

# **The United Nations Regional Commissions and the Climate Change Challenges**



UNITED NATIONS





# The United Nations Regional Commissions **and the Climate Change Challenges**





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Secretary-General visits Antarctica



UNITED NATIONS

**BAN KI-MOON** / SECRETARY-GENERAL

**Climate change** is the leading economic and geopolitical issue of the 21st century. It rewrites the global equation for prosperity, development and peace.

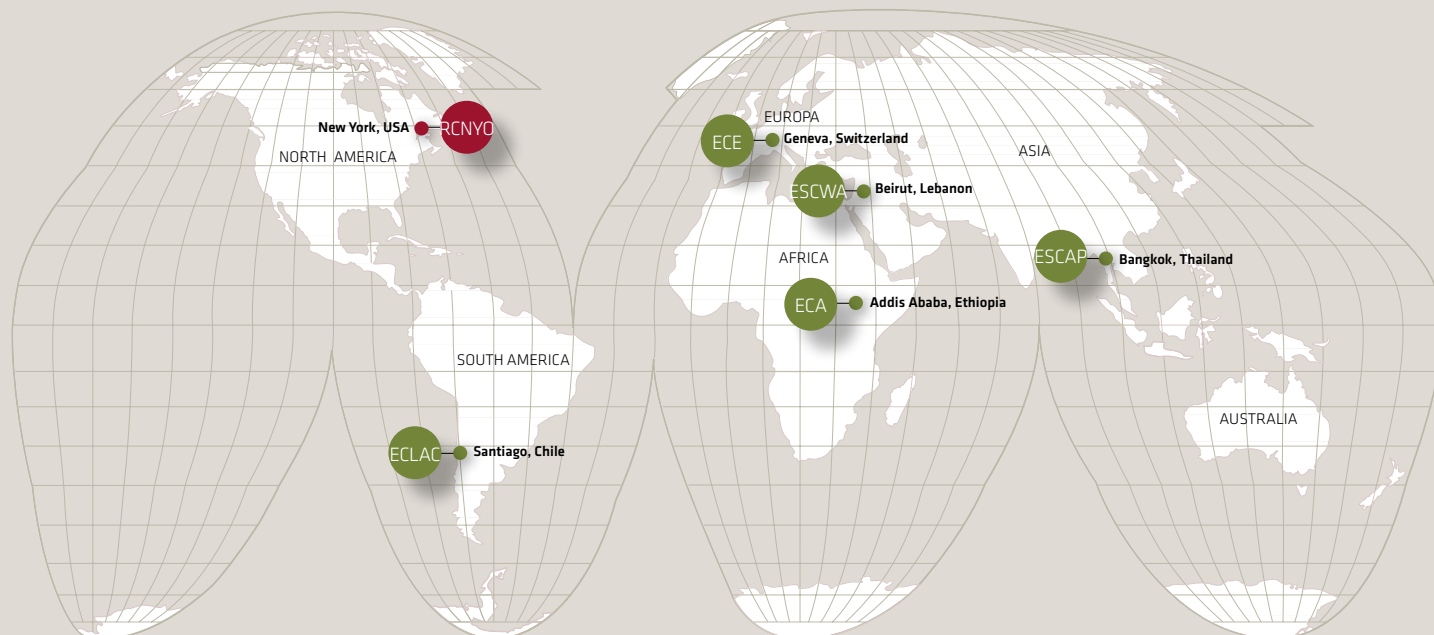
From the moment I took office, I have urged leaders to make this challenge a priority. I have traveled to the melting Arctic and the burning Amazon, and I have seen advancing deserts in Mongolia and drying lakebeds in Chad. Such impacts are only the beginning; we will continue to see growing pressure on water, food and land. Should present trends continue, climate change will reverse years of development gains, exacerbate poverty, destabilize fragile states and topple governments.

The UN Climate Change Conference in Copenhagen in December 2009 offers an opportunity to chart a safer, more sustainable path that protects people and the planet from catastrophe while catalyzing global green growth. Recent months have generated unprecedented momentum for action. Heads of State and Government are directly involved in climate change discussions to a degree previously unimaginable. Businesses around the world are clamouring for the policy signals that could unleash green investments and innovation. Millions of people on every continent are demanding urgent, ambitious action.

The five United Nations Regional Economic Commissions, each from its own perspective, have been an important part of this mobilization. This publication offers a bottom-up regional perspective on climate change. It shows what the Commissions are doing to promote sustainable development, and outlines the methodological and practical tools they are providing to Governments to confront the climate threat.

Some say tackling climate change is too expensive, especially at a time of global economic and financial upheaval. They are wrong. We will pay an unacceptable price if we do not act now. This is not an issue for tomorrow, nor can it wait for the global crisis to recede completely before the international community takes action. Now is the time to reduce the emissions that are causing climate change, help the most vulnerable adapt, and jump start a new era of global green growth.

I call on all partners to make Copenhagen a success, and I commend this publication to a wide global audience.





## PURPOSE AND STRUCTURE OF THE DOCUMENT

This document provides information by region and thematic area on the support that member countries receive from their respective regional commission in their effort to combat climate change.

The five United Nations regional commissions, working with regional partners and other United Nations bodies, are mobilizing their normative, analytical and technical capabilities to undertake collaborative initiatives and actions on climate change in support of Member States in order to integrate climate-change considerations into development plans, strategies and programmes at national and regional levels; assess the economic impacts of climate change and evaluate the costs of mitigation and adaptation, and explore options for climate-change financing; enhance their capabilities and leverage resources for disaster-risk reduction and preparedness; prepare methodologies for assessing the vulnerability of water resources; and examine the impacts of climate change on land, agricultural productivity and food security from social, economic and environmental perspectives.

The regional commissions have also facilitated intergovernmental regional consultation processes with a view to sharing information about policy options for mitigation and adaptation to climate change, and developing regional perspectives on the post-2012 framework. These regional consultations consist of two major approaches: 1) policy options on ways to mainstream climate-change policies into development plans, including through “Green Growth”; 2) policy consultations on the follow-up to the Bali Action Plan and innovative options for a climate-change-action framework now and beyond 2012 to promote the active participation of developing countries in mitigation and adaptation actions.

The document provides a succinct and aggregated overview of emissions trends in the countries within the scope of each of the five United Nations regional economic and social commissions. It examines basic data and lists the activities being pursued by each commission in support of its member countries. The thematic summary of these activities presented in conclusion will give countries a sense of the work of the Regional Commissions and of their ever closer collaboration in the effort to better address the challenges of climate change.

# Global Indicators on Climate Change

Melting glaciers, Patagonia, 2000



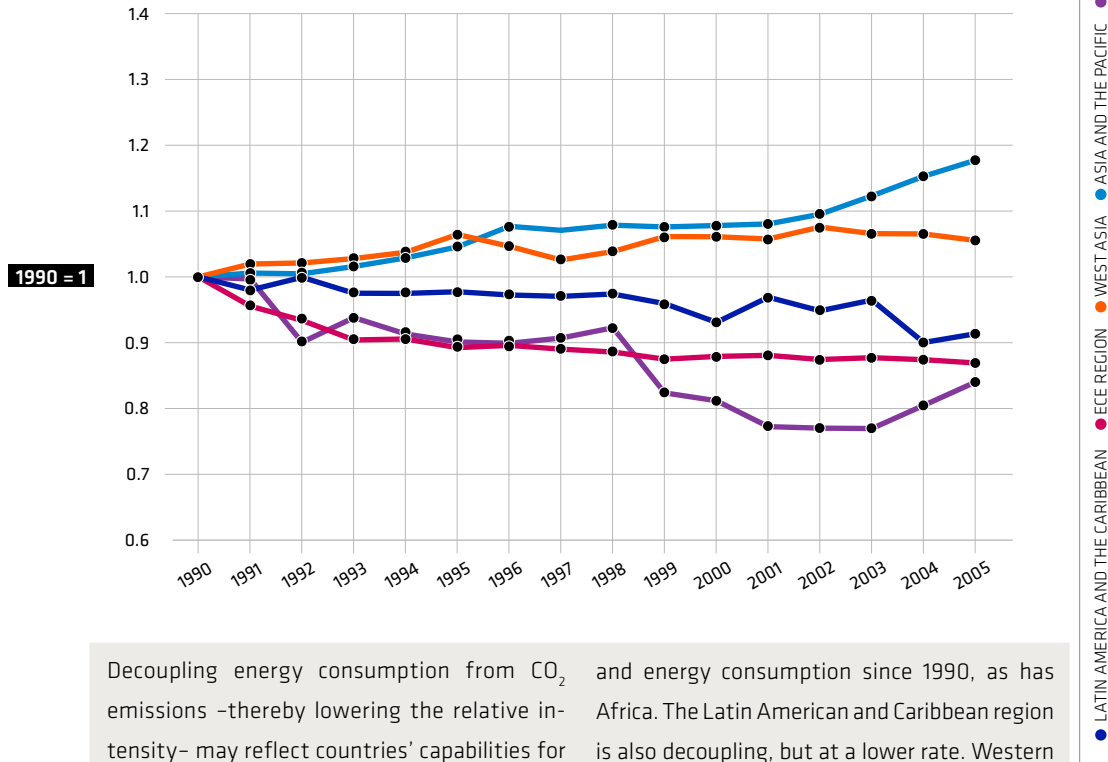


## DECOUPLING INDICATORS ON CLIMATE CHANGE

According to the OECD definition, “decoupling occurs when the growth rate of an environmental pressure is less than that of its economic driving force over a given period”. The intensity of the environmental pressure, calculated as the ratio between the growth rate of the environmental pressure and the growth rate of the economic driving force, may be used to measure this decoupling process. The lower the intensity, the greater the decoupling.

The evolution of decoupling may be measured by comparing the intensity of a particular period with the intensity of a selected reference period (*Intensity of period  $t$  / Intensity of reference period*). Relative intensities calculated for each period after 1990 (the reference period) are presented below to allow comparison between regions for three different economic driving forces, compared with CO<sub>2</sub> emissions of the energy sector, which represent the environmental pressure.

## CO<sub>2</sub> emissions - energy sector and energy consumption

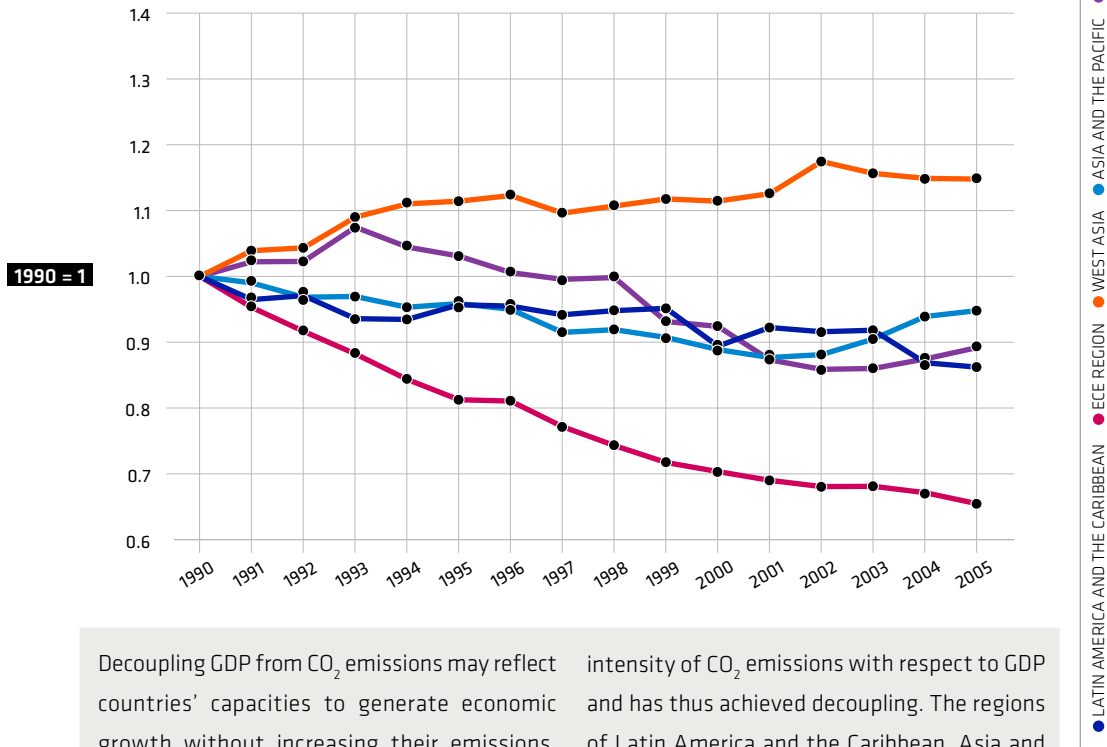


Decoupling energy consumption from CO<sub>2</sub> emissions -thereby lowering the relative intensity- may reflect countries' capabilities for generating energy from cleaner sources and decarbonizing the energy matrix. Europe has achieved steady decoupling between emissions

and energy consumption since 1990, as has Africa. The Latin American and Caribbean region is also decoupling, but at a lower rate. Western Asia is not achieving decoupling, and Asia and the Pacific has been moving in the opposite direction in recent years.



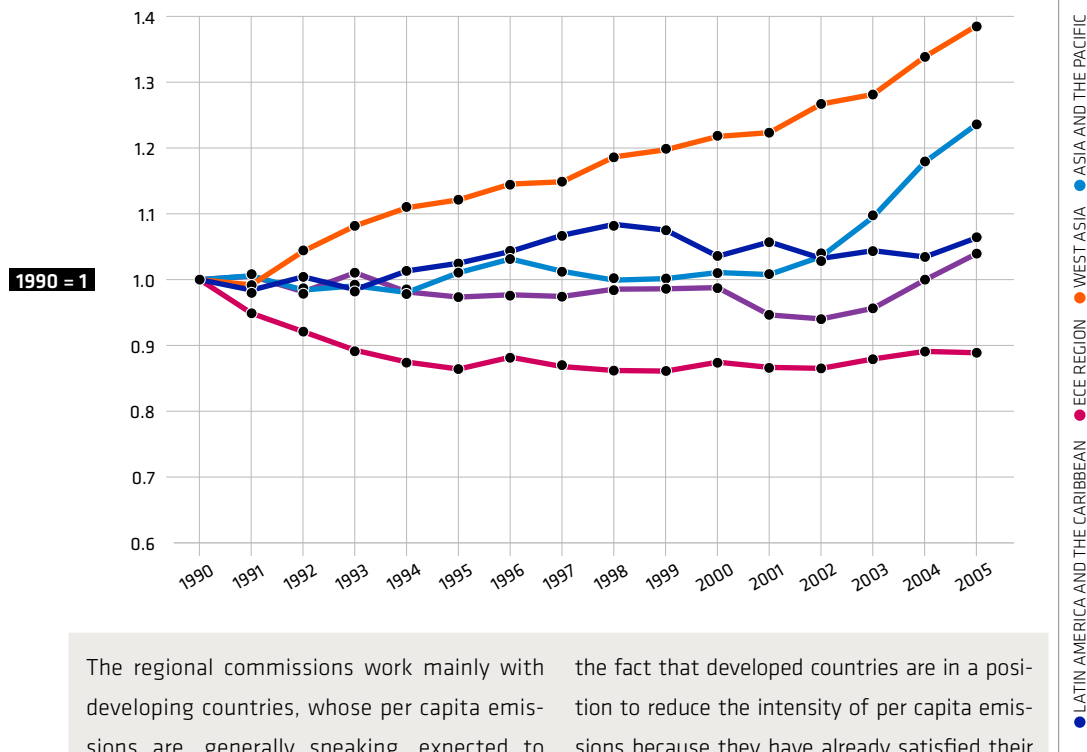
## CO<sub>2</sub> emissions - energy sector / GDP



Decoupling GDP from CO<sub>2</sub> emissions may reflect countries' capacities to generate economic growth without increasing their emissions, thanks to either advances in scientific knowledge and technology or an increase in the relative size of economic sectors that pollute less. Europe has lowered considerably the relative

intensity of CO<sub>2</sub> emissions with respect to GDP and has thus achieved decoupling. The regions of Latin America and the Caribbean, Asia and the Pacific, and Africa all show small, comparable degrees of decoupling. Western Asia has yet to decouple its economic growth from CO<sub>2</sub> emissions.

## CO<sub>2</sub> emissions - energy sector / population



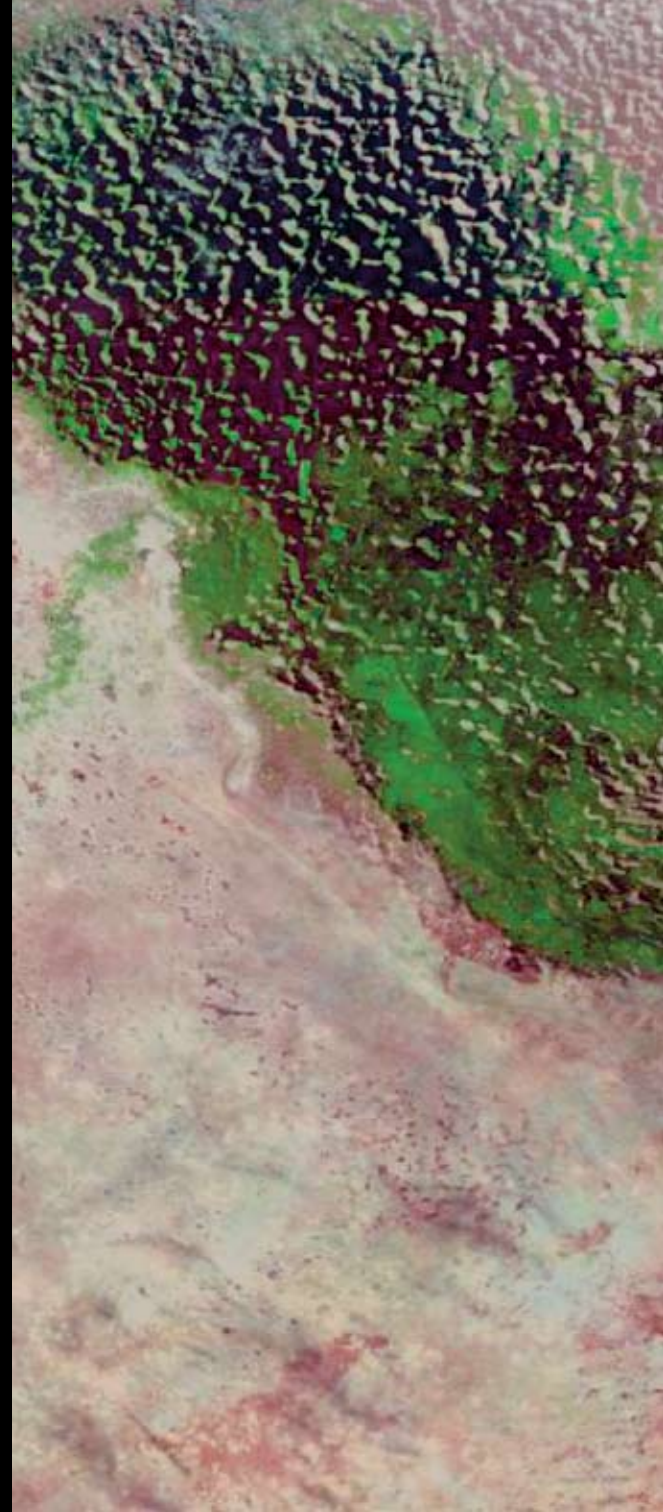
The regional commissions work mainly with developing countries, whose per capita emissions are, generally speaking, expected to grow in order to satisfy unmet needs. In addition, these countries' emissions include those produced in generating exports for developed countries. Accordingly, not all their emissions result from local consumption, as is illustrated by the oil-exporting countries. The line corresponding to the ECE region reflects

the fact that developed countries are in a position to reduce the intensity of per capita emissions because they have already satisfied their needs by means of higher emissions in the past. There is a certain convergence among regions in the rate of growth of per capita emissions, which is led by Asia, followed by the Latin American and Caribbean region and Africa. The high-growth period of 2000-2005 led to rising per capita emissions throughout the developing world.

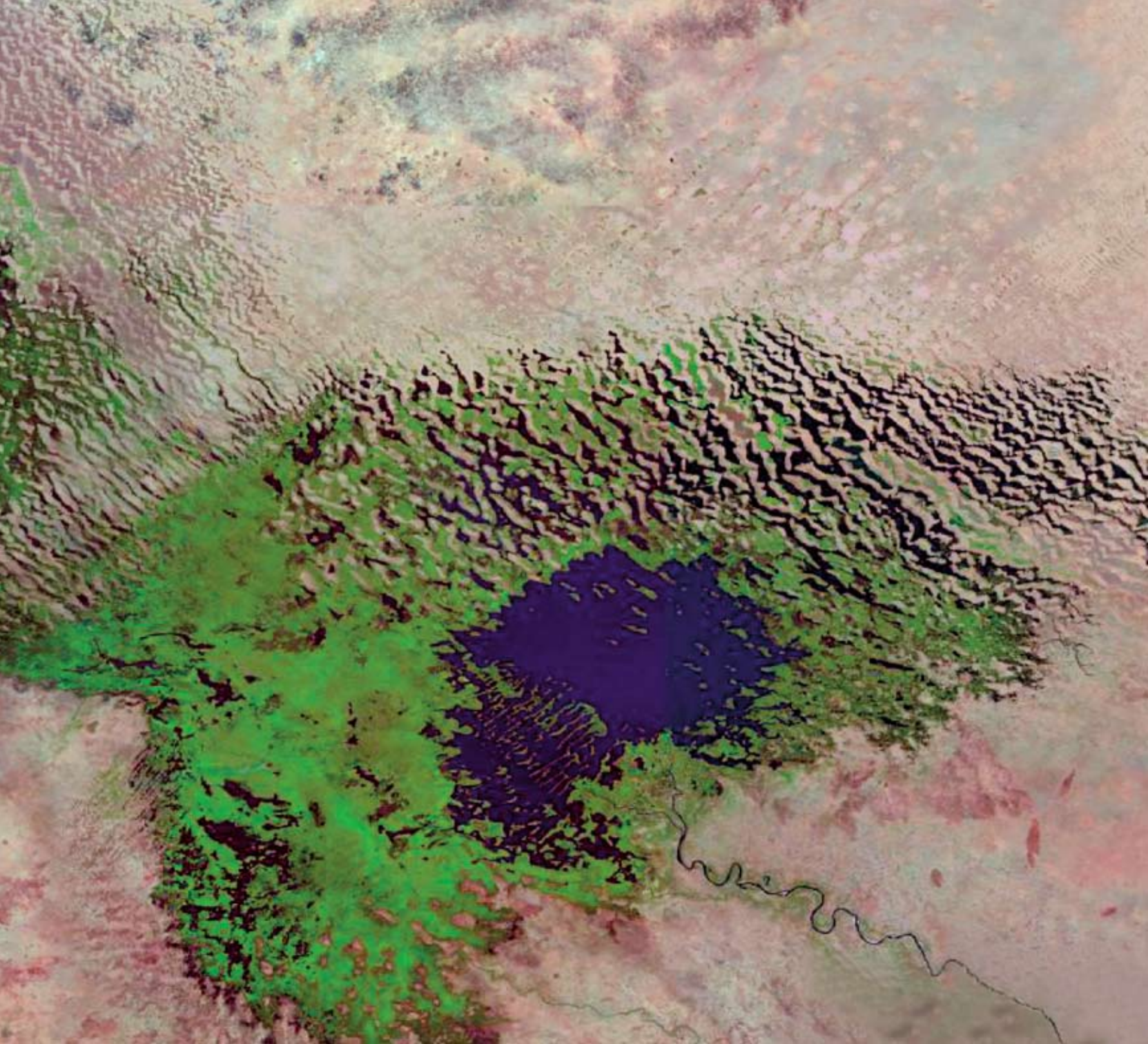
# Africa

ECA

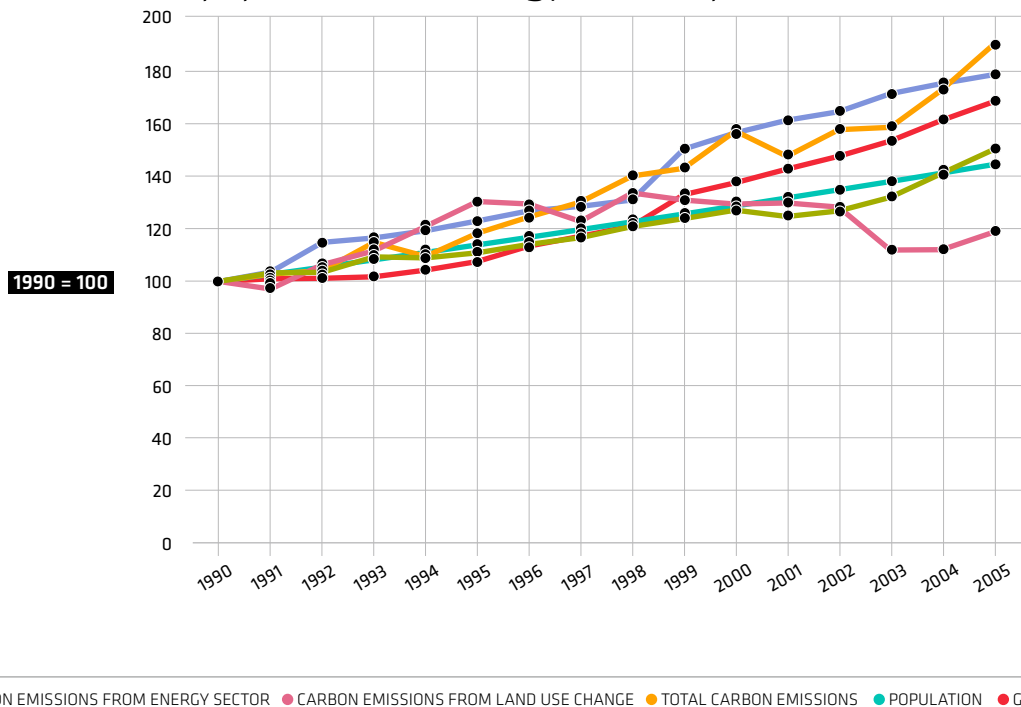
Economic  
Commission  
for Africa







## Africa: trend in carbon (CO<sub>2</sub>) emissions by sector, GDP, population and energy consumption 1990-2005

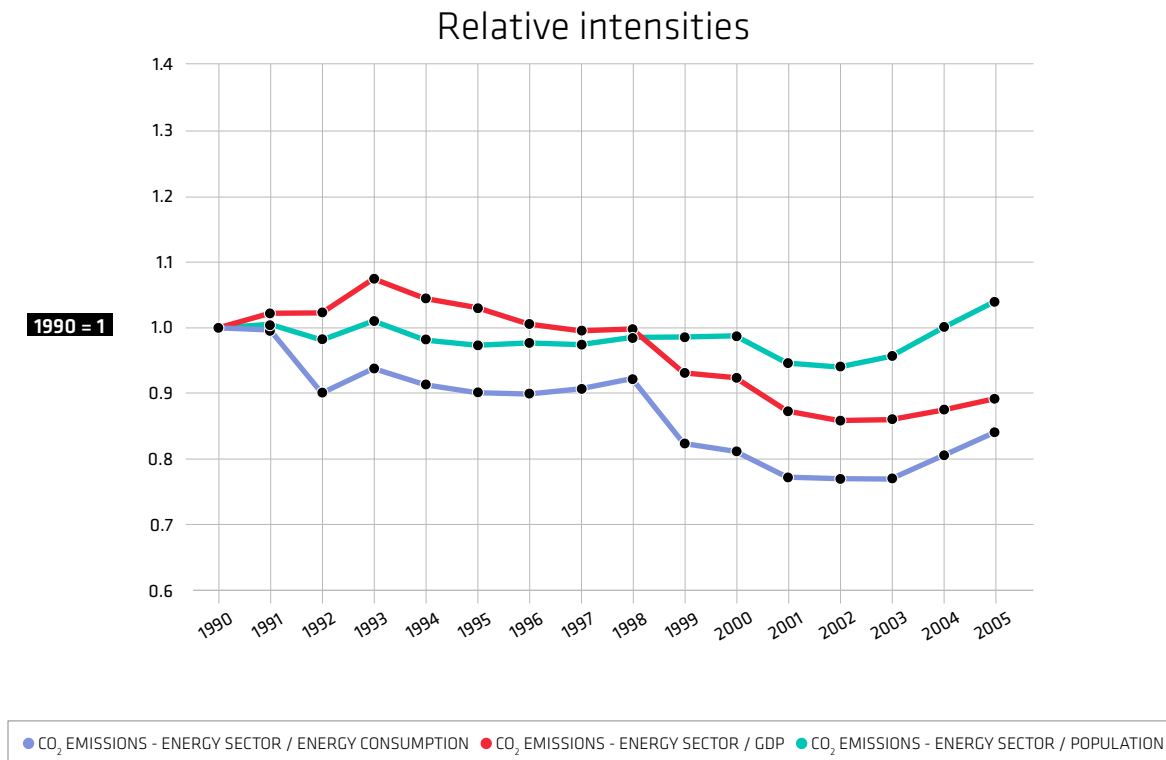


**Source:** Data relating to CO<sub>2</sub> emissions (total, energy and land-use change) were all obtained from the CDIAC site (<http://cdiac.ornl.gov>). Data for Total GDP (World Bank estimates) were drawn from the United Nations Database (<http://data.un.org>). Population data were acquired from the African Centre for Statistics (ACS) based at the Economic Commission for Africa. Energy-use data were available only for 25 African countries and were taken from the United Nations Database (<http://data.un.org>). The data relate to years from 1990 to 2006, and all websites cited as data sources were accessed on 2 November 2009.

As the world's second-largest and second most-populous continent after Asia, Africa is home to a billion people, representing approximately 15% of the world's human population. While demographic growth has been proceeding at a broadly constant rate, growth in total energy consumption has been significant and is outpacing population growth; thus, per capita energy consumption has been rising in the

region. Gross Domestic Product (GDP) has also been growing at an increasing rate over time, thanks to the better economic and development policies implemented by African member States over the past two decades. CO<sub>2</sub> emissions from the energy sector are also on the rise, as a result of greater energy demand from the growing population and an expansion of industrial activity in the region. Generally, GDP growth,





total CO<sub>2</sub> emissions and energy consumption are closely correlated, which implies opportunities for further investments in the green economy. Although CO<sub>2</sub> emissions due to land-use change have decreased slightly since the late 1990s, they remain higher than in the base year, 1990. There is thus potential for reducing CO<sub>2</sub> emissions by promoting appropriate land use and land-use change programmes.

Since 2003, there has been a trend towards decarbonization of the energy matrix. Africa shows progress in energy productivity and a recent increase in emissions per capita. Overall, it would seem that in Africa, the carbon intensity of the economy is decreasing but the technological gains are offset by the increase in energy consumption per capita.



### Member States

- Algeria
- Angola
- Benin
- Botswana
- Burkina Faso
- Burundi
- Cameroon
- Cape Verde
- Central African Republic
- Chad
- Comoros
- Cote d'Ivoire
- Democratic Republic of Congo
- Djibouti
- Egypt
- Equatorial Guinea
- Eritrea
- Ethiopia
- Gabon
- the Gambia
- Ghana
- Guinea
- Guinea-Bissau
- Kenya
- Lesotho
- Liberia
- Libya
- Madagascar
- Malawi
- Mali
- Mauritania
- Mauritius
- Morocco
- Mozambique
- Namibia
- Niger
- Nigeria
- Republic of Congo
- Rwanda
- São Tome and Principe
- Senegal
- Seychelles
- Sierra Leone
- Somalia
- South Africa
- Sudan
- Swaziland
- Tanzania
- Togo
- Tunisia
- Uganda
- Zambia
- Zimbabwe

## ECONOMIC COMMISSION FOR AFRICA (ECA)

The Economic Commission for Africa (ECA) was established by Economic and Social Council resolution 671(XXV) on 29 April 1958 with the mandate to promote the economic and social development of its member States, foster intraregional integration and promote international cooperation for Africa's development.

The Commission's strong commitment to Africa's development has been evident since its inception. It is noteworthy that with the exception of the eight founding members (Egypt, Ethiopia, Ghana, Liberia, Libya, Morocco, Sudan and Tunisia), all the other member States of ECA gained independence after the Commission's establishment. Hence, the history of the Commission is inextricably bound up with that of post-colonial Africa, which it was established to serve. Indeed, ECA has been shaped by the recent history of Africa and has, at the same time, contributed to shaping the Africa of today.

In this regard, the evolution of its structure and work programmes has helped guide and reflect the priorities of each of the five decades that have elapsed since 1958. During this period, ECA undertook several reform efforts, notably in 1991, 1996, 2002 and 2006.

The headquarters of ECA are located in Addis Ababa, Ethiopia. ECA has five subregional offices: the Subregional Office for North Africa, located in Rabat, Morocco; the Subregional Office in West Africa, located in Niamey, Niger; the Subregional Office in Central Africa, which has its headquarters in Yaounde, Cameroon; the Subregional Office for Eastern Africa, set up in Kigali, Rwanda; and the Subregional Office for Southern Africa, located in Lusaka, Zambia.

Another ECA body which is making an important contribution to capacity-building in Africa is the African Institute for Economic Development and Planning (IDEP).



Since its repositioning in 2006, ECA has focused on achieving results in two related and mutually supportive areas, namely:

■ **PROMOTING REGIONAL INTEGRATION IN SUPPORT OF THE VISION AND PRIORITIES OF THE AFRICAN UNION (AU).**  
 ECA support for the implementation of regional integration agenda of the African Union Commission will consist in research and policy analysis on the issues. In addition, ECA will seek to strengthen capacity and provide technical assistance to institutions driving the regional integration agenda, including the regional economic communities (RECs), and working on a range of transboundary initiatives and activities in sectors vital to the regional integration agenda;

■ **MEETING AFRICA'S SPECIAL NEEDS AND THE EMERGING GLOBAL CHALLENGES.**  
 ECA recognizes the importance of focusing attention on Africa's special needs, particularly within the context of achieving the Millennium Development Goals. In this regard, ECA will place emphasis on supporting efforts to eradicate poverty, placing African countries on the path of growth and sustainable development, reversing the marginalization of Africa in the globalization process, and accelerating the empowerment of women.



Mount Kilimanjaro, February 1993



Mount Kilimanjaro, February 2000

## ECA: CLIMATE-CHANGE-RELATED ACTIVITIES

### Introduction

ECA activities on climate change are being undertaken within the framework of the Climate for Development in Africa (ClimDev-Africa) Programme and its African Climate Policy Centre (ACPC).

The ClimDev-Africa Programme is a joint initiative of the African Union Commission (AUC), the United Nations Economic Commission for Africa (ECA) and the African Development Bank (AfDB). ClimDev was developed by the three partner institutions in collaboration with the Secretariat of the Global Climate Observing System (GCOS). The development and implementation of the programme were mandated by African Heads of State and Government and African ministers of finance, planning and economic development, and the environment. The launch of this programme provides ample demonstration of a genuine commitment by Africa's political leadership to mitigate the impacts of climate change, to which the region is highly vulnerable.

### ClimDev-Africa and the ACPC

The overall goal of ClimDev-Africa is to promote secure attainment of the Millennium Development Goals and overall sustainable development in Africa. More specifically, the Programme aims to upgrade the capacities of key institutions and stakeholders with a view to improving climate-related data and observation, information services, policies, investment processes and risk-management practices in climate-sensitive sectors such as agriculture, water and other natural resources, energy, and health.

ClimDev-Africa will be implemented at the regional, subregional and national levels with active involvement from the Regional Economic Communities (RECs); regional and subregional climate institutions; river/lake basin organizations; national weather, climate and water services; and other public authorities; research institutions; civil society organizations and the media. Programme implementation depends

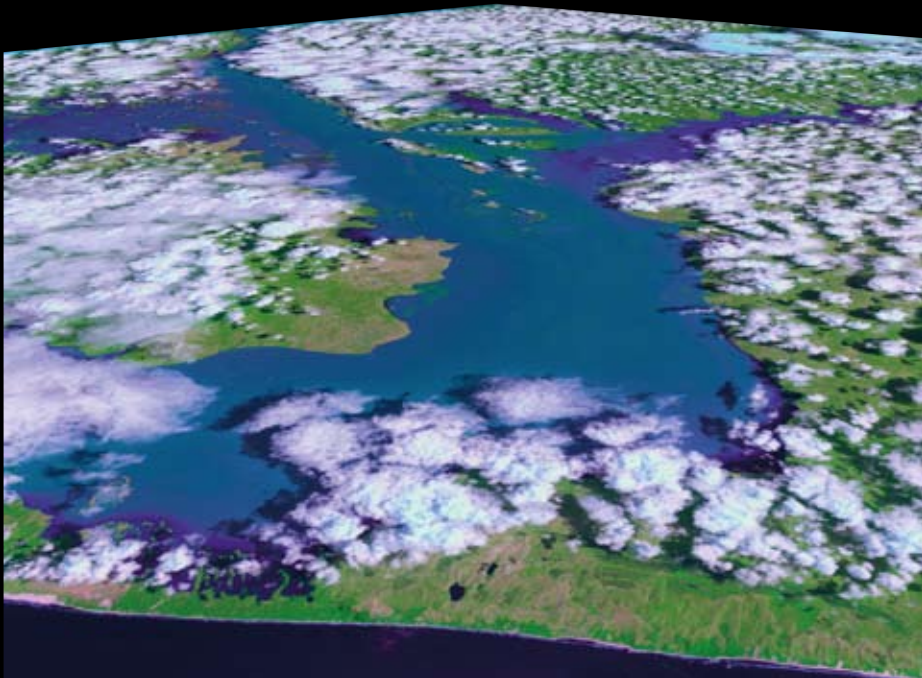
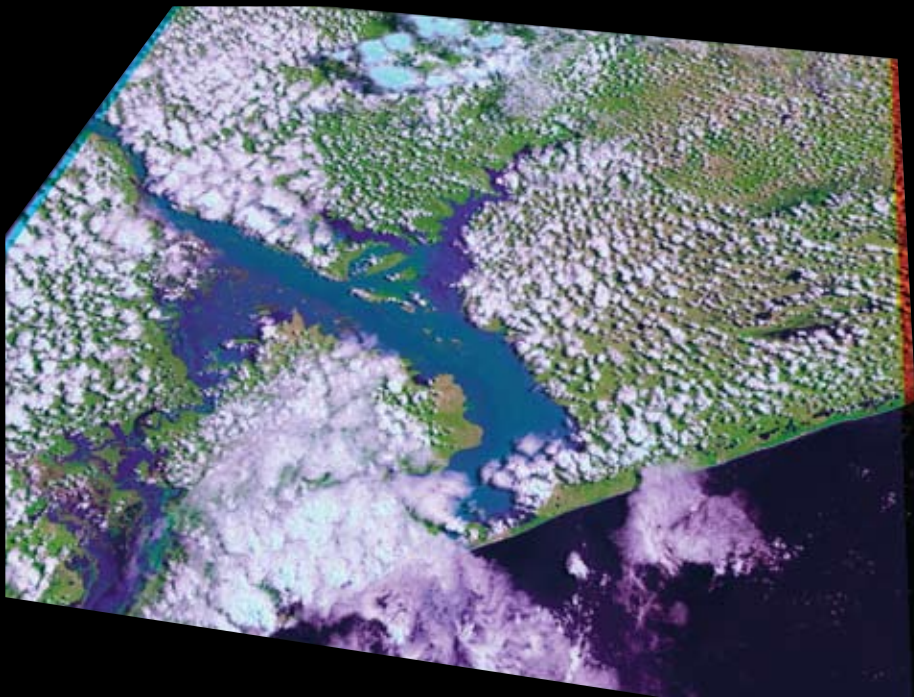
on two key instruments: the ECA-based African Climate Policy Centre (ACPC), which is the policy arm of the Commission; and the AfDB-based Special Climate Change Funding Mechanism, its financial arm.

### Activities implemented

The key activities undertaken by ECA thus far are aimed at supporting Africa's preparations for the United Nations Climate Change Conference in Copenhagen and are being implemented within the framework of ClimDev and the ACPC, with financial support provided by the Department for International Development (DFID) of the United Kingdom.

With a view to ensuring well-informed and targeted statements, ECA engaged with the negotiators at various international and regional meetings to facilitate better understanding of the issues under negotiation and the concerns and issues at stake for Africa.





Mozambique flood, March 2000

- In conjunction with the United Nations Environment Programme (UNEP), ECA co-sponsored the African Conference of Ministers in charge of Environment on Climate Change post 2012 and the African National Focal Points and Negotiators Preparatory Meeting. These meetings served as preparatory forums for the African group of negotiators for the Conference of Parties-14, which was held in Poznan, Poland, in December 2008. The meeting adopted the African Climate Platform to Copenhagen and the Algiers Declaration on Climate Change.
- ECA co-sponsored the third Special Session of the African Ministerial Conference on the Environment on Climate Change (AMCEN), held in Nairobi in May 2009. It also provided technical and secretariat support to the third Financing for Development Conference, held in Kigali, also in May 2009, under the theme of climate change. The outcomes of the Special Session and the Financing for Development Conference were endorsed by the Thirteenth Ordinary Summit of the African Union in July 2009. The Summit also set up the Conference of African Heads of State and Government on Climate Change (CAHOSCC) comprising Algeria, Ethiopia, Kenya, Mauritius, Mozambique, Nigeria, Republic of Congo and Uganda, together with the Chairperson of the African Union, the AUC Chairperson and the Chairperson of AMCEN. This unprecedented move by African Heads of State and Government has provided the much needed political impetus to enable the region to engage efficiently and effectively with the global community on climate-change issues.
- ECA has recruited a climate-change adviser for the African Union Commission (AUC) to, support the Commission in leading and coordinating the process of strengthening Africa's common position on climate change, among other things.
- In September 2009, ECA hosted the Special Session of the Africa Partnership Forum on Climate Change organized by the Secretariat of the New Partnership for Africa's Development (NEPAD), the Support Unit of the African Partnership Forum of the Organisation for Economic Co-operation and Development (OECD-APF) and the African Union Commission. Its main objective was to build a coalition around Africa's key concerns and expectations on climate change, to ensure that these are adequately addressed in the prospective climate-change agreement to be reached at Copenhagen. The main outcome was a joint statement by Africa and its partners containing key political messages for dissemination to relevant regional and global processes that feed into, and could influence, the Copenhagen outcomes.
- ECA hosted a Regional Conference on Enhancing the Potential for the Clean Development Mechanism (CDM) in Africa in September

2009. The Conference was organized in collaboration with the Swedish Energy Agency, UNEP-Risoe and the United Nations Development Programme (UNDP). The Conference provided training to various stakeholders on the legal and financial aspects of the CDM.

- In October 2009, ECA sponsored attendance by ministers from 25 African countries at the World Forum on Sustainable Development, which took place in Ouagadougou, Burkina Faso, under the theme of climate change.

### **Activities October to December 2009**

15-17 October, 2009: At the request of the AMCEN Secretariat, ECA hosted the Consultative Meeting on the Draft Framework of Central

African Subregional Climate-Change Programmes.

18 October, 2009: At the request of UNEP, ECA hosted the Climate Change and Gender Orientation for Delegates.

19-23 October, 2009: ECA hosted the Africa Preparatory Meeting for the fifteenth Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 15-UNFCCC), being organized under the auspices of AMCEN. The meeting comprised negotiator and high-level expert segments and aimed to consolidate Africa's negotiating position before Copenhagen.

17-20 November, 2009: In collaboration with sister United Nations agencies, ECA organized training on climate change for its professional staff. The meeting was coordinated by the

United Nations Institute for Training and Research (UNITAR), and trainers included staff from the UNFCCC Secretariat, UNDP and UNEP.

### **Post-Copenhagen**

ECA has begun thinking about how ClimDev Africa and its ACPC could best position themselves to play a key role in shaping Africa's policy responses and actions in a post-2012 climate-change regime. In this regard, an ACPC programme planning meeting is scheduled for the first quarter of 2010, to which all partners and stakeholders will be invited. The aim is to ensure effective implementation of relevant Copenhagen outcomes, as well as those of regional and subregional consultations, with a view to achieving the desired impacts at all levels.

## SUMMARY OF CLIMATE PROJECTS

Name of Project	Source of Funding	Duration	Outputs
Climate for Development in Africa Programme (ClimDev-Africa makers, Programme)  Joint initiative of ECA, AUC and AfDB	Multi-donor funding (so far provided or pledged by DFID of the United Kingdom, and by Norway, Sweden and the European Union)	5 years (2009 to 2013)	<ul style="list-style-type: none"> <li>■ ACPC and Climdev Special Fund established</li> <li>■ ClimDev projects identified and being implemented</li> <li>■ Knowledge of development-related climate-change issues increased among policy-officials and negotiators.</li> <li>■ A ClimDev communication strategy developed and implemented for user-friendly dissemination of analytical results, policy options and best practices.</li> <li>■ Population at large, including population groups and socio-economic groups that are particularly vulnerable to climate change, informed about climate-change impacts, opportunities and best practices.</li> <li>■ Quality of hydrological data and capacities for climate and hydrological data management improved across Africa.</li> <li>■ An efficient and publicly accessible system for sharing regional and subregional web-based information, knowledge, experience and best practices has been established and maintained.</li> <li>■ African countries, RECs, River Basin Organizations (RBOs) and climate- and development-oriented institutions and constituencies strengthened to integrate climate change into policy-making and management.</li> <li>■ Current policies affecting climate-sensitive sectors analysed with regard to gaps, overlaps and implementation efficiency; and policy areas needing improvement identified.</li> <li>■ Best management practices for climate-sensitive sectors developed for all levels, taking risks and uncertainties into consideration.</li> <li>■ Pilot climate and development projects conducted and experience fed into policy-making processes.</li> <li>■ Climate-sensitive policy options and scenarios developed and analysed with regard to impacts on sustainable development and MDG attainment.</li> <li>■ Policy options developed for implementing multilateral environmental agreements (MEAs).</li> <li>■ Scientifically-based recommendations developed on national, subregional and African positions on climate change; and timely communication and use of scientifically-based recommendations on African positions on climate change.</li> <li>■ Policy-makers using or considering up-to-date scientific results and recommendations from people affected.</li> </ul>

# Asia and the Pacific

ESCAP

Economic  
and Social  
Commission  
for Asia and  
the Pacific

Rice field, Cambodia

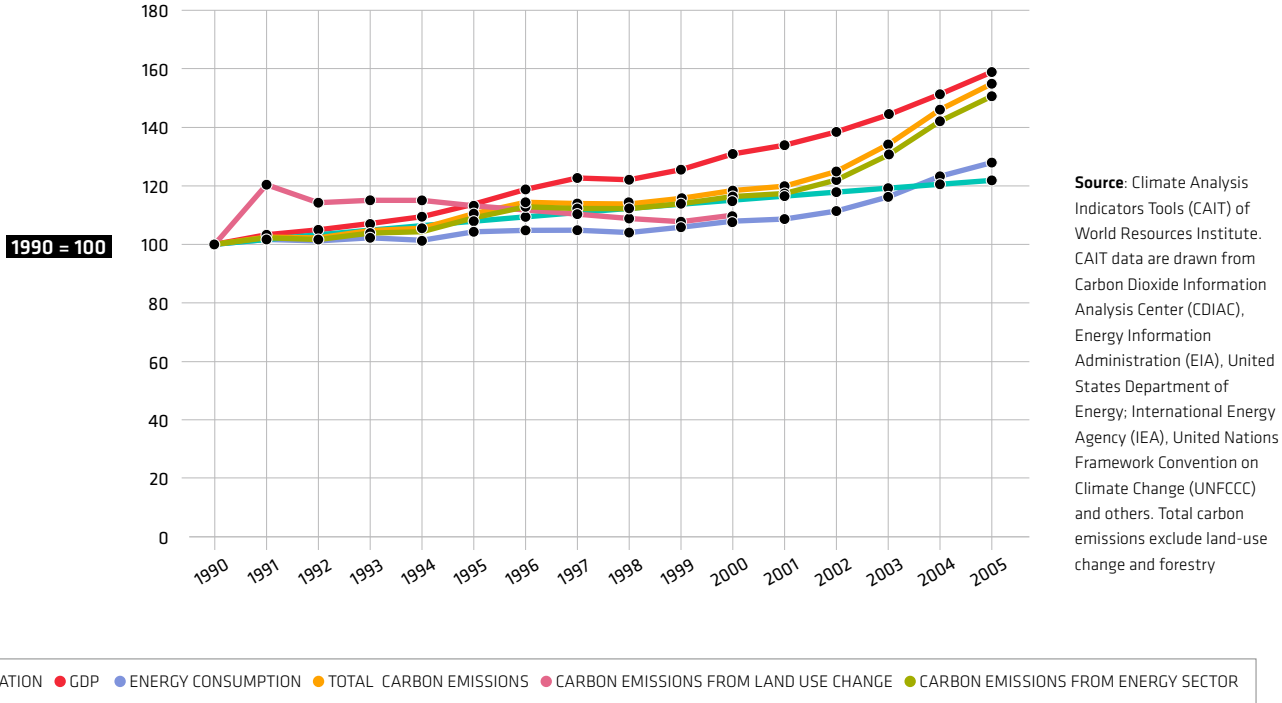








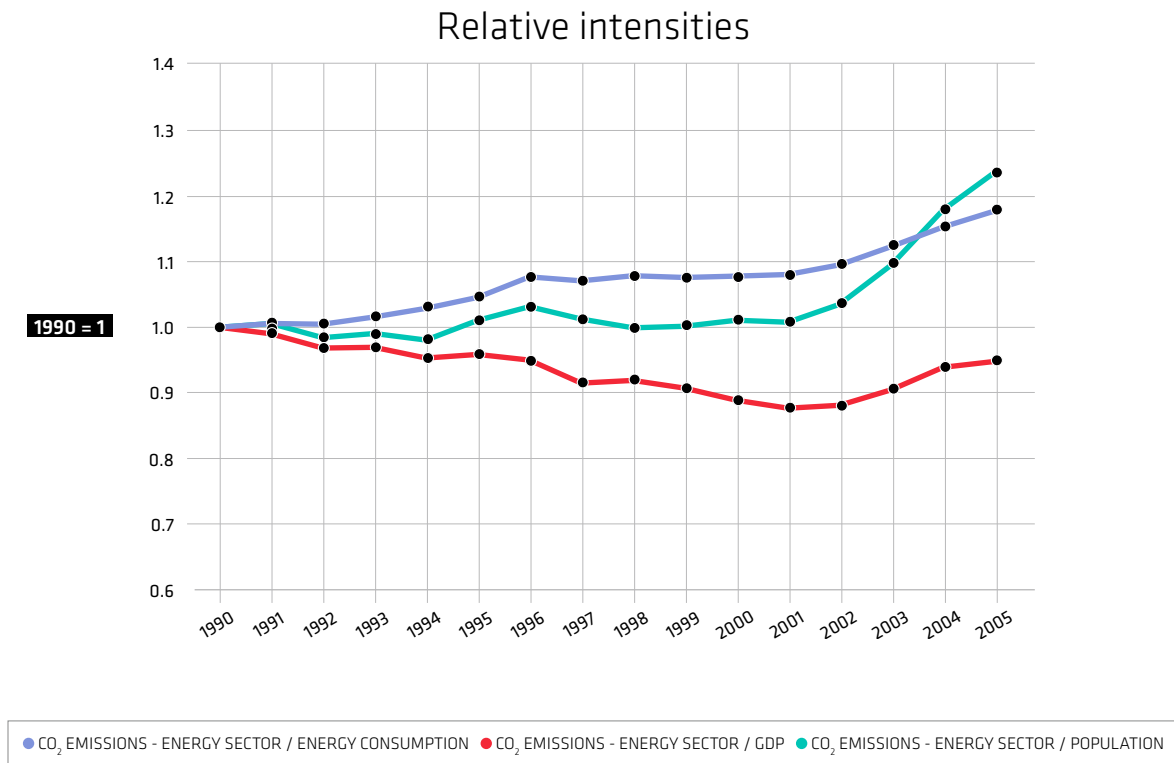
# Asia and the Pacific: Trend in CO<sub>2</sub> emissions by sector, GDP, population and energy consumption, 1990-2005



The ESCAP region comprises five subregions: Central Asia, North-East Asia, South-East Asia, South Asia and the Pacific. It is home to 4.2 billion people of whom over 40% still lack access to electricity, which poses a key challenge in addressing both development and climate change. Most indicators display rising trends

and direct correlations except for the relative stabilization of population growth in recent years. The region has significantly reduced the carbon intensity of its economic growth since the late 1990s. Nonetheless, the carbon intensity of the energy sector has remained broadly unchanged, relying persistently on fossil-fuel

energy. As a result, the region's share of global carbon emissions has increased from 41% in 1995 to 46% in 2005. Massive investments in low-carbon options are required to satisfy the huge unmet needs for energy and other major infrastructures and to substantially change the current trend of carbon emissions.



# ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC (ESCAP)

## Member States

- Afghanistan
- Armenia
- Australia
- Azerbaijan
- Bangladesh
- Bhutan
- Brunei Darussalam
- Cambodia
- China
- Democratic People's Republic of Korea
- Federated States of Micronesia
- Fiji, France
- Georgia
- India
- Indonesia
- Islamic Republic of Iran
- Japan
- Kazakhstan
- Kiribati
- Kyrgyzstan
- Lao People's Democratic Republic
- Malaysia
- Maldives
- Marshall Islands
- Mongolia
- Myanmar
- Nauru
- Nepal
- Netherlands
- New Zealand
- Pakistan
- Palau
- Papua New Guinea
- Philippines
- Republic of Korea
- Russian Federation
- Samoa
- Singapore
- Solomon Islands
- Sri Lanka
- Tajikistan
- Thailand
- Timor-Leste
- Tonga
- Turkey
- Turkmenistan
- Tuvalu
- United Kingdom of Great Britain and Northern Ireland
- United States of America
- Uzbekistan
- Vanuatu
- Viet Nam

## Associate Members

- American Samoa
- Cook Islands
- French Polynesia
- Guam
- Hong Kong, China
- Macao
- New Caledonia
- Niue
- Northern Mariana Islands

The Economic Commission for Asia and the Far East (ECAFE) was established in March 1947 by Economic and Social Council resolution 37(IV) to serve as an instrument for post-war economic reconstruction. In 1974, following a decision to expand its mandate to include social as well as economic aspects of development and to extend its geographical range, it was renamed the Economic and Social Commission for Asia and the Pacific (ESCAP).

ESCAP has its headquarters in Bangkok. Its regional offices are: the Asian and Pacific Centre for Agricultural Engineering and Machinery (APCAEM) (Beijing); the Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT) (Incheon, Republic of Korea); the Asian and Pacific Centre for Transfer of

Technology (APCTT) (New Delhi); the Centre for Alleviation of Poverty through Secondary Crops Development in Asia and the Pacific (CAPSA) (Bogor, Indonesia); and the Statistical Institute for Asia and the Pacific (SIAP) (Chiba, Japan). The Commission currently has one subregional office: the Pacific Operation Centre (EPOC), located in Fiji, but three more will be set up in 2010 to serve East and North-East Asia; North and Central Asia; and South and South-West Asia, respectively.

The geographical scope of ESCAP stretches from Turkey in the west to the Pacific island nation of Kiribati in the east, and from the Russian Federation in the north to New Zealand in the south. Of the Commission's 53 member States and nine associate members, 58 belong to Asia and the Pacific.



## MANDATE AND MISSION

- To serve as the regional hub promoting cooperation among member States;
- To achieve inclusive and sustainable economic and social development in the Asia-Pacific region.





Wind turbines

## ESCAP: CLIMATE-CHANGE-RELATED ACTIVITIES

### **Assessing regional challenges to development and climate change**

ESCAP assesses regional socio-economic challenges to climate change. The 2009 edition of its annual flagship, the Economic and Social Survey of Asia and the Pacific, reviewed the region's environmental and socio-economic vulnerability to climate change and policy options, and the implications of the financial crisis for action on climate change. The Commission also supported a regional review of the economics of climate change in South-East Asia (RRECCS), which was conducted by the Asian Development Bank (ADB) using the methodology of the Stern Review; it is currently discussing preparing a joint assessment of North-East Asia in 2010. The review contributed to regional discussions on the economic costs and benefits of mitigation of, and adaptation to, climate change, and raised stakeholders' awareness of the urgency of action in this regard. The Regional Report on Sustainable Development, which will be jointly published by ESCAP, ADB and the United Nations Environment Programme (UNEP) as the major input for the sixth Ministerial Conference on Environment and Development in Asia and the Pacific, to be held in September 2010, will also assess the challenges

to development posed by climate change and put forward approaches to low-carbon development and resilience.

Starting in 2010, ESCAP will also undertake a four-year project to review in depth policy options for low-carbon development and formulate the East Asia roadmap for low-carbon green growth and the regional strategy for low-carbon development in Asia and the Pacific, with financial contributions from the East Asia Climate Partnership, launched by the Republic of Korea in 2008.

### **Developing and advocating innovative policy approaches**

ESCAP has been advocating the green growth approach, which seeks to improve the ecological efficiency or eco-efficiency of economy-wide performance by devising both macro-policy frameworks and micro-policy practices for specific sectors that shape the overall situation of national eco-efficiency. As the key strategy for sustainable development in the Asia-Pacific region, the green growth approach was adopted at the fifth Ministerial Conference on Environment and Development in Asia and the Pacific in 2005. The strategy focuses on the potential of Asia-Pacific developing

countries for achieving sustained economic growth in order to alleviate poverty and meet the basic needs of the poor without compromising environmental sustainability. A broad range of socio-economic policy measures could be put in place to realize that potential and enhance the eco-efficiency of society as a whole or the entire economy. The work done by ESCAP on the green growth approach consists of five major paths: green tax and budget reform, sustainable consumption, sustainable infrastructure, greening markets and business, and investment in natural capital. Such a framework is in line with the approach proposed in the Bali Action Plan, which calls on developing countries to take nationally appropriate mitigation action in the context of sustainable development. Designed to lower energy, resource and carbon intensities in both production and consumption as an integral part of improving ecological efficiency, the green growth approach directly supports countries in aligning their development with action on climate change, and in turn helps to reduce greenhouse gas emissions without undermining national development needs.

ESCAP has held a series of regional consultations and training programmes on green growth

policies. Drawing on accumulated knowledge and outcomes from previous activities, ESCAP has developed a training module for the capacity development programme on green growth policies. The module highlights the compatibility of the green growth approach with the countries' prospects for low carbon development and aims specifically to strengthen such linkages and to help develop strategies to promote climate-change actions that simultaneously address the countries' multiple development challenges.

### **Building a common regional view and regional capacity**

ESCAP has facilitated the regional consultation process to share information on policy options for mitigation and adaptation to climate change, and to develop regional perspectives on the post-2012 framework. Regional consultations have focused on two major areas: (1) regional cooperation in engaging the active participation of developing countries in mitigation and adaptation actions; (2) policy approaches and options for mainstreaming climate-change policies into the development plan, or vice versa. ESCAP convened three policy consultations with developing member countries, especially from South-East Asia, in April, October and November 2008 at which participants reviewed

developing countries' challenges and responses to climate change and discussed key areas of subregional/regional cooperation. Participants addressed the need to raise awareness on the negotiation process for the post-2012 framework, enhance regional knowledge on the scientific, economic and environmental implications of climate change and strengthen national capacity for policy coordination.

In conjunction with other United Nations agencies, international bodies and national institutes, ESCAP has organized regional policy forums for both the public and the private sector. In 2009, these have included Climate Change Innovations and Solutions for Climate Change Adaptation (Bangkok), Asia and the Pacific Forum on Low-carbon Economy (Beijing), Regional Workshop on Low-carbon Green Growth in Asia (Bangkok), Green Industry in Asia: Managing the Transition to Resource-Efficient and Low Carbon Industries (Manila), Policy Dialogue on Energy Efficiency for Low-carbon Development in Cities (Beijing), Asia-Pacific Mayors' Forum on Sustainable Urban Infrastructure (Ulsan).

### **Acting as the convener of the United Nations Regional Coordination Mechanism**

As the regional convener of United Nations

organizations, ESCAP, in conjunction with OCHA and UNEP, has helped establish and operate the Thematic Working Group on Environment and Disaster Management. Within this framework, ESCAP has convened regular meetings of United Nations agencies to share information on activities and discuss areas for joint action. A brief analysis of the activity information was presented in the report "Striving Together: ASEAN and the UN" to help ASEAN members pursue further collaboration with United Nations agencies. During the Bangkok Climate Change Talks, held from 28 September to 9 October 2009, ESCAP organized a special event, the regional briefing on United Nations programmes on climate change in Asia and the Pacific, to share information on the key outcomes and messages of the work done by United Nations organizations on climate change with the delegates and observers at the Talks. On 9 October 2009, ESCAP also organized a high-level dialogue between United Nations organizations and the ASEAN Secretariat on disaster response and preparedness, at which the United Nations system and ASEAN decided to help ASEAN member countries develop a harmonized mechanism for prompt transnational disaster response.



President of the Maldives at cabinet meeting

## NEW MAJOR PROJECT ON CLIMATE CHANGE (FROM 2010)

<b>Project title</b>	Low-carbon Development in Asia and the Pacific
<b>Funding source</b>	The East Asia Climate Partnership of Republic of Korea: (tentative commitment: US\$ 3 million),
<b>Duration</b>	2010-2012
<b>Key components and outputs</b>	Low-carbon green growth roadmap for East Asia (2010-2011) Regional strategy for low-carbon development in Asia and the Pacific (2011-2012)
<b>Major goals and activities</b>	Support developing countries in Asia and the Pacific to simultaneously address development challenges and climate change by providing conceptual frameworks and policy options for low-carbon, green growth and helping to develop a national strategy for the framework

# ECE Region

ECE

Economic  
Commission  
for Europe

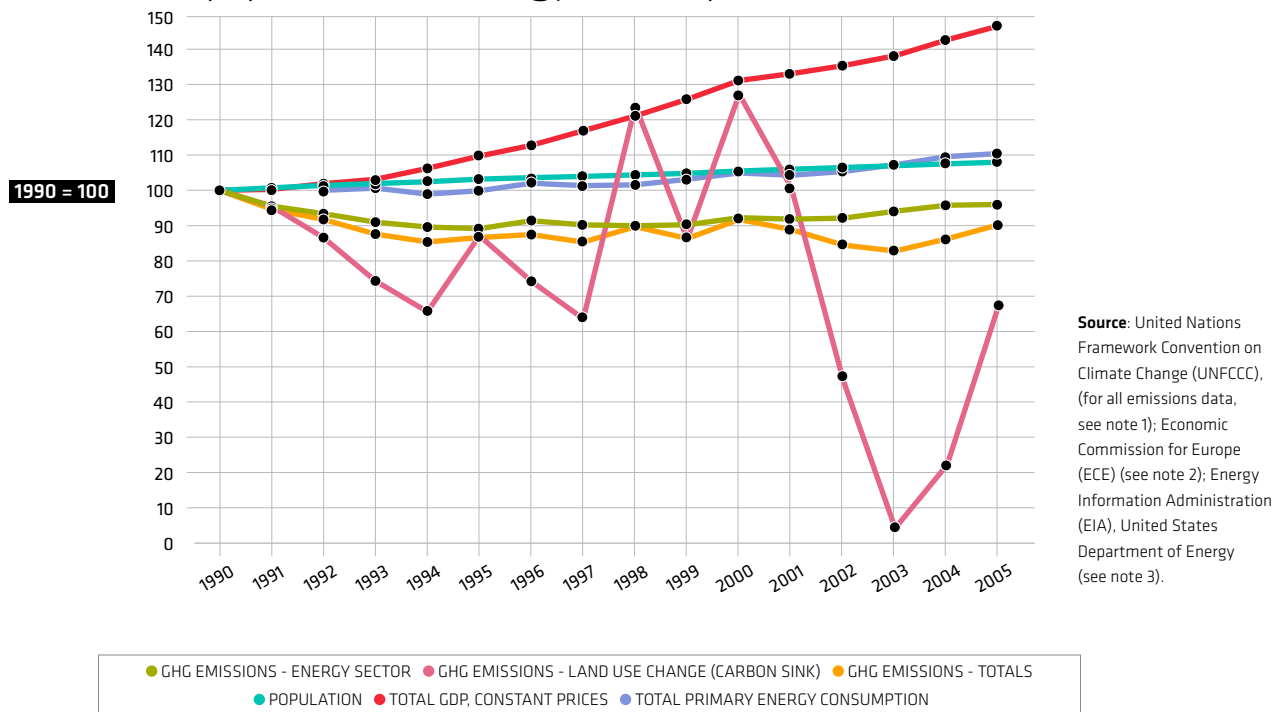
Duffey Lake and Cayoosh Creek with dead trees







## ECE Region: Trend of greenhouse gas (GHG) emissions by sector, GDP, population and energy consumption 1990-2005

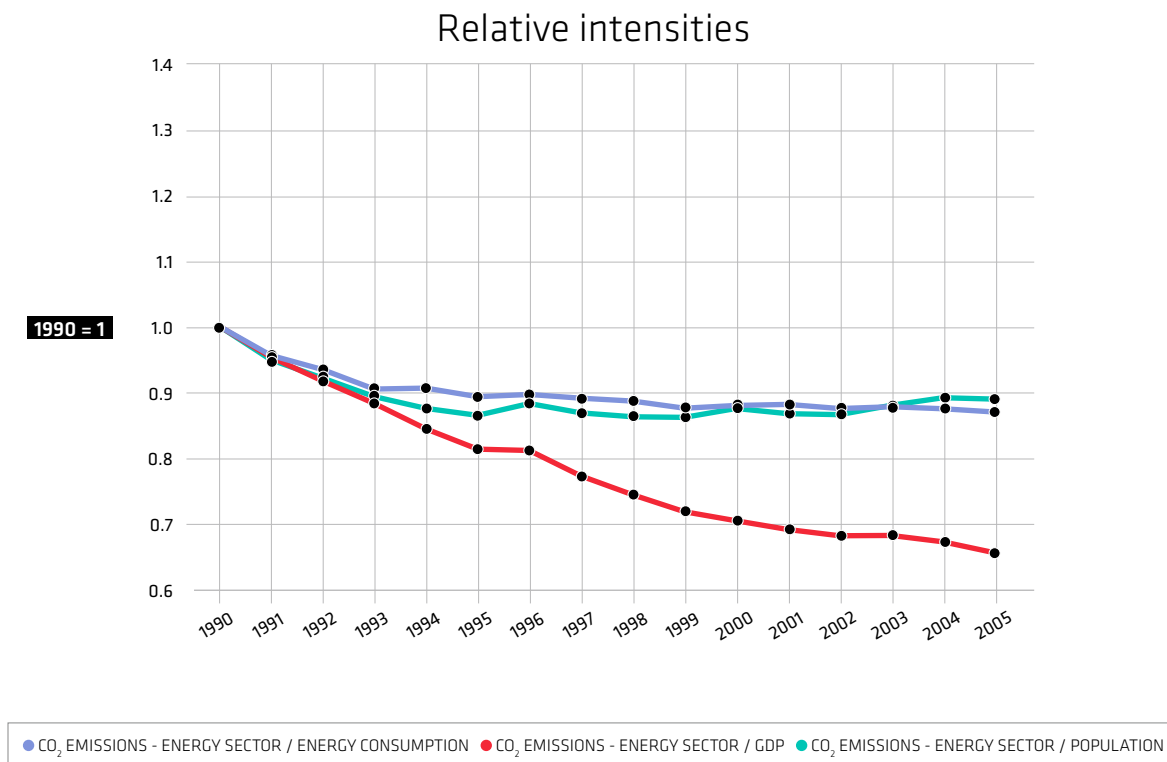


**Notes:** /1a/series greenhouse gas (GHG) emissions -energy sector- data include 50 member States from ECE region (all except Andorra, Bosnia and Herzegovina, Cyprus, Montenegro, Serbia, San Marino). Various countries do not have full coverage across the full time series: Albania (only data for 1990-1994), Armenia (1990 only), Azerbaijan (1990-1994 only), Georgia (1990-1997 only), Israel (1996, 2000, 2003-2005 only), Kazakhstan (1990, 1992, 2004-2005 only), Moldova (1990-1998 only), former Yugoslav Republic of Macedonia (1990-2002 only), Tajikistan (1990-2003 only), Turkmenistan (1994 only). /1b/ series GHG emissions land use, land-use change and forestry (LULUCF) data include 48 member

States from the UNECE region (all except Andorra, Bosnia and Herzegovina, Cyprus, Malta, Monaco, Montenegro, Serbia, San Marino). Various countries do not have full coverage across the full time series: Albania (only data for 1994), Armenia (1990 only), Azerbaijan (1990-1994 only), Georgia (1990-1997 only), Israel (1996, 2000, 2003-2005 only), Kazakhstan (1990, 1992, 2004-2005 only), Moldova (1990-1998 only), former Yugoslav Republic of Macedonia (1990-2002 only), Tajikistan (1990-2003 only), Turkmenistan (1994 only). /1c/series GHG emissions -totals- data include 50 member States from ECE region (all except Andorra, Bosnia and Herzegovina, Cyprus, Montenegro, Serbia, San Marino). Various countries

do not have full coverage across the full time series: Albania (only data for 1990-1994), Armenia (1990 only), Azerbaijan (1990-1994 only), Georgia (1990-1997 only), Israel (1996, 2000, 2003-2005 only), Kazakhstan (1990, 1992, 2004-2005 only), Moldova (1990-1998 only), Former Yugoslav Republic of Macedonia (1990-2002 only), Tajikistan (1990-2003 only), Turkmenistan (1994 only). /2a/series population - ECE Statistical Database (ECESDB), compiled from national and international (Commonwealth of Independent States (CIS), Statistical Office of the European Communities (EUROSTAT), International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD) official sources. Data

include 48 member States from UNECE region (all except Andorra, Bosnia and Herzegovina, Cyprus, Liechtenstein, Monaco, Montenegro, Serbia, San Marino). Armenia (data for 1995 - 2005 only). /2b/series total GDP - ECE Statistical Division Database. Data include 50 member States from ECE region (all except Andorra, Bosnia and Herzegovina, Cyprus, Montenegro, Serbia, San Marino). /3/series total primary energy - Energy Information Administration (EIA), United States Department of Energy, International Energy Annual 2006. Data include 50 member States from ECE region (all except Andorra, Liechtenstein, Monaco, Montenegro, Serbia, San Marino) from 1992 to 2005 (Index: 1992=100).



Following a decrease in the early 1990s, reflecting the slump in output that occurred at the outset of economic transition through much of the region, total emissions of greenhouse gases (GHG) have been rising since 1995, and were up by roughly 6% over the decade to 2005. In that year, total measured GHG emissions from the region, which make up the bulk of Annex I -countries under

the United Nations Framework Convention on Climate Change (UNFCCC), reached 14,736 million tons of CO<sub>2</sub>-equivalent. At the same time, population growth has been flat, while economic output has been growing steadily, accumulating a 34% expansion between 1995 and 2005. This suggests that economic growth and GHG emissions are largely decoupled at the regional level,

thanks mainly to the huge efforts undertaken by some countries in the region to significantly curb emissions. Land use, land-use change and forestry (LULUCF) are important sources of carbon removal in the ECE region and act as a natural carbon sink. The data show that LULUCF emissions in 2005 had a negative value of 1,783 million tons of CO<sub>2</sub>-equivalent taking the region as a whole.

### Member States

- Albania
- Andorra
- Armenia
- Austria
- Azerbaijan
- Belarus
- Belgium
- Bosnia and Herzegovina
- Bulgaria
- Canada
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Georgia
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Israel
- Italy
- Kazakhstan
- Kyrgyzstan
- Latvia
- Liechtenstein
- Lithuania
- Luxembourg
- Malta
- Monaco
- Montenegro
- Netherlands
- Norway
- Poland
- Portugal
- Republic of Moldova
- Romania
- Russian Federation
- San Marino
- Serbia
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- Tajikistan
- The former Yugoslav Republic of Macedonia
- Turkey
- Turkmenistan
- Ukraine
- United Kingdom
- United States of America
- Uzbekistan

**Note:** The Holy See, which is not a member of the United Nations, also participates in ECE activities in a consultative capacity. Provision is also made for participation by representatives of other Member States of United Nations inter-governmental and non-governmental organisations in activities of concern to them.

## ECONOMIC COMMISSION FOR EUROPE (ECE)

The Economic Commission for Europe (ECE) was created on 28 March 1947 by Economic and Social Council resolution 36 (IV). The Commission brings together 56 countries located in Europe, Central Asia and North America to collaborate on economic and sectoral issues.

The Commission has its headquarters at the Palais des Nations in Geneva, Switzerland. A small ECE office will be opened in Central Asia in the near future.







## MANDATE AND MISSION

ECE was established with the key aim of promoting pan-European economic integration.

The secretariat of the Commission:

- Provides analysis, policy advice and assistance to Governments;
- Acting in cooperation with other stakeholders, notably the business community, gives focus to United Nations global economic mandates; and
- Issues norms, standards and conventions to facilitate international cooperation both within and outside the region.

UNECE expertise covers sectors such as economic cooperation and integration, sustainable energy, environment, housing and land management, population, statistics, timber, trade and transport.





## ECE: CLIMATE-CHANGE-RELATED ACTIVITIES

- UNECE has ongoing climate change activities focusing on four major areas, **sustainable transport, energy, timber** and the **environment**
- In **transport**, much of our climate change work focuses on vehicle construction, specifically, global emission test cycles for vehicles (including CO<sub>2</sub>) and market fuel quality standards. These have improved, or are in the process of improving, the capacity to measure and limit emissions by vehicle of gaseous pollutants, including CO<sub>2</sub>, while ensuring that motor vehicles regularly use fuels with specific characteristics that suit their engine technology types.
- Within the framework of its **sustainable energy** programme, Energy Efficiency 21, ECE is implementing the Financing Energy Efficiency Investments for Climate Change Mitigation project, to promote an investment climate in which self-sustaining energy efficiency and renewable energy projects can be identified, developed, financed and implemented by local teams in municipalities, factories and energy utilities in various countries in the region. In December 2008, the Commission also set up its Global Energy Efficiency 21 Project (GEE21) at the United Nations Climate Change Conference in Poznan (COP-14), as part of a United Nations Energy side event, in order to transfer the experience gained in ECE energy efficiency projects to other regions of the world. It is working with other regional commissions to identify needs, obstacles and best practices for the formation of an energy efficiency market. The Ad Hoc Group of Experts on Coal Mine Methane (CMM) promotes the recovery and use of methane gas from coal mines to minimize greenhouse gas (GHG) emissions. The Ad Hoc Group of Experts on Cleaner Electricity Production from Coal and other Fossil Fuels is reviewing prospects for cleaner electricity production from fossil fuels and measures or incentives to promote investment in cleaner electricity production, especially carbon capture and storage technologies.
- As part of its **timber programme**, ECE collects data on wood energy through the Joint Wood Energy Enquiry (with the International Energy Agency (IEA) and the Statistical Office of the European Communities (EUROSTAT) and provides analysis in its Forest Products Annual Market Review (FPAMR). It also carries out major studies on forestry resources and carbon sequestration and on biomass and carbon stocks in forests, producing quantitative indicators for Sustainable Forest Management for the State of Europe's Forests report.
- With respect to the **environment**, ECE serves (along with other organizations) as secretariat for the Protocol on Water and Health under its Convention on the Protection and Use of Transboundary Watercourses and International Lakes (the **Water Convention**). This instrument provides for joint or coordinated surveillance and early-warning systems, contingency plans and response capacities, as well as mutual assistance to respond to outbreaks or incidents of water-related diseases, especially those arising from extreme weather events. Under this Convention, ECE has finalized its Guidance on water and adaptation to climate change. Based on integrated water resources management, the Guidance provides advice on how to assess impacts of climate change on water quantity and quality, how to perform risk assessment, in particular in relation to health, how to gauge vulnerability, and how to design and implement appropriate adaptation measures. The ECE Convention on Long-range Transboundary Air Pollution (CLRTAP) and its protocols aim to





cut emissions of air pollutants, especially those that either directly or indirectly influence global warming. Recent studies have revealed major synergies in tackling air-pollution control and climate-change mitigation and have highlighted the economic and environmental co-benefits to be obtained by addressing these issues in an integrated way. The ECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) is an international, legally binding instrument that establishes a strong framework for environmental information management. It is founded on Principle No. 10 of the Rio Declaration on Environment and Development. The Convention's first pillar on access to information establishes and guarantees this right to information. Information under the Convention encompasses factors that affect the environment, decision-making processes, and the state of human health and safety. It also makes it an active duty of Governments to collect and disseminate such information within a specific timeframe. The Convention's Protocol on Pollutant Release and Transfer Registers, which is about to enter into force, also provides for public access to a large volume of relevant

Lake bed dying due to drought

data on emissions of harmful or toxic pollutants, including the major greenhouse gases, by industry on a facility-by-facility basis. National registers created under the Protocol can help countries meet the objectives of the United Nations Framework Convention on Climate Change (UNFCCC). Lastly, our work on sustainable buildings is geared to maximizing energy efficiency in the region's housing, which will allow countries to share experience and good practice in reducing energy consumption in the residential sector, encompassing both the existing housing stock and new residential housing construction. In this context, the country-specific housing-sector profiles prepared by the UNECE describe existing legislative frameworks and incentives in the region, providing relevant analysis on energy efficiency in housing.

ECE has a number of instruments or capabilities at its disposal which will be relevant for its future work in helping to implement the climate-change regime following the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 15). First and foremost is the potential to build on the activities mentioned under Item II, including

the environmental legal instruments, and sustainable energy and transport programmes. The following areas also deserve mention:

■ **Monitoring and assessment**, specifically of CO<sub>2</sub> emissions in the transport sector. ECE is working to develop an information and analysis tool based on a uniform methodology for evaluating CO<sub>2</sub> emissions in that sector. ECE has a Working Group on Environmental Monitoring and Assessment under the “Environment for Europe” process, which helps countries in the region to build their environmental information and observation capacities and harmonize their approaches with those used by the European Environment Agency. The Working Group covers various areas, such as air, inland waters, and waste. It has already prepared a data inventory which identified gaps in country coverage, weaknesses in data-reporting and a number of problems in data accessibility. These findings can provide a basis for further work to help individual countries and relevant intergovernmental bodies responsible for data collection to improve the current situation. Lastly, the Commission's highly-regarded, peer-appraised Environmental Performance Reviews are an

important tool for assessing, analysing and raising awareness of climate-change issues in the countries of the region.

■ **Capacity-building**, Under its Transport, Health and Environment Pan-European Programme (THE PEP), ECE promotes sustainable urban transport, including alternative modes of transport in the region. This can help build capacity to achieve more sustainable transport patterns and mainstream environmental concerns in transport policy. In the area of sustainable development statistics, ECE is considering possible involvement in helping national statistical offices to gradually include statistics on emissions in the regular process of producing and disseminating official national statistics, following the recent recommendation by the United Nations Committee of Experts on Environmental-Economic Accounting. ECE also conducts a public-private partnership programme, which could help inform national climate-change adaptation strategies, particularly with regard to infrastructure. Lastly, its Strategy for Education for Sustainable Development provides a vehicle for continuing to shape knowledge and attitudes on climate change.

# Latin America and the Caribbean

ECLAC

Economic  
Commission  
for Latin  
America and  
the Caribbean

Aerial view of the Amazon

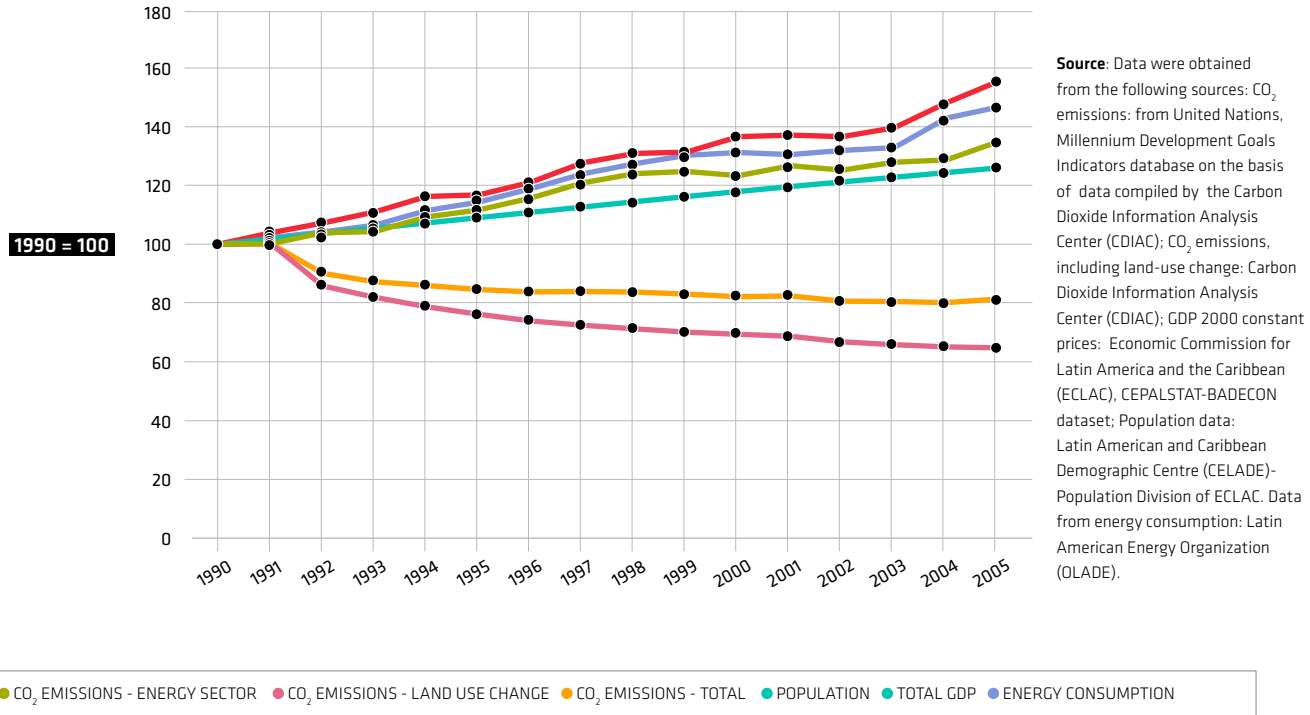








# Latin America and the Caribbean: CO<sub>2</sub> emission trends per sector, GDP, population and energy consumption 1990-2005

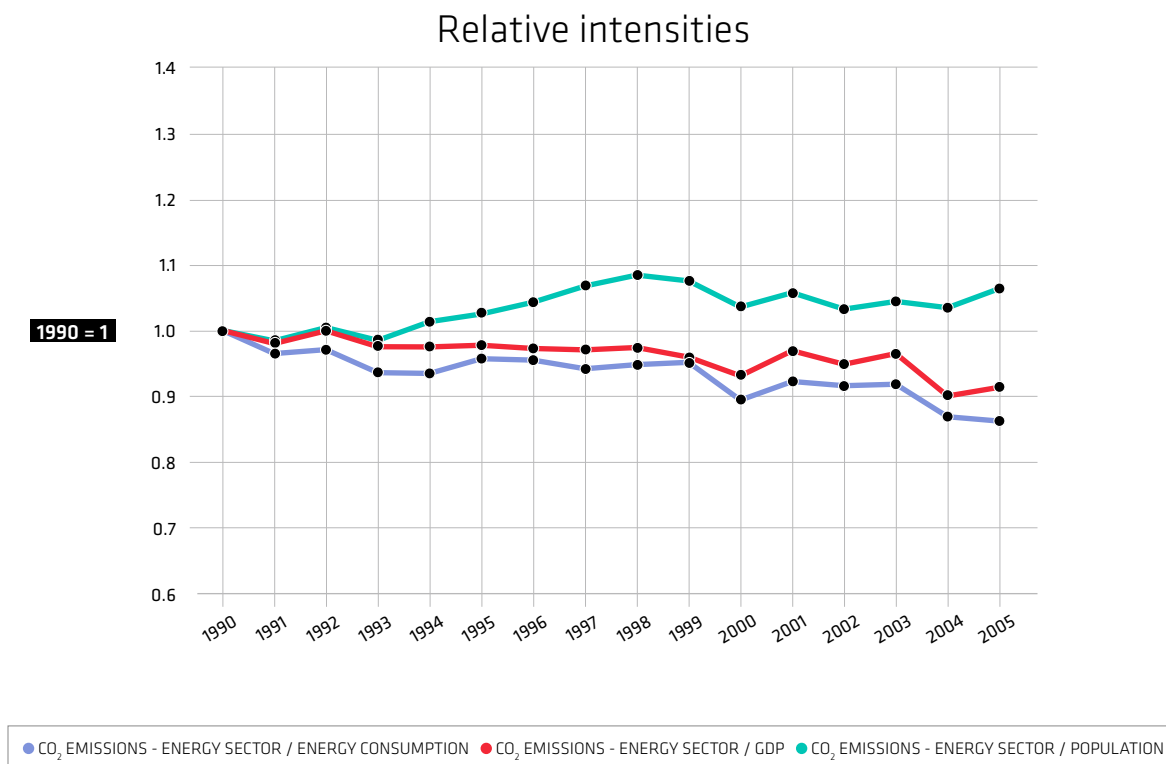


CO<sub>2</sub> emissions from the energy sector are growing at a faster rate than population, and this is leading to an increase in per capita emissions. Yet, energy consumption is increasing more rapidly than emissions, showing a positive trend, particularly in recent years, towards a cleaner energy matrix and improved energy productivity relative to wealth production. Land-use-change emissions are slowly but

steadily decreasing but are still significant in this region and have offset some of the CO<sub>2</sub> emissions of energy sector; the increase in other gases, such as methane from cattle, may be underestimated, however. Therefore, in terms of the net effect, total CO<sub>2</sub> emissions remained flat in the latter part of the period. There is room for further reductions in emissions from deforestation and other land-use

changes and the same is true for energy emissions, bearing in mind that transport growth is a heavy contributor to energy-consumption emissions.

Energy emissions are strongly coupled with growth in GDP and population, but in recent years the tendency is towards a slight decoupling of both of these indicators.



In terms of intensities, there has been a marked decrease in CO<sub>2</sub> emissions per unit of energy consumed, with a slight reversal since 2004 as well as per unit of GDP. This points to an increase in energy productivity or to the fact that less energy-intensive activities account for a higher share of GDP. Per capita CO<sub>2</sub>

emissions seem to have stabilized since 2000, with an increase since 2004, which may be a consequence of the increase in emissions per unit of GDP. In any case, growth in per capita CO<sub>2</sub> emissions has been flat since 1998. The region is moving in the right direction, albeit very slowly.



### Member States

- Antigua and Barbuda   ■ Panama
- Argentina   ■ Paraguay
- Bahamas   ■ Peru
- Barbados   ■ Portugal
- Belize   ■ Republic of Korea
- Bolivia   ■ Saint Kitts and Nevis
- *(Plurinational State of)* Saint Lucia
- Brazil   ■ Saint Vincent and the Grenadines
- Canada   ■ Spain
- Chile   ■ Suriname
- Colombia   ■ Trinidad and Tobago
- Costa Rica   ■ United Kingdom of Great Britain and Northern Ireland
- Cuba   ■ United States of America
- Dominica   ■ Uruguay
- Dominican Republic   ■ Venezuela
- Ecuador   ■ *(Bolivarian Republic of)*
- El Salvador
- France
- Germany
- Grenada
- Guatemala
- Guyana
- Haiti
- Honduras
- Italy
- Jamaica
- Japan
- Mexico
- Netherlands
- Nicaragua

### Associate members

- Anguilla
- Aruba
- British Virgin Islands
- Cayman Islands
- Montserrat
- Netherlands Antilles
- Puerto Rico
- Turks and Caicos Islands
- United States Virgin Islands

## ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN (ECLAC)

The Economic Commission for Latin America (ECLA) –the Spanish acronym is CEPAL– was established by Economic and Social Council resolution 106(VI) of 25 February 1948 and began to function that same year. The scope of the Commission's work was later broadened to include the countries of the Caribbean, and by resolution 1984/67 of 27 July 1984, the Economic Council decided to change its name to the Economic Commission for Latin America and the Caribbean (ECLAC); the Spanish acronym, CEPAL, remains unchanged.

ECLAC, which is headquartered in Santiago, Chile, was founded with the purpose of contributing to the economic development of Latin

America, coordinating actions directed towards this end, and reinforcing economic ties among countries and with other nations of the world. The promotion of the region's social development was later included among its primary objectives.

In June 1951, the Commission established the ECLAC subregional headquarters in Mexico City, which serves the needs of the Central American subregion, and in December 1966, the ECLAC subregional headquarters for the Caribbean was founded in Port-of-Spain, Trinidad and Tobago. In addition, ECLAC maintains country offices in Buenos Aires, Brasilia, Montevideo and Bogotá, as well as a liaison office in Washington, D.C.





## MANDATE AND MISSION

The secretariat of the Economic Commission for Latin America and the Caribbean (ECLAC):

- Provides substantive secretariat services and documentation for the Commission and its subsidiary bodies;
- Undertakes studies, research and other support activities within the terms of reference of the Commission;
- Promotes economic and social development through regional and subregional cooperation and integration;
- Gathers, organizes, interprets and disseminates information and data relating to the economic and social development of the region;
- Provides advisory services to Governments at their request and plans, organizes and executes programmes of technical cooperation;
- Formulates and promotes development cooperation activities and projects of regional and subregional scope commensurate with the needs and priorities of the region and acts as an executing agency for such projects;
- Organizes conferences and intergovernmental and expert group meetings and sponsors training workshops, symposia and seminars;
- Assists in bringing a regional perspective to global problems and forums and introduces global concerns at the regional and subregional levels;
- Coordinates ECLAC activities with those of the major departments and offices at United Nations Headquarters, specialized agencies and intergovernmental organizations with a view to avoiding duplication and ensuring complementarity in the exchange of information.



## ECLAC: CLIMATE-CHANGE-RELATED ACTIVITIES

The climate-change-related activities which ECLAC has been carrying out in the last few years may be grouped as follow:

### Assessing economic impacts in the region

- In 2009, ECLAC issued the document “Cambio climático y desarrollo en América latina y el Caribe: una reseña” (Spanish only), which compiles scientific information published in recent years and illustrates possible economic impacts of climate change on various economic sectors in Latin American and Caribbean countries. The document includes challenges to economic development, new constraints linked to adaptation, as well as those stemming from mitigation measures adopted by industrialized countries to combat climate change, such as carbon footprinting of imports from developing countries and carbon leakage through foreign direct investment flows into the region towards energy-intensive sectors.
- In partnership with the Department for International Development (DFID) of the United Kingdom, the Inter-American Development Bank (IDB), the Danish and Spanish Governments and the European Commission, ECLAC is

currently preparing the Regional economics of climate change (RECC) studies. These studies analyse climate-change impacts on sectors and mitigation potential based on costs and benefits. Subregional studies are under way in Central America, the Caribbean and eight national studies are being conducted in South America. These will be incorporated in a regional Latin American and Caribbean report.

- ECLAC is coordinating a multi-agency report under the Regional Coordination Mechanism of the United Nations on regional progress on Goal 7 of the Millennium Development Goals, which includes, among other indicators, CO<sub>2</sub> emission trends, deforestation, the potential impacts of climate change on progress towards fulfilment of other Goals and other constraints caused by climate change.
- In conjunction with the Global Trade Analysis Project (GTAP) and IDB, ECLAC hosted the twelfth Annual Conference on Global Economic Analysis in Santiago in June 2009. This Conference, which consisted of a plenary session and several parallel sessions on climate-change models, examined global innovations in modelling techniques.

### Capacity-building

#### GENERAL

- In March and September 2009, respectively, ECLAC held the first and second Latin American and Caribbean Dialogues on the Climate Change Talks in 2009: the Road to Copenhagen. At these Dialogues, negotiators and high officials from the region were able to exchange views on progress with talks in preparation for the fifteenth Conference of the Parties. Further dialogues will be organized at the request of countries.

#### ON MITIGATION

- Reducing emissions from deforestation and forest degradation (REDD) is crucial for Latin American and Caribbean countries. Land-use change accounts for approximately 60% of total emissions generated in the region. In cooperation with the Spanish Climate Change Office (OECC), InWent (Germany), and other Latin American and Caribbean institutions, such as the Andean Community, ECLAC has organized and co-financed workshops on technical, financial and institutional issues relating to REDD for forest experts in Latin American and Caribbean countries. Studies have





Deforestation, south of Chile

been carried out on the costs of forest conservation to appraise the value of the environmental service of carbon retention.

- Since 2007, ECLAC, together with ONF International (Office National des Forêts, France) and GTZ (German Agency for Technical Cooperation), has been organizing biannual meetings of forest experts to enable them to share views and experiences and prepare written submissions to the secretariat setting out their positions for the UNFCCC negotiation process on REDD-related issues.

#### ON ADAPTATION

- Under a cooperation agreement with the Ibero-American Network of Climate Change Offices (RIOCC), ECLAC and OECC have organized four courses in 2008-2009; two were delivered by the Brazilian Centre for Climate Prediction and Weather Forecasting (CPTEC) of the Brazilian Institute of Space Science (INPE) on climate modelling at the national level while the two others were devoted to climate-change adaptation projects.
- The Commission's 35 years of experience in economic valuation of disasters (damage to assets and loss of economic flows, such as income,



additional expenses, increased indebtedness, increased balance-of-payment and fiscal deficits) have been captured in a *Damage and Loss Assessment Methodology*. This is being tested to evaluate the costs of the expected impacts of climate change, as part of the regional study on the economics of climate change, to assess potential adaptation costs and resource gaps and to promote risk-reduction policy changes.

### Other activities

- During 2009, climate-change-related variables were examined for statistical consistency at the Forum of Ministers of the Environment of Latin America and the Caribbean (which generated the environmental indicators of the Latin American and Caribbean Initiative for Sustainable Development); at the Statistical Conference of the Americas Working Group on Environmental Statistics; at the regional Workshop of the Environmental-Economic Integrated Water Accounts in June (with the Sustainable Development Division of the United Nations Department of Economic and Social Affairs); in September, at the Regional course on methodologies for calculation of ILAC/MDG7 environmental indicators; and, in December, at the Regional Workshop on Water Resources Estimation Methods (orga-

nized by the Food and Agriculture Organization of the United Nations (FAO).

- In several issues of its annual report on trade (*Latin America and the Caribbean in the World Economy*), ECLAC has addressed the impact of climate-related commitments on international trade and on the trade negotiations of the Doha Round, reviewed initiatives of a potentially protectionist nature, adopted primarily by industrialized countries; and studied their effects on the competitiveness of regional exports and on access to the markets of industrialized countries. This has been complemented by dialogues on the potential consequences of mitigation measures on agriculture markets (Carbon Footprinting in Agricultural Trade, 26-27 June 2007 with the French Embassy in Chile, "Agriculture: another victim of climate change?", 2007, and "The carbon footprint of agri-food goods and services", 18-19 June 2009).
- ECLAC has been promoting awareness of the link between water and climate change and the regulatory frameworks and on energy efficiency through publications ("Situation and perspectives on energy efficiency in Latin America and the Caribbean") and meetings (Regional Intergovernmental Meeting on Energy Efficiency,

the Solar International Seminar 2009, with the participation of Dr. Carlo Rubbia, Nobel laureate for physics and Special Adviser to the Executive Secretary of ECLAC on energy and climate change matters; Access to Energy and Poverty Reduction: achieving the Millennium Development Goals, First Geothermic Conference on the Caribbean), for which background documents were provided.

Initial efforts have been made to address the link between infrastructure and lower carbon economies through improved construction and operation. The related activities are:

- Adoption of a strategy for the development of the Rosario Port Area (sustainable ports);
- Development of urban mobility policies and infrastructure transport services;
- Studies on international and regional trends in logistics and land transport (energy efficiency, carbon footprint);
- International seminar: Infrastructure 2020 (sustainable transport);
- Seminar and workshop on strategic multimodal infrastructure planning (co-modal and sustainable transport).
- Promotion of an eco-efficient urban infrastructure project (ECLAC-ESCAP).

# West Asia ESCWA

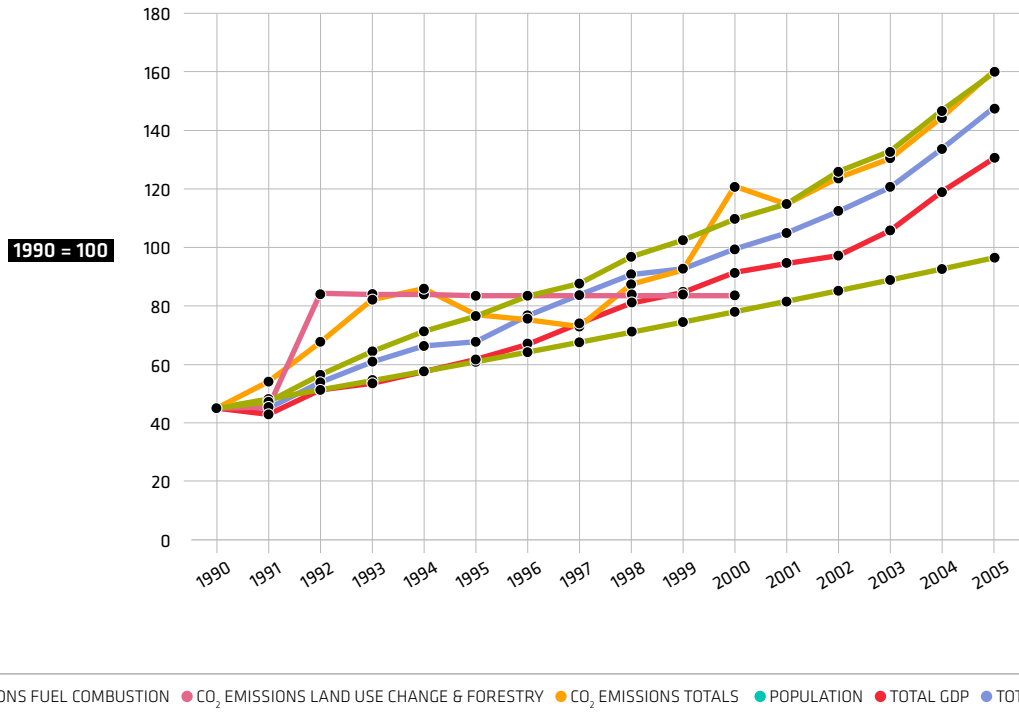
United Nations  
Economic and  
Social Commission  
for Western Asia

Tree in the desert of wadi rum, Jordan





## Western Asia: Trend of CO<sub>2</sub> emissions per sector, GDP, population and energy consumption 1990-2005



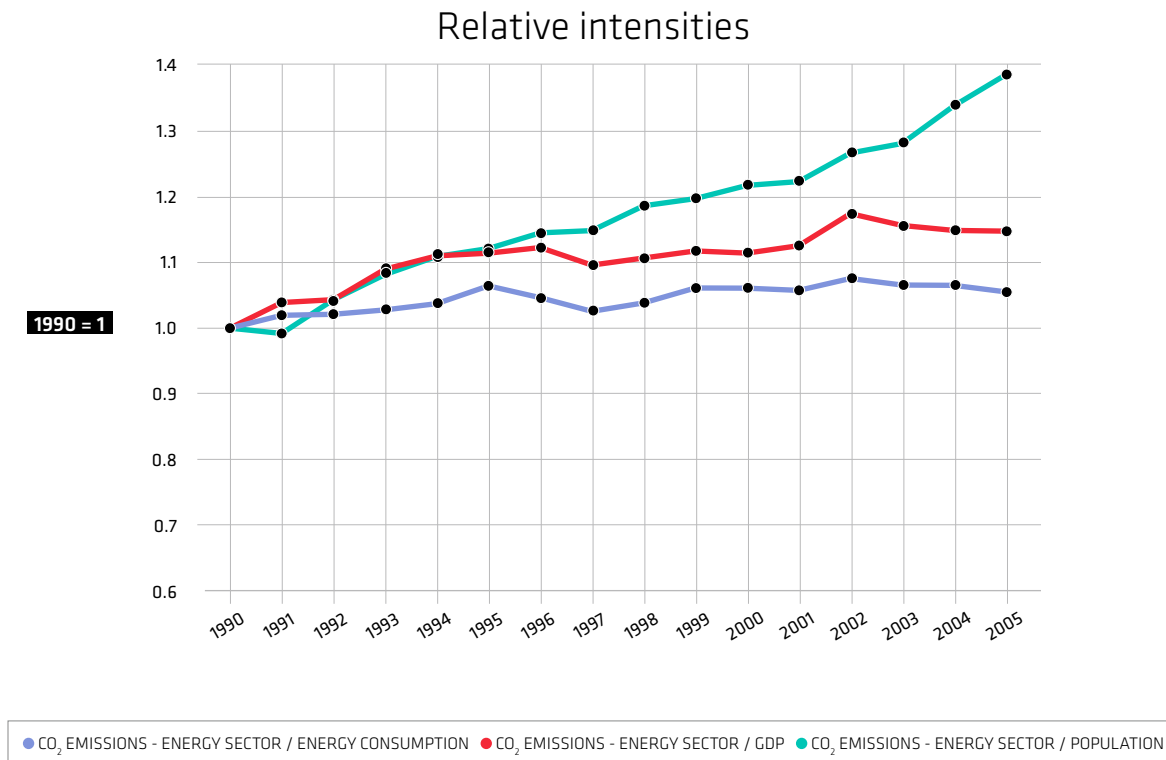
**Source:** Prepared on the basis of United Nations, "Millennium Development Goals indicators" [online database] <http://mdgs.un.org/unsd/mdg/Search.aspx?q=emissions>, 2009 and Carbon Dioxide Information Analysis Center (CDIAC), CO<sub>2</sub> total emissions; World Resources Institute (WRI), Climate Analysis Indicators Tools (CAIT), version 6.0, CO<sub>2</sub> emissions from land use change; International Energy Agency (IEA), CO<sub>2</sub> Emissions from Fuel Combustion. Highlights 2009, 2009; United Nations Population Division, World Population Prospects: The 2008 Revision [online database] <http://esa.un.org/unpp/>; International Energy Agency (IEA), gross domestic product (GDP) at 2000 constant prices; Energy Information Administration (EIA), United States Department of Energy, International Energy Annual 2006.

CO<sub>2</sub> emissions in Western Asia go hand in hand with GDP growth. Although per capita energy consumption and carbon emissions have risen steadily in the region over the last two decades, some rural areas within the region still do not have access to electricity. As GDP grows and new areas gain access, energy

consumption and emissions are bound to increase. Moreover, most countries are located in arid and semi-arid zones where the summer climate is extremely hot and humid, which, compounded with economic growth, leads to extensive use of indoor air conditioning. In addition, the lack of rainfall and scarcity of water

resources dictate the need for high desalination capacity, especially in the Gulf Cooperation Council (GCC) countries. This has led to a rise in energy consumption and a corresponding increase in carbon emissions per capita compared with 1990.





In terms of intensity, and starting from low per capita emissions in 1990, growth in per capita emissions increased in the past two decades owing to two main factors: (i) electricity is now being extended to areas where it was previously unavailable; and (ii) with the increase in GDP and the hot and humid climate, especially

in the summer, the use of indoor air conditioning has escalated. As a result, Western Asia is recording higher ratios for emissions to GDP, emissions per capita and emissions per unit of energy consumed. Growth in the emissions to GDP ratio has outpaced growth in the emissions to energy ratio.

# ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA (ESCWA)

## Member States

- Bahrain
- Egypt
- Iraq
- Jordan
- Kuwait
- Lebanon
- Oman
- Palestine
- Qatar
- Saudi Arabia
- the Sudan
- the Syrian Arab Republic
- the United Arab Emirates
- Yemen

Pursuant to United Nations Economic and Social Council resolution 1818 (LV), the Economic Commission for Western Asia (ECWA) was established on 9 August 1973 as the successor to the United Nations Economic and Social Office in Beirut (UNESOB). On 26 July 1985, in recognition of the social component of its work, the Commission was re-designated the United Nations Economic and Social Commission for Western Asia (ESCWA). The headquarters of the Commission are located in Beirut.

ESCWA provides a framework for the formulation and harmonization of sectoral policies for member countries, a platform for congress and coordination, a home for expertise and knowledge, and an information observatory. ESCWA activities are coordinated with the divisions and main offices of the United Nations Headquarters, specialized agencies, and international and regional organizations, including the League of Arab States, the Organization of the Islamic Conference, and the Gulf Cooperation Council.

## ESCWA Commission and other intergovernmental bodies

The ministerial session of ESCWA is the governing body of the Commission and mandates its policy. It is held every two years. In addition, ESCWA has seven specialized subsidiary intergovernmental committees that meet biennially, with the exception of the Committee on Transport, which meets annually. Those committees are:

- The Statistical Committee (established in 1992);
- The Committee on Social Development (established in 1994);
- The Committee on Energy (established in 1995);
- The Committee on Water Resources (established in 1995);
- The Committee on Transport (established in 1997);
- The Technical Committee on Liberalization of Foreign Trade and Economic Globalization in the Countries of the ESCWA Region (established in 1997);
- The Committee on Women (established in 2003).



## MANDATE AND MISSION

The objectives of ESCWA are:

- To support economic and social development in the countries of the region;
- To promote cooperation between the countries of the region;
- To encourage interaction between member countries and promote the exchange of experiences, best practices and lessons learned;
- To achieve regional integration among member countries;
- To ensure interaction between Western Asia and other regions of the world, familiarizing the outside world with the circumstances and needs of the countries in the region.





## ESCWA: CLIMATE-CHANGE-RELATED ACTIVITIES

### ADAPTATION

ESCWA has helped galvanize political will among the Arab countries in addressing the challenges posed by climate change. In this regard, the ESCWA Ministerial Session adopted Resolution 281 (XXV) Addressing climate change issues in the Arab Region. The Commission also contributed to development of the Arab Framework Action Plan on Climate Change (AFAPPC) in partnership with the League of Arab States (LAS) and the United Nations Environment Programme/Regional Office for West Asia (UNEP/ROWA). As the Secretariat of the Regional Coordination Mechanism (RCM), ESCWA is leading the Thematic Working Group on Climate Change (TWG-CC) for the Arab region, to ensure coordination between different United Nations agencies working in the region.

#### Regional coordination

ESCWA coordinates its work on climate change with LAS and UNEP/ROWA through the Arab Climate Change Framework Strategy. It focuses on adaptation issues (particularly with regard to water resources management), capacity-building and technology transfer.

As RCM Secretariat, ESCWA established a thematic working group on Climate Change for the Arab region to ensure coordination between different United Nations agencies on:

- Vulnerability assessment on water resources of the region (lead: UNDP)
- Regional training programme on methodologies for vulnerability assessment (lead: UNEP/ROWA)
- Regional circulation/climate modelling (lead: United Nations Educational, Scientific and Cultural Organization – UNESCO)

#### Climate change impacts on water resources

In collaboration with UNEP/ROWA, UNDP and other organizations, ESCWA organized the Expert Group Meeting: Towards Assessing the Vulnerability of Water Resources to Climate Change in the Arab Region (Beirut, 26-28 October 2009). The purpose of this meeting was to:

- Gather and exchange lessons learned on the assessment of vulnerability of water resources to climate change from other regions.

- Build a consensus on the methodological approach and associated parameters for the vulnerability assessment.
- Review existing models and methodologies and investigate knowledge gaps and data availability.
- Develop a work plan which will include the tasks to be carried out by all involved agencies, time line and targets.
- Prepare a broad outline of the vulnerability assessment report.

The outputs of this meeting were:

- A roadmap for assessing water vulnerabilities including the selection of the model and methodological approach for vulnerability assessment.
- An inventory of resources available in the Arab regions to support studies of impacts of climate change on water resources (e.g. institutions, information and research studies).
- A network of regional and national experts on climate change to support collaborative research on the subject.

### **South-South cooperation on climate change**

The Arab Integrated Water Resources Management Network (AWARENET) is a network of water stakeholders in the Arab region, the secretariat of which is hosted by ESCWA. The Climate Change Working Group was set up on 29-30 July 2009. The Working Group developed a work plan for their first year of operation, which includes the following:

- A review of the literature and identification of gaps in the vulnerability of water resources to climate change in the Arab region.
- A roster of Arab experts on climate change and water resources.
- An analysis of the outcome of the Climate Change Conference in Copenhagen and its effects on water in the Arab region.

## **MITIGATION**

### **Transport**

In preparation for the eighteenth session of the Commission on Sustainable Development (CSD-18), ESCWA, in collaboration with

the League of Arab States (LAS) and UNEP/ROWA, organized an expert group meeting from 29 September to 1 October 2009 to discuss progress achieved and policy measures on transport for sustainable development in the Arab region, in particular with respect to advanced emission control technologies/fuel specifications and cleaner fuels, legislation and legal frameworks. A report was issued by ESCWA on transport for sustainable development in the Arab region and relevant climate change issues.

### **Renewable energy for climate-change mitigation**

ESCWA is preparing a report on the potential for wind farms and solar thermal power plants in the Arab countries. It is looking into the possibility of financing such projects through the clean development mechanism (CDM), GEF or other available mechanisms. In collaboration with local government organizations and non-governmental organizations in Lebanon, ESCWA is organizing a training workshop for the local manufacture of solar water heating

■ systems with a view to obtaining equipment at lower cost. With regard to extending renewable energy services for reducing emissions, ESCWA embarked on the Ka'awa Village Photovoltaic Electrification Project for a typical Yemeni rural village. This project reduces dependence on non-commercial fuel and its associated greenhouse gas emissions and, at the same time, provides job opportunities for poverty reduction.

### **Electricity and national gas networks**

ESCWA is supporting ongoing projects in the region by:

- Publishing the "Annual Review of Globalization".
- Contributing to the development of terms of reference for the Pan-Arab Electricity Grid Connection Project.
- Organizing an expert group meeting for 22-23 December 2009 on the role of energy networks in regional integration, the importance of electrical interconnection and natural gas networks for lower CO<sub>2</sub> emissions

## Energy efficiency

ESCWA has published a series of studies of economic sectors, including industry, tourism, housing, the electric power sector and the upstream energy sectors. Each study identified energy efficiency and energy conservation opportunities in the sector, along with policies for promoting the relevant applications. Specific case studies from selected countries in the region were also investigated.

Based on the outcomes of the assessment studies, a number of regional capacity-building programmes have been launched and have facilitated mutual exchange of expertise among ESCWA member countries.

## Technical support to member countries

ESCWA is advising member countries on ways and means to enhance the sustainability of their energy sectors and climate-change mitigation. This includes support for the development of strategies on renewable energy, clean fuels and energy efficiency as well as energy audits in different sectors. For example:

- The agreement signed in February 2006 with the Qatari General Electricity and Water Corporation (KAHRAMAA), which included:
  - Performing a study and field surveys on the potential and prospects for improving energy efficiency in the sector and a national plan to implement the findings.
  - Organizing a joint workshop with KAHRAMAA on measures and technologies for improving sectoral energy efficiency in the Qatari electricity sector, in Doha on 15-16 April 2008. During the workshop, the results of the ESCWA study on “Preliminary situation analysis, potential and prospects for improving energy efficiency in the Qatari electricity sector” were discussed with KAHRAMAA and end-user representatives. The Qatari authorities confirmed that the recommendations and outcomes of the study would be taken into consideration for future implementation.
- In Yemen: ESCWA provided support to Yemen through a seminar on “Establishment of National Cleaner Fuels Strategies” for promoting the use of cleaner fuels (production and utilization). The seminar was held in Sana’a, Yemen, in October 2008.

# The Regional Commissions and Climate Change





## A THEMATIC OVERVIEW

### ▪ National planning related to climate change

In view of the vulnerability of Africa to climate change, its political leaders have expressed their commitment to tackling this challenge. The African Union, in January 2007, urged African States and regional economic communities (RECs), to integrate climate change considerations into development plans, strategies and programmes at national and regional levels. They also requested the African Union Commission (AUC) to work with the **Economic Commission for Africa (ECA)** and the African Development Bank (AfDB) to develop and implement a major plan on climate change and development in Africa. In response, these pan-African institutions, in collaboration with the

Secretariat of the Global Climate Observing System (GCOS), developed the *Climate for Development-Africa (ClimDev-Africa) Programme* (see [online] [www.uneca.org/eca\\_programmes/sdd/events/climate/climdev.pdf](http://www.uneca.org/eca_programmes/sdd/events/climate/climdev.pdf)).

The overall goal of ClimDev-Africa is to promote the sustainable attainment of the Millennium Development Goals and overall sustainable development in Africa. The programme sets out to scale up the capacities of key institutions and stakeholders with a view to improving climate-related data and observation, information services, policies, investment processes and risk management

practices in climate-sensitive sectors such as agriculture, water and other natural resources, energy and health. ClimDev-Africa will be implemented at the regional, subregional and national levels with the active involvement of the RECs, regional and subregional climate institutions, river/lake basin organizations, national weather, climate and water services and other public authorities, research institutions, civil society organizations and the media. Programme implementation rests on the **ECA**-based African Climate Policy Centre (ACPC) as its policy arm and the AfDB-based Special Climate Change Fund as its financial arm.

### ▪ Assessing the costs of climate change

In Asia and the Pacific, the **Economic and Social Commission for Asia and the Pacific (ESCAP)** supported the Asian Development Bank on a regional review of the economics of climate change in South-East Asia and is currently considering applying the assessment to North-East Asia. The review is based on the Stern Review's methodology.

The review shows that the temperature rise in South-East Asia could be higher than the Intergovernmental Panel on Climate Change (IPCC) projection and the economic costs of climate change could be higher than predicted globally. In Latin America and the Caribbean, the **Economic Commission for Latin America and the Caribbean**

(**ECLAC**) participated in the Mexican study on the economics of climate change and is currently preparing studies on climate change and the economy in eight South American nations (Argentina, the Plurinational State of Bolivia, Colombia, Chile, Ecuador, Paraguay, Peru and Uruguay) and for Central America and the Caribbean, with a view to producing comparable

results and a regional review. These studies will examine the costs of climate change by sector (water, agriculture, health, infrastructure, etc.), adaptation, trends in greenhouse gas (GHG) emissions and the potential to mitigate their effects. These studies will be the basis for future in-depth subregional and country analyses directed by **ECLAC**, along with the Governments and technical teams of the countries involved, the Governments of the United Kingdom, Germany, Spain and Denmark, the European Union and the Inter-American Development Bank. **ECLAC**

has also developed a well-recognized and widely used *Handbook for Estimating the Socio-Economic and Environmental Effects of Disasters*. This handbook describes the methods required to assess the social, economic and environmental effects of disasters, breaking them down into direct damages and indirect losses and into overall and macroeconomic effects. This knowledge will be transformed into a risk management and adaptation tool (see [online] <http://www.gdrc.org/uem/disasters/disenvi/eclac-handbook.html>).

**ECLAC** has also initiated work to assess the economic co-benefits of low carbon investment options, such as employment per dollar of investment, vis-à-vis mainstream options, in order to support better-informed public-policy-investment decisions for development and, in partnership with **ESCAP**, is currently exploring the opportunities in Asian and Latin American cities to provide incentives for the development of eco-efficient urban infrastructure (see [online] <http://www.unescap.org/esd/environment/infra/daproject.asp>).

## ■ Supporting mitigation efforts

The **Economic Commission for Europe (ECE)** is pursuing a sustainable energy programme called *Energy Efficiency 21*. Within this programme, it manages the *Financing Energy Efficiency Investments for Climate Change Mitigation* project, with a budget of approximately US\$7.5 million, financed by the United Nations Foundation, United Nations Environment Programme/Global Environment Facility (UNEP/GEF), the French Global Environment Facility (FGEF) and the European Business Congress e.V. The project aims to help eastern European countries to enhance their energy efficiency

and gain access to renewable sources of energy. It supports the creation of a dedicated investment fund for new and existing projects that can provide up to US\$250 million of mezzanine and/or equity financing to project sponsors. The fund, which will benefit from both public and private resources, will target projects in 12 countries of Central Asia and eastern and south-eastern Europe. Outreach to other regional commissions in the context of energy efficiency for climate change mitigation is being organized by **ECE** as part of the *Global Energy Efficiency 21 project*. Launched in December

2008 in Poznan, Poland, this project is developing a systematic exchange of information and expertise between the regions on capacity-building, policy reform and investment project financing. A joint publication by the five regional commissions and UN-Energy entitled “Financing Global Climate Change Mitigation” has been prepared for the fifteenth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP-15). It provides a summary of the climate-change-mitigation activities based on efficient energy use which are supported by each

of the United Nations regional commissions and describes sources of financing for energy efficiency investments in each region (see [online] [http://www.unece.org/press/pr2008/08sed\\_p07e.htm](http://www.unece.org/press/pr2008/08sed_p07e.htm)).

The Secretariat of the African Ministerial Conference on the Environment (AMCEN) commissioned the **Economic Commission for Africa (ECA)** and the OECD-Africa Partnership Forum to prepare a technical policy brief on financing climate change in Africa for negotiators and policymakers. This technical paper served as a background document for the high-level expert meeting at the third special session of AMCEN, and also informed the deliberations of the Third African Ministerial Conference on Financing for Development, held in Kigali, Rwanda, from 21 to 22 May 2009, under the theme of “climate change”. The outcomes of the AMCEN Special Session and the Financing for Development Conference were endorsed by the thirteenth Ordinary Summit of the African Union in July 2009 (see [online] <http://www.uneca.org/f4d/home1.htm>).

To combine economic growth with environmental sustainability, the countries of Asia and the Pacific adopted the *Green Growth* approach during the Fifth Ministerial Conference on Environment and Development (MCED) (Seoul, March 2005).

The *Green Growth* approach seeks to lower energy, resource and carbon intensities in production and consumption in order to improve ecological efficiency and directly supports the efforts of countries to align their development with action on climate change and, in turn, contribute to mitigating GHG emissions without neglecting their development needs. The measures and tools are based on sound normative, analytical and research work: sustainable consumption and production (demand-side management); greening business and markets; sustainable infrastructure; green tax and budget reform; eco-efficiency indicators (see [online] <http://www.greengrowth.org/index.asp>).

Cambodia, Viet Nam and Bhutan were among the first countries to benefit from the approach and training, which were supported by the Korean International Cooperation Agency (KOICA) (see [online] <http://www.greengrowth.org/mandate.asp> and [http://www.greengrowth.org/capacity\\_building/kanchanaburi.asp](http://www.greengrowth.org/capacity_building/kanchanaburi.asp)).

In the Western Asia region, the **Economic and Social Commission for Western Asia (ESCWA)** has completed several assessments on energy efficiency potential and options in energy-consuming sectors, including the oil and natural gas technolo-

gies industry, tourism, electricity and housing<sup>1</sup>.

In April 2008, **ESCWA** completed a project for the Qatari General Electricity and Water Corporation (KAHRAMAA) designed to upgrade the efficiency of its electrical energy consumption, in particular in the industrial and building sectors, as well as to reduce the peak electricity load. According to the project results, the Qatari peak summer load can be cut back by 22% and savings of 19% in total fuel consumption can be achieved, together with an annual emissions reduction of 1.3 million tons of CO<sub>2</sub>. The Qatari authorities have confirmed that the recommendations and outcomes of the study will be taken into consideration for future implementation (see [online] <http://www.escwa.un.org/divisions/newsdetails.asp?id=162&division=SDPD>).

**ESCWA** is currently preparing a report on the promotion, in the Arab region, of large-scale renewable energy applications, such as wind farms and solar thermal power plants, for climate-change mitigation using .

**ESCWA** is also implementing a project entitled “Promoting renewable energy applications in rural areas”, with the objective of increasing access to clean energy, supporting small and medium-sized

1 See “Energy conservation and efficiency in the upstream energy sectors in selected ESCWA member countries”, 1997.

enterprises and empowering women. The project includes the implementation of a Solar Village electrification project in Ka'awa village in Yemen. This project has targeted the design, procurement, installation, testing and evaluation of a pilot photovoltaic rural electrification project for a typical Yemeni rural village with potential replications in other villages. This project was due to start operating in November 2009 and will reduce dependence on fuel while cutting associated greenhouse gas emissions and providing job opportunities for poverty alleviation (see [online] <http://www.escwa.un.org/divisions/otherdetails.asp?id=84> and <http://www.escwa.un.org/divisions/otherdetails.asp?id=141>).

Regional organizations including the Asian Development Bank, the Clean Air Initiative and **ESCAP**, are currently working on a “Transport and Climate Change” initiative to share information and coordinate activities among key players in the region. The initiative aims to develop a coordinated action plan for strengthening the integration of transport sector policies and climate change.

In May 2008, climate-change mitigation and adaptation activities conducted by **ECE** in the transport sector focused on different means of CO<sub>2</sub> abatement, including: (a) innovative engine technologies to increase fuel efficiency; (b) the use of sustainable biofuels; (c) improved transport infrastructure; (d) the dissemination of consumer information on eco-driving; (e) the implementation

of legal instruments. The Transport Health and Environment Pan-European Programme, a joint project of **ECE** and the World Health Organization (WHO), was initiated to help achieve more sustainable transport patterns and a better reflection of environmental health concerns in transport policy (see [online] <http://www.thepep.org/en/publications/THEPEPassessment.en.pdf>).

**ESCWA** prepared a report entitled “Transport for Sustainable Development in the Arab Region: Measures, Progress Achieved, Challenges and Policy Framework”. The report covered the characteristics of the Arab transport sector, advanced transport technologies, fuel specifications and cleaner fuels, legislative and legal frameworks and policies and priority actions required for reducing emissions.

## ■ Supporting adaptation efforts

The regions most affected by natural hazards and weather-related disasters are Asia-Pacific and Latin America and the Caribbean. As a result, there has been extensive work by the United Nations regional commissions to increase the resilience of countries in those regions to the impacts of natural hazards.

The use of space-based information and services to help reduce the risk of disasters in the Asia-Pacific region is being promoted through the collaboration agreement between the Japan Aerospace Exploration Agency (JAXA) and ESCAP. Representatives of the two organizations have signed a memorandum of understanding for managing

climate variability and change, and the effort will bring about a “unified climate-risk management effort” within Governments, United Nations agencies and the donor community (see [online] [http://www.unescap.org/pmd/documents/mou/MoU\\_JAXA\\_12Dec08.pdf](http://www.unescap.org/pmd/documents/mou/MoU_JAXA_12Dec08.pdf) and <http://www.unescap.org/publications/detail.asp?id=1241>).



The **ESCAP** Multi-Donor Trust Fund for Tsunami, Disaster and Climate Preparedness was established in 2005 to strengthen the early-warning system capacities of the Indian Ocean and South-East Asian countries. Fund-supported initiatives have assisted the development of monitoring and early-warning services that provide effective support to lower-capacity countries, the establishment of standard operating procedures and the distribution of education and awareness materials that are used in regular national programmes. A Strategic Plan for the Fund was launched in 2009 along with a report on regional unmet needs (see [online] [http://www.unescap.org/pmd/tsunami\\_index.asp](http://www.unescap.org/pmd/tsunami_index.asp)).

Under the Regional Coordination Mechanism (RCM) led by **ESCWA**, an inter-agency *Thematic Working Group on Climate Change* was established under the leadership of the UNEP Regional Office for West Asia (ROWA) to coordinate work on climate change among regional United Nations organizations and the League of Arab States (LAS). Among its activities, the Thematic Working Group is preparing a *Methodology for Assessing the Vulnerability of Water Resources to Climate Change in the Arab Region*. **ESCWA** organized and hosted

the launch of this collaborative work with member States in October 2009 in Beirut. The participants included representatives of LAS, the World Meteorological Organization (WMO), the World Bank, ROWA, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), the Arab Centre for the Studies of Arid Zones and Dry Lands (ACSAD), the Islamic Educational, Scientific and Cultural Organization (ISESCO) and other regional organizations (see [online] <http://www.awarenet.org/Content.aspx?Page=96&ContentID=174> and <http://www.escwa.un.org/divisions/teamsasp?teams=Water%20Resources&division=SDPD>).

The *Climate Change Thematic Working Group* also adopted a work plan that included a review of the literature and identification of gaps in the information available on the vulnerability of water resources to climate change in the Arab region; a roster of Arab experts on climate change and water resources; an analysis of the outcomes of COP-15 and a preliminary analysis of the effects of climate change on water resources in the Arab region.

On this topic, reference may also be made to the ECLAC studies on the economic consequences of climate change, including those for water

resources (see [online] <http://www.eclac.cl/DRNI/proyectos/samtac/progasoc.asp>).

An **ESCAP** study entitled “Sustainable Agriculture and Food Security in Asia and the Pacific”<sup>2</sup> examines the environmental, economic and social challenges at the root of the region’s food insecurity and suggests a regional framework of action to be taken by Governments and the international community in order to improve food security. Over the long term, adapting and mitigating impacts from climate change will have to be a top priority for all countries in the region and the study contains practical recommendations for addressing this priority in terms of food security (see [online] [http://www.unescap.org/65/theme\\_study2009.asp](http://www.unescap.org/65/theme_study2009.asp)).

In the Latin American and Caribbean region, a collaboration agreement was signed between the Global Mechanism of the United Nations Convention to Combat Desertification (UNCCD) and **ECLAC** to analyse the economic consequences of land degradation in synergy with the rest of the studies of the impacts of climate change<sup>3</sup>, based on the Stern Review Methodology (see [online] <http://www.unccd.int/cop/officialdocs/cric5/pdf/3add2eng.pdf>).

2 See [online] <http://www.unescap.org/65/documents/Theme-Study/st-escap-2535.pdf>.

3 See also the ECLAC studies on the economic consequences of climate change.

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