

2009/2010

National Human Development Report

Chapter

1

Introduction

1. INTRODUCTION

1.1. Climate change as major human development risk

Humankind is in no way a complete stranger to major development risks. Indeed, over the period from the plagues of the Middle Ages to the Great Depression and the two world wars of the last century, human progress went hand in hand with major development risks. Moreover, the end of this decade has been marked by major financial and economic turmoil. This turmoil is far from over and may well result in a significant setback to human development for rich and poor countries alike. However, in the worst-case-scenario the outcome may be the wholesale dismantlement of the global economic and financial architecture laid down in the wake of World War II which was strengthened with the passing of the Cold War.

Nonetheless, one more challenge has been looming large for years. This existential challenge is as certain to happen, if the necessary action is not taken, as it is unpredictable in its dire consequences. This challenge is the immediate and longer-term negative impacts of climate change-related events.

Climate change has several distinctive features. First of all, it is truly global, as the main emitters of greenhouse gases will suffer along with underdeveloped or "green" economies. Second, the world's poor will be hit disproportionately as the majority of poor countries will be on the geographical frontline of climate change and perhaps will lack the resources required to implement sound adaptation policies. Third, the world is committed to climate change, i.e. greenhouse gases, once emitted, remain in the atmosphere for a long time. In other words, we can do very little about climate change effects that have already been locked in as a result of past and present emissions. What we can and must still do is avoid dangerous climate change by striving to cut emissions and embark on low-carbon development pathways in the interest of future generations,¹ while looking for win-win opportunities and a more sustainable development model. Finally, if we reach a certain threshold (2°C above preindustrial levels), these changes may become irreversible. As the UNDP 2007/2008 Human Development Report points out, unless changes are made to the business-as-usual model, "we are edging towards 'tipping

points'. These are unpredictable and non-linear events that could open the door to ecological catastrophes...that will transform patterns of human settlement and undermine the viability of national economies"²

For underdeveloped countries, climate change effects are seemingly double-edged: besides hitting them disproportionately there is fear that any significant mitigation and adaptation efforts may derail ongoing development and poverty-reduction efforts. This fear, however, appears to be vastly exaggerated. First, climate change mitigation and adaptation efforts are not necessarily at odds with development if we see development as an environment-inclusive phenomenon, not confined only to GDP growth per capita.³ Indeed, growth in incomes may make little sense against a background of a sharp decline in the environmental conditions people live in. Second, there is sufficient evidence showing that climate change may eventually derail economic growth since it can lead to economic disruptions comparable to those provoked by world wars or the depression of the first half of the 20th century.⁴ Thus, one of the conclusions of the Stern review⁵ was that "... tackling climate change is the pro-growth strategy for the longer term, and it can be done in a way that does not cap the aspirations for growth of rich or poor countries"⁶

The imminent risks of climate change require an immediate and concerted action on both international and national levels. Unfortunately, in Moldova climate change is sometimes perceived as a remote and irrelevant concept. Indeed, while the country is still struggling to set itself firmly on a development path and struggling to complete the never-ending post-communist transition process, while labour migration remains the only solution for escaping the poverty trap and overall progress in human development is uneven, to consider climate change a policy priority may seem to be outlandish.

Nonetheless, it does not need to be so. There is no trade off between development policies and climate change policies. As everywhere in the world, climate change is going to pose significant challenges that may derail development and modernisation efforts in Moldova. Since these effects are no longer a distant prospect, the sooner

¹ UNDP Human Development Report 2007/2008.

² Ibid.

³ Ibid.

⁴ The Stern Review on the Economics of Climate Change is a comprehensive report released in 2006 by economist Lord Stern of Brentford for the British

government. The Report discusses the effects of climate change and global warming on the global economy.

⁵ Ibid.

⁶ Ibid.

Moldova acknowledges these paramount risks and adjusts its policy agenda accordingly the better. Hence, although this Report has quite a wide audience, its main target is local policy-makers. At the same time, even the most carefully crafted policies cannot help without support of all elements of the population. Climate change requires a much broader society response and action, particularly given that many high-impact, but low- or no-cost behavioural measures to address climate change can be easily implemented by each citizen of the country. Certainly, as this Report was being written, Moldova was entering into a prolonged period of political turmoil aggravated by the economic impacts of the global financial crisis. However, as political animosities settle down and political actors start forming a governmental coalition, the new government should not get bogged down solely in addressing arduous, though short- or mid-term tasks on the economic and financial fronts. The long-term challenges should not be ignored and left for future generations, who might confront a situation where whatever they do at the national level is “too little, too late”.

Therefore, we believe the climate change challenge should be fully introduced into the national policy agenda. The implementation of Moldova's development policies may not contribute significantly to the acceleration of climate change,⁷ but, nonetheless, climate change will affect Moldova's prospects for accomplishing its development goals. The need is, then, to become aware of the risks posed to the goals and either re-adjust them or put forward such adaptation policies that would allow for a continuous pursuit of Moldova's development agenda. Even though the focus of this Report is on adaptation policies, the need for climate change mitigation cannot be neglected. Embarking on a low carbon development pathway, for example by promoting by ‘win-win’ solutions for effective emission reductions, green technologies, improved access to energy and energy efficiency, sustainable land management, and reduction of emissions from deforestation and forest degradation, will ensure that future development efforts do not contribute further to climate change. While adaptation and mitigation measures will require additional resources, they also considerably reduce the residual costs of climate change impacts. If we proceed with business as usual – both in terms of allowing climate change to continue unabated and in terms of adaptation to those changes that are already

unavoidable – the cost of inaction will be significant.

At the same time, development policies are of little value if they fail to advance the interests of their intended beneficiaries – the people. In this report we address the human development perspective on the way climate change will affect Moldova's development trends and agenda and, ultimately, the hopes, aspirations and present and future opportunities of Moldovan people. Given the fact that climate change's impact on human development will be broad and multi-faceted, in this Report we focus on the areas (resources and economic sectors) where this impact will be most significant to human development in general and economic growth in particular. This is additionally the most sensitive area for human development in Moldova, since improvements in Human Development Index in recent years were driven by economic growth.

1.2. Guide to the report

The 2009 National Human Development Report consists of 11 chapters, including this introduction.

In the second chapter we introduce the human perspective that underlies the whole Report. We start with a review of human development dynamics in Moldova with a specific focus on the most vulnerable groups and on the key factors defining these dynamics. We also add regional comparative perspective to this review. Further, we look at the effects of climate change on human development and how they are relevant for Moldova.

The third chapter introduces the topic of climate change and the physical challenges it poses. The chapter offers a concise review of the global perspective on climate change, the observed effects on the global climate and looks at estimations of its future impact. It also outlines the main vulnerabilities and reasons for concern. Further, the chapter offers a brief overview of the Moldovan climate and a more detailed presentation of the likely changes to it that may result from climate change. The Report's climate projections are closely correlated with regional estimates and are specifically focused on future heat supply and humidity, changes to agro- and bio-climate conditions as well as the expected frequency of extreme weather events. Special attention is also paid to the interplay between adaptive capacity

⁷ Currently Moldova contributes little in the way of GHG emissions and even those emissions are decreasing (see National Inventory Report, Greenhouse Gas Sources and Sinks in the Republic of Moldova 1990-2005, 2009).

to climate change and human development and the report puts this issue into a regional comparative perspective.

Further on, the fourth chapter contemplates the climate change impact on the vitally important resource of water. First, we evaluate the current situation with regard to water quality, its quantity, use and disposal. Second, the impact of climate change on water availability and quality is assessed. Finally, the chapter reviews available adaptation options: the feasibility of infrastructure solutions as well as passive and active policy options.

The next two chapters are focused on two 'microcosms' of critical importance for the future livelihood of a large share of the country's population. The first of these two is biodiversity. Ecosystems are highly vulnerable in the face of climate change and the chapter offers a comprehensive assessment of its future impact on ecosystems. It also reviews options available for ensuring conservation of ecosystems in different regions of Moldova. Since agricultural ecosystems cover around 75 per cent of Moldova's land area, climate change impacts on ecosystems are of extreme importance for the future of Moldovan agriculture.

Hence, the next chapter turns to the second 'microcosm' – agriculture. A concise review of the current situation in Moldovan agriculture is followed by an assessment of the economic impact of climate-related conditions as well as the available policy options for adaptation. Furthermore, as agriculture has enormous significance for the lives of more than half of Moldova's population this chapter pays special attention to this matter by bringing into the discussion the human development perspective.

The seventh chapter paves the way for a critically important sector for economic development: transport infrastructure. It provides an overview of the current state of the transport infrastructure in Moldova, which due to its poor condition imposes significant costs on economic development. Then, the possible impact of climate change on the transport infrastructure is examined. The chapter goes on to discuss tentative adaptation measures aimed at managing climate change impacts.

The energy sector is put in a wider perspective in chapter eight. The core of the analysis of the energy sector is an examination of the effects of

climate change on the demand and supply sides, while less attention is paid to infrastructure issues. Following a review of the current state of the energy sector and its main vulnerabilities, the chapter provides an evaluation of the impact of climate change on energy supply, demand and infrastructure. This analysis is followed by a set of proposed adaptation measures.

The ninth chapter looks at another area of concern – human health. It starts with an analysis of the main effects of climate change on human health and the main transmission mechanisms of such effects as heat-waves, worsening water quality, and air pollution. At the same time, it outlines the outcomes of these changes from a human development perspective. The chapter concludes with a series of potential adaptation options.

The following chapter looks at the ways a sound insurance policy and insurance instruments can pave the path towards a risk-resilient society. The chapter starts with an explanation of the importance of risk transfer as part of adaptive capacity and then looks at current state of the insurance sector in Moldova with a special focus on property and agricultural insurance. It also tries to offer suggestions for the shape of a future transfer mechanism and concludes with policy recommendations on how to bring this mechanism into being.

The final chapter offers a venue for broad policy discussion. It reviews Moldova's development strategies from the perspective of climate change. In particular it focuses on development objectives that are likely to be thwarted if climate change is not taken into account. After summarising key development strategies, the criteria used to evaluate adaptation options will be explained and adaptation options that can assist in achieving development objectives identified. The chapter will stress realistic adaptation options from the perspective of their feasibility, advantages, and drawbacks, including consideration of adaptation strategy costs and the realities of the government's financial situation. The chapter concludes with recommendations for Moldova given the expected climate impacts and available adaptation strategies.

We do hope that this Report will accomplish its three-pronged mission: it will bring climate change discussion into the national policy agenda, it will contribute to elaboration of the national adaptation policies and it will add an important human development perspective to this issue.