for African governments to address population – both from the perspective of consumptive and wasteful lifestyles in cities and the need for access to family planning across the continent." Negussu Aklilu, Director, Forum for Environment

Negussu Aklilu, Director of the Forum for Environment, gave the closing remarks at the workshop. His remarks touched on three points – an update on the global climate negotiations and implications for Copenhagen; perspectives on population and climate change; and proposing a way forward. He talked about the stalled negotiations and fading hopes for a global deal being reached in Copenhagen. He mentioned an advocacy campaign he has started, America Take Charge, to encourage grass roots advocacy in the United States to the US Congress to act on climate change.

Related to population and environment, he emphasized that Ethiopia has surpassed its biocapacity to an alarming extent and that population pressure should certainly be addressed, among other issues.

He left workshop participants with a proposal for moving forward on climate change. Current consumptive and wasteful lifestyles need to change in the West and in cities in the developing world. He recounted that the noted futurist Lester Brown had recently said, for example, that China is turning into America with its move towards the same consumptive and wasteful lifestyle. He challenged the world to think about what current patterns of economic development in urban areas are doing to rural areas. He said that it is about time for African governments to address population – both from the perspective of lifestyles in cities and the need for access to family planning across the continent.

Mr. Negussu Aklilu, Director, Forum for Environment, and Professor Zerihun Woldu, PHE-Ethiopia Board Vice Chairman in the closing session.

ATTACHMENT 1. AGENDA

TIME	ACTIVITY	PRESENTER
8:30-9:00 am	Registration	
9:00-9:05 am	Welcome and Introduction	Negash Teklu Executive Director, CIPHE
9:05-9:20 am	Keynote address	Dr. Abera Deresa State Minister, MoARD
9:20-:9:40 am	Population and Climate Change	Dr. Terefe Degefa Institute of Population Studies College of Development Studies Addis Ababa University
9:40-10:00 am	Climate and Health: Malaria, Meningitis and AWD	Hiwot Teka, Climate and Health Working Group
10:00-10:30 am	Tea Break	
10:30-11:00 am	Miz Hasab/PAI Case Study: Linking Population, Fertility and Family Planning with Adaptation to Climate Change: Views from Ethiopia	Dr, Karen Hardee Vice President for Research, PAI Dr. Aklilu Kidanu, Executive Director, Miz Hasab Research Center
11:00 am-12:30 pm	Roundtable discussions	Annie Wallace, PHE Fellow, Packard Foundation
12:30-1:15 pm	Anchors for each group report out on discussion	
1:15-1:30 pm	Closing	Negussu Aklilu Director, Forum for Environment

Population and Climate Change Adaptation Workshop
Saturday, November 7, 2009 at Hilton Hotel

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ATTACHMENT 3: OPENING SPEECH, H.E. DR. ABERRA DERESSA, STATE MINISTER, MOARD

Participants of this Conference, Honorable Guests, Ladies and Gentlemen:

It is an honor for me, on behalf of the National Climate Change Forum, to be with you and officiate this important and timely conference.

As you all know, **climate change** is any long-term change in the expected patterns of average weather of a specific area over time. The dynamic interaction between human and climate affects all aspects of sustainable development. Understanding such climate dynamics requires knowledge/technology that can lead to reductions of the impacts of extended climate trends.

There are a number of factors that affect climate, but those factors related to human activities are important in developing countries, while greenhouse gas emission and heavy industries that use fossil fuel to produce energy and important in developed nations.

I highly appreciate the participation of representatives of various Governmental and non-governmental organizations in the country tirelessly working on the three important variables in the equation for sustainable development namely, population, health, environment and their interaction.

I warmly welcome the move to realize the values and visions of Millennium Development Goals of the Federal Democratic Government of Ethiopia in which Population, Health and Environment are integral components of the PASDEP.

Climate is considered the most important variable in the equation for development and would like to give more emphasis to it. Of all the environmental issues that have emerged in the past few decades, global climate change is the most serious, and the most difficult to manage.

As you know, the atmosphere was predominantly made up of carbon dioxide (the present Green House Gas) and water vapor. Life evolved under such difficult conditions.

Ladies and Gentlemen

Over the past few centuries, the atmospheric composition has changed and affected the proportion of carbon dioxide, oxygen and nitrogen. The human induced climate change is a change after the industrial revolution, when the green house gases increased in the atmosphere.

The world's climate is changing triggered by the disequilibrium of the oxygen producing and oxygen consuming agents of our globe. Prior to the start of the Industrial Revolution, the level of carbon dioxide concentration was low while after industrial revolution it is increasing at an alarming rate.

Climate is not predictable thus leaving us in uncertain condition. That is why we are experiencing extreme weather effects with associated risks of flooding, increased erosion, landslides, water shortages, crop loss, wildfires, and increased vulnerability of crops and forests to pests and diseases.

Ladies and Gentlemen

In Ethiopia alone, the last prolonged cessation of precipitation resulted in the current food and energy crisis. These variability in the rainfall resulted in reduction in crop yields in some parts of the country. Our previous experience showed that flooding in the east and southern parts of the country affected the economy and health status

of the community living in the area. The disease outbreak include: diarrhea, malaria and other water borne diseases.

The second variable in the development equation is population. Population of organisms other than humans compete for resources. As the natural resources have limited carrying capacities, any pressure exerted beyond the given capacity of the resource will result in significant effect.

World population experienced its fastest growth in history during the second half of the 20th century, swelling from 2.5 billion in 150 to 6.1 billion in the year 2000.

Ladies and Gentlemen

Where is the connection between population and climate change? Population effects on emissions are determined by consumption patterns of different social groups throughout the world and, ultimately, by model of civilization.

Industrialized countries have heavily affected the environment with modern technology which contributed the largest portion of climate change. The vast majority in the developing countries is victims of the industrialized nations and yet we are being for to pay for their error. The current population will continue to have huge environmental problems. Hence, we need to help communities that are vulnerable to climate change and increasing their capacity for adaption strategies.

Adaptation measures are seeking to adjust human society to the changing climate and so reduce the resultant effects. Building high dams, developing draught resistant crops would be some of the options in dray areas.

Mitigation measures are seeking to reduce emission of green house gases that are causing the climate to change. Planting indigenous trees that can consume the carbon dioxide would be the most important measures for developing countries.

The Federal Democratic Government of Ethiopia is striving to keep the momentum of economic growth while at the same time engaging with climate change with full capacity by effectively responding to the risks of climate change.

We therefore need to quickly develop a mechanism to estimate the costs of climate change impacts and adaptation measures and engage in the negotiation and hold them accountable for the loss caused by climate change.

While our government is preparing for the negotiation to protect our economy, biodiversity, and livelihoods, it is my earnest hope that the ideas generated in this conference will contribute to reinforce our arguments and demands for effective outcome.

Finally, I would like to congratulate the Climate negotiators for their unreserved efforts and thank you all for stepping forward to defend the environment and welfare of people. Your inspiration will be example for many of the rest of professionals.

Thank you.

Linking Population, Fertility and Family Planning with Adaptation to Climate Change: Views from Ethiopia

Aklilu Kidanu Miz-Hasab Research Center (MHRC)

Kimberly Rovin Population Action International
Karen Hardee

Population and Climate Change Adaptation Meeting, Addis Ababa, Ethiopia, November 7, 2009

The Miz-Hasab Research Center Addis Ababa, Ethiopia

Population Action INTERNATIONAL

Introduction

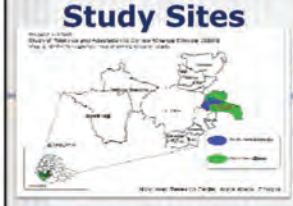
- The effects of climate change are being felt disproportionately among people least able to cope
- Need to understand people's vulnerability and ability to adapt to changes in climate
- Many of the most affected live in countries with rapid population growth
- Scant research exists linking vulnerability and adaptation to population issues

Purpose

Miz-Hasab and PAI undertook a study in Ethiopia to address how communities in Ethiopia react to and cope with climate variation, specifically:

- Knowledge of climate change and experience with weather-related events
- The social groups most vulnerable to climate change
- Changes that have taken place in their livelihoods related to climate change
- The links people make, if any, between climate change and population and family size.
- Coping strategies used and measures to increase resilience

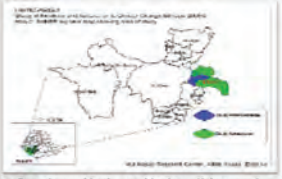
Study Sites



Southern Nations, Nationalities and People's Region (SNNP)

Oromia

Study Sites



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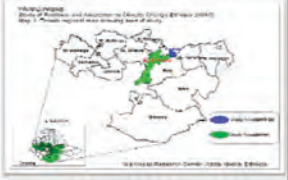

Oromia

SNNPR, fetching free water from 'bono' – public water tap.

A market place in Oromiya

Study Participants

Table 1: Number and Type of Interview, by Location

Region, zone and woreda	Location	Number of Interviews: FGDs – Community members: Male	FGDs – Community members: Female	IDIs – Community members, leaders: Members	IDIs – Community members, leaders: Leaders	IDIs – Policymakers, government reps and other leaders
Oromia/ Eastern Shewa Zone/Fentale Woreda	Peri-urban	1	1	3	1	4
	Rural	2	2	5	3	
SNNP/ Sidama Zone/Loko Abaya Woreda	Peri-urban	1	1	3	5	4
	Rural	2	2	5	3	
National						6
Total		6 groups, 48 participants	6 groups, 48 participants	16	12	14

Table 2. Background Characteristics of FGD Participants: 2008

Characteristics	Oromia: Total (N=48)	Oromia: Rural (N=32)	Oromia: Peri-urban (N=16)	SNNP: Total (N=48)	SNNP: Rural (N=32)	SNNP: Peri-urban (N=16)
Average age	37.4	30.3	51.4	29.0	30.6	25.9
Average # of children	3.2	3.1	3.2	3.5	3.5	3.4
Married (percent)	79%	78%	81%	73%	72%	75%
# of people in Household	5.2	5.0	5.6	5.7	5.5	5.9
Lived more than 10 years in current community	32	22	10	30	21	9
Highest level of schooling completed (percent)						
None	23%	22%	25%	2%	3%	
Some/completed primary	40%	44%	31%	31%	31%	32%
Some/completed secondary	23%	15%	38%	54%	56%	51%
Tech/Vocational Certificate	13%	19%		13%	9%	19%
University/College Diploma	2%		6%			

Knowledge and Experience of Climate Change

"One of the main reasons for this climate change is there is no forest in this area and the temperature is increasing because of this."
SNNP, peri-urban male, age 40 with 3 children, merchant.

"I think one indicator [of climate change] is the temperature increment, which is getting worse day to day. The other thing... is the absence of rain in some seasons."
Addis Ababa, government representative

Knowledge and Experience of Climate Change

"In earlier times, our woreda was very green, and there was no famine...everything was accessible in our area, but now...we cannot get harvest after planting, and rain doesn't come on time.... Trees are cut for timber."
SNNP , peri-urban female, age 25 with 3 children, occupation not specified

"I have lived here for 10 years. The climate change has caused high temperature increment in our woreda... forest trees are minimized... [and] the rainfall is unseasonal."
Oromia, rural male, age 36 with 2 children, pastoralist

Groups Most Vulnerable to Climate Change

"Women are the ones most affected by the drought because our culture has laid most activities on them. They do the labor, household activities and feed the cattle...[and] fetch water, even if it takes her a long time of journey. Other than that...women give birth to many children... [and] are also affected by birth-related problems."

Oromia,rural male, age 36 with 2 children, pastoralist

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Time spent by household collecting water (minutes)	29	43	2	66	76	45

Groups Most Vulnerable to Climate Change

"Children will be forced to stop [their] education due to [a] lack of water. For example, last year due to shortage of water, families together with their children were forced to [migrate] to a place called Abaya looking for water. At that time schools were closed... The other is children will suffer from diseases...[and] scarcity of food."

SNNP, rural female, age 19 with 2 children

Changes in Livelihoods Related to Climate Change

"In the past, when we had enough rainfall, we used to get a good harvest…. But now we plant crops but there are times [when] they won't grow. We buy fertilizers [at] high prices … but at times we come out with nothing. So this affects our economy and puts us in bankruptcy."

SNNP, rural male, age 35 with 6 children, farmer

"The old times are gone forever. Before, I worked for some time and [could] support my family. But now I work a lot harder…and this helps me [only] to feed my children. I don't want them to starve, because things are getting worse."

Oromia, peri-urban female, age 40 with 9 children, nurse

Linking Climate Change to Population

"I think the major problem is population increase, not diminishing forest reserves, because it is population increase that causes the loss of forests. In the past when few people lived in this area, it had huge forest reserves, but as the population increased, forests got damaged."

SNNP, rural male, age 38 with 6 children, farmer

Population Action International

Linking Climate Change to Family Size

"I have six children…. I didn't raise them well, because it would have been [easier to help them succeed] if they were two or three, but since they are six, I have harmed myself and harmed them, too. I would say it's not good to have more than three children."

Oromia, peri-urban male, age 68 with 6 children

Community Coping Strategies and Resilience

"Even if our farmers are not educated, they know a lot of things. For example, most of the participants here are farmers. For example, I can mention this person and he has a plantation that can keep soil fertile. He considers these plants as his children."

SNNP FGD, peri-urban male, age 26, three children, gov worker/ agriculturalist

"The community within [various] ethnic groups is also helping one another like [in] earlier times. That is how we are living now."

Oromia FGD, rural male, age 39, eight children, pastoralist

Community Coping Strategies and Resilience

"Since the Ethiopian [calendar year] 1997, there has been a safety net program which was planned for five years in this area…and there is a thing named 'food for work,' in which people work like planting trees, building dams in eroded areas, constructing roads and so on. In doing so, they cope [with] the problems they face."

Oromia, rural female, age 24 with 2 children, community organization employee

Rural SNNPR housing construction

Beseka Lake in urban Oromia

Community Coping Strategies and Resilience

"[Using the] slogan of 'two trees for 2000' we can enhance the awareness of the society… This improves the weather situation."

Oromia, policymaker

http://www.thesurvivorfoundation.com/images/slideshow/images/Survivor%20-%20Beyonceinafrica3.jpg

Community Coping Strategies and Resilience

"Thinking about our living condition seriously hurts your mind. Those with serious harm will be forced to cut trees, make charcoal and sell it… he will use the money to buy cheap food and feed his children. Sometimes, you will sell one or two of your cattle and try to escape the hard time. In other times, we plant crops on our land and try to escape the hard time."

Oromia IDI, rural female, age 50, five children, pastoralist.

Family Planning Among Coping Strategies

"The only solution to adapt to climate change is to [undertake] agricultural activities [along with pastoral activities] in order [to] fulfill the needs for food and start to use family planning services and quit marriage with many wives… By doing this, they are going to be able [to] adapt [to] the situation"

Oromia rural female, age 37 with 5 children, pastoralist/agriculturalist

"When there is a drought there is famine, and when there is famine there is poverty. If family planning [is] a service that we get by paying money during times of difficulty, we couldn't use the service as we don't have money."

SNNP, rural female, age 18 with no children

Summary of Key findings

- Most (urban, rural, community members and leaders, policymakers, men and women) :
  - Acknowledged that CC was occurring and noticed environmental change
  - Believed women, children, and the elderly most affected by CC
  - Felt that government should take lead in addressing CC—irrigation, reforestation, etc.
- Many noted that large families are not currently sustainable and noted importance of family planning

Recommendations

- **Support integrated approaches to climate change adaptation** that build on people's expressed needs, and strengthen community-based adaptation strategies to include expanding access to reproductive health and family planning services.
- **Give more high-level policy support to Ethiopia's reproductive health and family planning programs** to reduce the high unmet need for contraception and to improve maternal and child health.
- Researchers should **include population growth, fertility and access to family planning and reproductive health services in future studies** of impacts, adaptation and vulnerability to climate change.

Thank You

Miz-Hasab Research Center

Population Action INTERNATIONAL
HEALTHY FAMILIES HEALTHY PLANET

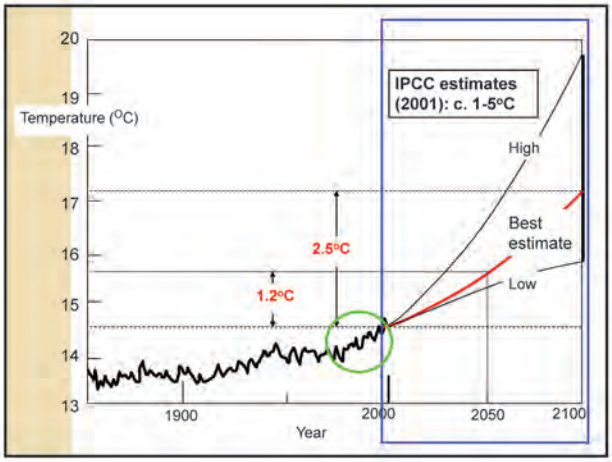
Climate Impact on Health

Hiwot Teka

Climate and Health Working Group

Nov 7, 2009

Hilton Hotel



Introduction

- According to the UN Humanitarian Forum Report an estimated death tolls of 300,000 occur every year due to climate change. These deaths are mostly attributed to vector and water borne diseases.

Introduction

- Malnutrition
- Malaria
- Diarrhoea
- Heat stress
- Disaster

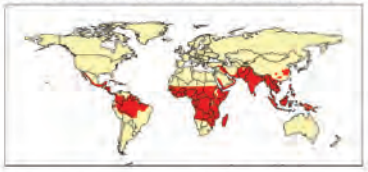
Climate change and mosquito-borne disease: IPCC

"tend to increase in range and incidence … actual occurrence strongly influenced by local conditions"

Health impact	*Confidence*
Move to higher altitudes	Medium - high
Move to higher latitudes	Medium - low
Extended transmission season	Medium - high
Increased population in areas of potential transmission	Medium - high
Decreased transmission where temperatures high	Low - medium

The changing distribution of malaria

a) The current distribution according to WHO



b) The distribution of malaria in 1850-1870

Introduction

- CHWG was established as a result of a workshop entitled "Climate Matters in Health"

Mission

- To mobilize responsible and legalized agencies to work together on appropriate use of climate information for protecting people from climate-related health problems.

Mission, Vision, Goal

Vision

- To engender self-reliant, healthy and productive population through proper usage of climate information for improving health outcomes from climate sensitive diseases.

Goal

- To create a climate-informed health sector and beneficiary communities that routinely request and use appropriate climate information to improve the effectiveness of health interventions

Objectives

- To create awareness on the impact of weather and climate on health.
- To develop effective and functional means for the health sectors and beneficiary communities to routinely use appropriate climate information for estimating populations at risk of climate sensitive diseases (where and when – including early warning systems)
- To stimulate the partners in the climate community to identify needs, create relevant products and supply appropriate services.

Members

1. Federal Ministry of Health (Chair)
2. National Meteorology Agency (vice- chair)
3. Anti Malaria Association (Secretariat)
4. Ethiopian Public Health Association
5. School of Public Health AAU
6. Christian Relief and Development Association
7. Ethiopian Red Cross Society
8. Ethiopian Health and Nutrition Research institutes
9. UNICEF
10. WHO
11. UNEP

Collaborators

- International Research Institute for Climate and Society (IRI)
- Health and Climate Foundation
- Groups on Earth Observations

Activities and Achievements

1. Workshops
2. Fostering research
3. News letters (information)
4. Projects

Activities and Achievements

Outcome: able to

- asses what has been done in the country regarding climate and health issues
- identify the gaps in using climate information for health in general and especially for malaria control.

Climate information

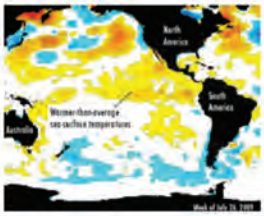


Fig 1: Warming sea surface temperatures in the equatorial pacific predict El Nino event - ENSO!
(Source: IRI Web page)

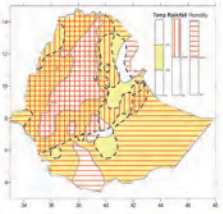


Fig2: Combined temperature, rainfall and relative humidity analysis during July 2009.

Thank you!!!

Workshop on Health, Population and Climate Change

Population and Climate Change

by
Terefe Degefa, PhD
Institute of Population Studies
College of Development Studies
Addis Ababa University
Hilton Hotel
November 07, 2009

Overview

- Contextualizing the links between population and environment: A brief note on the debates.
- Some evidences regarding population and climate change.
- The impact of population and structural forces on climate: Some reflections.
- The effects of climate change on population.
- Population in the mitigation and adaptation processes to climate change.

Contextualizing the links between population and environment: A brief note on the debates

The two main contending groups

(1) Malthus and his followers consider population as:

→ A Bomb and explosion.
→ A threat next to Nuclear war.
→ Lifeboat ethics and the eugenics.
→ A fundamental environmental (and developmental) problem.
→ A cause of climate change, etc.
→ → Anti-natalists → population control particularly for the poor.

Contextualizing the links between population and environment (Cont'd)

(2) Opponents of Malthus and his followers consider population as:

→ A resource.
→ A base for strong social interaction and organization.
→ A good ingredient of innovation and technological changes.
→ A means of attaining economies of scale both as producers and consumers.
→ A source of labour and capital in environmental resource conservation and management, and economic development, etc.
→ → Pro-natalists .

Contextualizing the links between population and environment (Cont'd)

Implications of the contending groups on:

→ Thinking and viewpoints.
→ Research works and academics.
→ Policymaking.
→ Practical actions.
→ Funding decisions.
→ Solving problems.
→ → All the above have been polarized making the contributions of the groups thin and a subject of suspicion.
→ → These polarized contentious stances have been extended to the population and climate interfaces.

Some evidences regarding population and climate change

- Since the first Earth Day in 1970, global population and annual carbon dioxide emissions have both increased by about 70%.
- As a result, per capita emission rates remain steady at about 1.2 metric tons of carbon per person per year.

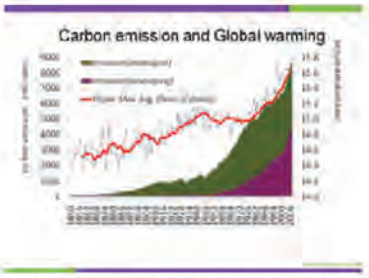
Some evidences regarding population and climate (Cont'd)

Global Demographic Trends

	2005	2050
Population size (billion)	6.7	9.2
developed	1.2	1.2
developing	5.5	8.0
Urban (billion) (%)	3.3 (48%)	6.4 (70%)
developed	1.0	1.1
developing	2.3	5.3
Elderly (60+ billion) (%)	0.67 (10%)	2.0 (22%)
developed	0.24	0.4
developing	0.43	1.6

Source: UN Population Prospects, 2006 Revision; UN Urbanization Prospects, 2007 Revision

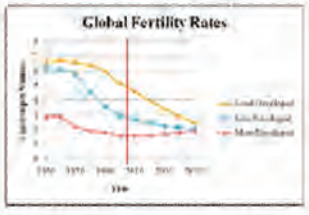
Some evidences regarding population and climate (Cont'd)



Source: Leiwen Jiang, 2009. Unpublished analysis, Population Action International

Some evidences regarding population and climate (Cont'd)

Fertility decline in Developed and Developing Regions



Assumptions built into UN population projections about fertility convergence in 2050. Is this assumption valid? Source: PAI, 2009

The impact of population and structural forces on climate: Some reflections.

- Climate change is caused by the accumulation of heat trapping greenhouse gas emissions in the atmosphere.
- Greenhouse gases are produced by populations dependent upon various economic systems that consume *coal* and other *fossil* fuels,

but

- Per person greenhouse gas emissions vary a lot; we are not equal consumers; as per capita income levels increase, per capita greenhouse gas emissions also increase,

for example

- Australia's per person greenhouse gas emissions are nearly double the OECD average and more than four times higher than the world average,

therefore

- Large population size does not necessarily emit large volume of greenhouse gases.

The impact of population and structural forces (Cont'd)

- The poorer the people are, the less per capita greenhouse gas emissions.

→ Solutions aimed at the reduction of greenhouse gas emissions need to consider this differential rates of emissions.

what does this mean?

→ We reduce the *amount* that each of us consume.

or

→ We reduce the *number* of us consuming.

is that all?

. Consumption is the function of production; what is consumed is what is already produced.

→ Changing consumer habits may be attempted,

but

The impact of population and structural forces (Cont'd)

→ Changing consumer habits has *little* impact on production decisions particularly in a short period of time:

→ → The difficulty is less a dearth of *alternatives* than with linking existing political forces in a way that can bring the available resources for such purposes.

therefore

. Consumption rates are not the cause of the problem — the methods of production and who makes the decisions over it are.

also note that

→ We live in a time of abundance, with the *potential* to produce enough for everyone.

The impact of population and structural forces (Cont'd)

- However, *distributional injustice* in food makes people starve needlessly.

for example

- By 2006 the number of *obese* people surpassed the number of starving people, and it is likely that the number has been increasing since then.

→ The solution that 'We reduce the *amount* that each of us consume' has a challenge, by considering *only* food consumption though the consumption of other materials and services stand out conspicuously in that regard.

The impact of population and structural forces (Cont'd)

- The roots of the problem of climate change, like other environmental problems, are both *production* and *distribution* systems which are meant for profit making, short-term profits, and therefore are *structural* forces.
- On the other hand, this same structural forces are wasteful of immense food resources;

for example

- According to the UNEP report released in February this year;

→ Food *waste* and *losses* in the US were estimated at around 40-50%;

→ Close to one third of all food bought in Britain is thrown away; and

→ In Australia, food waste makes up close to half of all landfill.

→ → It appears that it's more profitable to *waste* food than get it to the people who need it most.

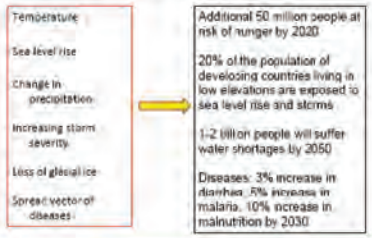
The impact of population and structural forces (Cont'd)

- However, people who need food most are *compelled* to scavenge for available resources only to ache out their means of immediate survival creating a further denuded landscape and *emitting greenhouse gases* to the atmosphere.
- To put it short, those who see 'We reduce the *number* of us consuming' as a solution to climate change fail to tackle the cause of this change at its roots (the structural forces): the environmentally destructive way things are produced and unjustly distributed in the *unfair* global economic system.

→ Population growth, consumption, barriers to developing environmentally friendly technologies and putting them to use are all products of the *unfair* global economic system, the arguments go, being driven by profit motives under the headship of few powerful decision makers and related groups called the omnivores, the development-aided class of modern consumers.

The effects of climate change on population

Climate change hurts people



Source: PAI, 2009

The effects of climate change on population (Cont'd)

Impacts distributed unevenly

Figure 5 Global distribution of climate-related hazard hotspots

Population in the mitigation and adaptation processes to climate change

Changes related to population issues:

→ Enhancing the knowledge – base of the population to change individual lifestyles in order to mitigate and adapt to climate change.

→ Provision of adequate need-based family planning services to allow couples to have wanted family sizes and also improve their reproductive health..

→ Facilitating population mobility from risky areas.

→ Improving educational and health sectors in order to deliver good services so as to build up human capital.

→ Improving the asset portfolio of the vulnerable group of the population.

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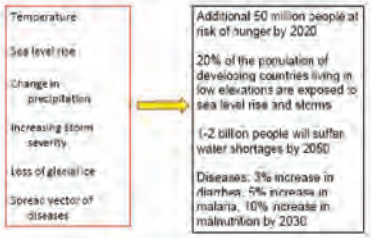

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