



## **Expert Group Meeting: Population Dynamics and Climate Change**

**UNFPA and IIED**

**In Collaboration with UN-HABITAT and the Population Division, UN/DESA**

**24-25 June, 2009**

**London, UK**

### **Key Messages**

Population matters for climate change! There is a long history of increasing linkages between population and environmental change, and now increasingly climate change. In the last 15 years, however, this focus has faded at the global level. The links between population dynamics and climate change are often ignored, or are being addressed in simplistic ways. The time has come to introduce a nuanced and evidence-based perspective on population dynamics for policy makers and the public into global and country level climate change responses. The following areas are examined in this statement:

- Incorporating Population Dynamics
- Mitigation
- Vulnerability
- Migration
- Urbanization
- Data and Measurement
- Influencing the Process

### **INCORPORATING POPULATION DYNAMICS**

In the formulation of emissions scenarios, population trends in growth and composition have to date been considered only in highly aggregated terms. Moreover, the potential contribution of population policy to mitigation efforts has not been explicitly analyzed or proposed, nor has sufficient attention been given to population distribution and composition. Interest in population issues has been focused primarily on growth and size issues. These are undoubtedly critical. Current regimes of consumption, especially in industrialized countries, already stretch the limits of sustainability. Legitimate development aspirations in less developed regions, who already make up more than four-fifths of the world's current population, obviously amplifies this conundrum. Improved access to sexual and reproductive health (SRH) within a rights perspective, including family planning, is essential for individual welfare and accelerates the stabilization of population growth. Major achievements in family planning have in the past had significant impacts on declining population growth rates, and slower population growth in some countries has bought more time to prepare adaptation plans for the coming impacts of climate change. The decline of international support for SRH in recent years has resulted in an increase



in unintended fertility. Given the nature of demographic inertia, as well as the differences in development levels and consumption patterns, family planning should not be touted as a quick fix for current trends of rapidly increasing emissions. However, provided measures are taken to ensure that family planning is used to enhance (and not to constrain) human rights and reproductive health, it should become an important and integral part of climate change adaptation and, in the long run, mitigation.

Development efforts are essential in order to reduce poverty and inequality but, under present models, they inevitably increase the global climate change (GCC) threats that, to the present, have been largely generated by industrialized countries. This paradox has to be addressed urgently and effectively in a way that will benefit the poor and not block their path to social and economic advancement or to environmental justice.

## MITIGATION

Historically, the linkages between population dynamics and environment have been only superficially examined in global frameworks. When they have been analysed in the context of climate change, the focus has been primarily on population size and growth. Most environmental problems, including those arising from climate change, are indeed aggravated by population growth. Still, the relationship between population size/growth and greenhouse gas emissions is complex. Not all people contribute the same amount of emissions. When understanding and projecting emissions into the future, differences linked to composition and distribution must therefore be taken into account. And when projecting the impact of population stabilization on emissions, differences in consumption levels are of utmost importance. New modeling processes are incorporating variations by age and spatial distribution in order to better understand the contribution of different scenarios of future population growth to global emissions. It is also crucial to integrate differential consumption as well as production into these modeling exercises. Further, understanding of how the situation will evolve in the face of fast-paced urbanization, particularly in Africa and Asia, requires a very careful analysis of what urbanization actually is and what it means for production and consumption linking population and emissions.

## VULNERABILITY

It is impossible to understand and target vulnerability without incorporating population dynamics. From acute, climate-related events like storms and floods to long term shifts in weather patterns and sea level patterns, the impacts only become clear through an understanding of who is at risk, how risk varies across populations, and how people will respond to destabilized livelihoods and short- and long-term displacement. Vulnerability is unevenly distributed between men and women, and between the young, the middle aged and the elderly. Projecting vulnerability to immediate and longer-term health impacts of climate



change requires a holistic model taking into account social, demographic, economic, political, and other factors. Most clearly, poverty is inextricably linked to climate change vulnerability: the impacts of climate change particularly destabilize livelihoods of the poor, and poverty increases the challenges of adaptation in the context of sustainable development.

## MIGRATION

Migration is caused by an array of factors – environmental change is one that has existed for a long time, but it has been increasingly highlighted because of the current and future impacts of climate change. There is some panic about climate-induced migration, but it is unlikely that alarmist predictions of climate-change related migration will become reality. However, mobility will in all likelihood increase, though predictions are still hazardous. Based on past experience, short-distance and short term movements will predominate. These will be key elements of strategies of adaptation to climate change, but the poorest will not be able to move, and this should also be a concern for policymakers.

Therefore, migration and mobility in the context of climate change need not be the problem, but part of the solution. For this to occur, however, policies need to accommodate and support migration and mobility by strengthening local governments and institutions that can contribute to the reduction of cumulative vulnerabilities.

Failure to support rural populations to adapt will help produce crisis-driven movements that increase the vulnerability of those forced to move, as they leave behind homes and assets and cannot rely on social networks and family ties. Refugees fleeing conflicts and disasters are in some countries a large part of the urban poor, and it can take them a long time to integrate in local communities and find employment and shelter. Failure by national governments and international agencies to recognise and support adaptation, including mobility and migration, by the poorest and most vulnerable households, could result in forms of migration more damaging for both the migrants and the receiving communities.

## URBANIZATION

Almost all population growth in the foreseeable future will occur in urban areas, most of this in developing countries. The linkages between population growth, urban population growth, and emissions involve several multiplicative factors, each of which varies significantly among population sub-groups within countries, across countries and over time. There is some evidence of the links between urban density (compactness of form, absence of sprawl) and mitigation. Much depends on initiatives taken by mayors, community and neighborhood organizations and other local leaders in relation to processes of urban growth and urban organization.



As for urban adaptation, there are many dimensions along which exposure to climate-related risk needs consideration, and this is also the case for the important areas of vulnerability and resilience. Indeed, there is great value in applying the theoretical frameworks, empirical measures, and interventions being currently used to address poverty and inequality in different parts of the world to organize thinking about urban risks, vulnerabilities, and adaptation needs. While the poor are not uniformly vulnerable to the impacts of climate change, the intersection of geography and poverty is a major predictor of risk.

An essential ingredient in constructing the evidence base for urban adaptation is the availability of population and socioeconomic data for finely disaggregated administrative and political units, which provide a frame over which climate-related risk maps can be draped, so as to produce estimates of the number of persons, percentage poor, and numbers of poor by jurisdiction and neighborhood. The effort to assemble such data must begin with processing of national censuses into small-area units. This effort should be conducted in a manner sensitive to ecosystem and other bio-geophysical parameters, with the drylands and low-elevation coastal zones serving as examples. It is also necessary to consider the utility of the most local analysis, given that many impacts of climate change are still in the future, and urban areas undergo constant change.

In order to understand how future population growth will reshape the landscape and level of risk, it is important to develop models of city population and spatial growth. Using currently-available materials, it can be shown that one empirically powerful influence on city growth is urban fertility rates. A significant fraction of urban fertility is either unintended or unwanted, and this implies that efforts to reduce fertility through voluntary family planning programs may ease the urban adaptation burden in the future, a benefit in addition to the important benefits these programs hold for reproductive health.

## DATA AND MEASUREMENT

One of our foremost challenges in understanding the linkages between population dynamics and climate change is in identifying, collecting and integrating data. UN agencies must advocate for responses that include the characterization of population trends, and support the data collection, research, and analysis at the global and country levels necessary to ensure that those responses are evidence-based. Census data provide an insufficiently-exploited source of information for the analysis of phenomena that will improve both mitigation and adaptation efforts. The 2010 round of censuses provides an exceptional opportunity to exploit the potentialities of this source of information, but doing so will require urgent and effective efforts at the international and national levels. Encouraging and supporting the timely release of census data is an important role for global institutions.



A community of researchers is working to integrate satellite data, climate modeling and socio-demographic data in order to understand local vulnerability globally, but these efforts are under-funded and are being done without coordination within the UN system. United Nations support of improved data streams and technical assistance is essential in this connection.

This workshop has also underscored the myriad challenges of definitional issues in climate change analysis, including problems of scale – global, regional, national and community – definitions of coastlines, boundaries and expanses, omissions in the production and diffusion of data, measurement of consumption-based versus supply-based emissions, and others.

### INFLUENCING THE PROCESS

At the country level, UN agencies acting together through the UN Delivering as One initiative can provide a new structure for engaging more effectively and holistically on climate change. Still, much work needs to be done in ensuring coordination between agencies and with Governments and partners from civil society. The Nairobi work programme on impacts, vulnerability and adaptation to climate change and NAPAs provide another entry point to integrate reproductive health since many of them recognize that population growth, especially in the poorest countries, will increase vulnerability. Translating recognition of the challenges associated with population growth into relevant adaptation programs is the challenge.

At the international level, multiple options need to be followed. In formal terms, this includes support to the process leading to Copenhagen through submissions by observer organizations, side events, awareness-raising publications, plenary interventions, and partnerships. One difficulty in convincing the international community is the way population issues appear to be packaged into large and complex black boxes. Repackaging in smaller and more understandable sets of processes, in accessible publications, would help advocacy efforts for the mainstreaming of population issues into GCC discussions.