



How-to Guide: Low-emission Development Strategies and Nationally Appropriate Mitigation Actions: Eastern Europe and CIS



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INTRODUCTION: objectives and overview of this guide

The transition to low-emission development in both developed and developing economies has been recognized internationally as an imperative to stabilizing greenhouse gas (GHG) concentrations in line with a 2°C temperature increase scenario. However to date there is only limited practical experience of designing and implementing comprehensive national low emission development (LED) strategies (LEDS), and no guidelines on the preparation of such strategies or on Nationally Appropriate Mitigation Actions (NAMAs) developed and adopted in the United Nations Framework Convention on Climate Change (UNFCCC) process. At the same time, fast start financing committed by developed countries at the Copenhagen Climate Conference 2009 is already supporting countries in developing and implementing LEDSs and NAMAs.

This guide is designed to help policy makers and policy experts:

- determine opportunities for low-emission development and;
- design national LEDS or NAMAs in their respective countries.

Recognizing that each country has unique national circumstances and priorities, this guide describes the main steps in the process of developing LEDS and NAMAs that a country would need to follow; it identifies the main questions that need to be addressed at each stage of the process and describes the main relevant policy instruments available, based on the analysis of the practical experience with LEDS and related processes to date. Where possible the guide uses practical examples to illustrate various elements of a LEDS. Therefore this guide is intended to help policy makers organize the process of developing LEDS or NAMAs and to assist in preparing initial concepts for such strategies or actions. It is also intended to serve as the basis for determining strategic national goals and for obtaining international finance to support national actions. It can also be used as a reference for where to find more detailed information on various elements.

This guide is particularly targeted at countries in Eastern Europe and the Commonwealth of Independent States region, however it can also be useful for countries in other regions considering or initiating the development of LEDSs or NAMAs.

ACRONYMS

AR4	IPCC's Fourth Assessment Report
CA	Copenhagen Accord
COP	Conference of the Parties
ECIS	Europe and the Commonwealth of Independent States
GEF	Global Environmental Facility
GHG	Greenhouse Gases
IEA	International Energy Agency
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
LED	Low Emission Development
LEDC	Low-Emission Development Concept
LEDS	Low-Emissions Development Strategy
MRV	Measurement, Reporting and Verification
NAMAs	Nationally Appropriate Mitigation Actions
NCs	National Communications
PAMs	Policies and Measures
TNA	Technology Needs Assessment
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

Chapter 1: Transition to Low-Emission Development – an overview

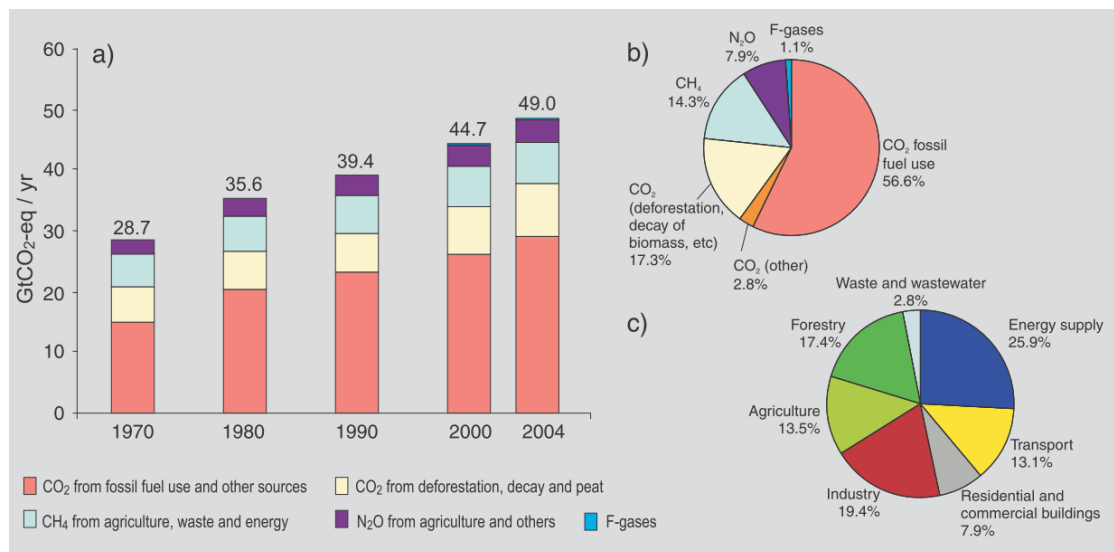
1. Global climate change and greenhouse gas emission trends: shifting towards low-carbon society

1.1. Global emission trends and climate change

Climate change presents a challenge unprecedented in human history. In November 2007, the International Panel on Climate Change (IPCC) released its fourth assessment report, in which it concluded that warming of the climate system is now unequivocal.

Over the past 35 years, global emissions of greenhouse gases (GHGs) have seen dramatic growth of 70%. The main contributor to GHG emissions is fossil fuel combustion in the energy and industrial sectors, as well as the transport sector. These sectors together are roughly responsible for about 60% of global emissions. A significant contribution to global GHG emissions is also made by the agriculture and forestry sectors (see Figure 1).

Figure 1: Global GHG emission trends in 1970–2004 and contribution of sectors to GHG emissions in 2004



Source: IPCC AR4, Synthesis Report

The IPCC recommended in its fourth assessment report that, for a fair chance to limit increases in average global temperature to 2°C, the concentration levels of GHG need to stabilize at 450 parts per million carbon dioxide equivalent. To ensure that, emissions by developed nations would need to fall by 25%–40% by 2020, and 80%–95% by 2050, while developing countries would need to “deviate substantially” from a business-as-usual scenario. Similarly, the 2007–2008 *United Nations Development Programme (UNDP) Human Development Report* stated that an overall 50% reduction of the world GHG emissions to below 1990 levels by 2050 will be required. The report recommends that to achieve the above global objective, developed countries cut GHG emissions by at least 80% by 2050,

with 20–30% cuts by 2020. For the large emitters in developing countries it recommends aiming for an emission trajectory that would peak in 2020 with 20% cuts by 2050.¹

1.2. Transformation in global investment and development patterns

Reaching these emission reduction goals requires transition to low-emission development pathways around the globe. This means decoupling carbon emissions from economic growth through a series of measures across all economic sectors, such as energy efficiency improvements, changes in fuel mix, managing land use change and others.

In 2008 the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) analyzed the investment and financial flows that will be needed to meet worldwide mitigation and adaptation requirements in 2030. One of the key findings of the review is that the additional investment and financial flows in 2030 to address climate change amounts to 0.3 to 0.5% of global domestic product in 2030 and 1.1–1.7% of global investment in 2030.²

Energy is the key factor of economic growth. Access to clean and affordable energy is one of the main prerequisites for sustainable economic and social development. As noted above, production and consumption of energy is also the main source of global GHG emissions. It should therefore be the focus of mitigation policies. The International Energy Agency estimates that 22 trillion dollars in new energy investment will be needed between 2005 and 2030. By 2030 the result would be a 55% increase in global primary energy use, with developing countries accounting for three quarters of that total.³

The McKinsey Global Institute has estimated that the projected growth of global energy demand can be cut at least by half by 2020 through increasing energy productivity, with the associated significant reduction of GHG emissions compared to business-as-usual scenario. Additional annual investments of US\$170 billion for the next 13 years would be sufficient to capture the energy productivity opportunity among all end users.⁴

Similarly, the IEA has shown that, on average, an additional one dollar invested in more efficient electrical equipment, appliances and buildings, avoids more than two dollars in investment in electricity supply.⁵ This ratio is highest in non-OECD countries. Improving energy efficiency in industry is one of the most cost-effective measures to help supply-constrained developing and emerging countries meet their increasing energy demand and loosen the link between economic growth and environmental degradation. Based on demonstrated industrial energy efficiency policies and commercially available technologies, industry has the potential to decrease its energy intensity and emissions by 26% and 32% respectively. That would allow for an 8% reduction in total global energy use and 12.4% in global CO₂ emissions.⁶

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