

Chapter 5

Climate Change: Helping Poor Countries to Adapt

While the developed world is working out the best mitigation strategies for reducing greenhouse gas emissions, the developing world needs help to adapt to the impacts of an already changing climate. “Development as usual” will not be adequate to climate-proof vulnerable populations and countries. Adaptation needs to be built into planning at all levels, from projects to national and sectoral strategies. This chapter outlines the DAC members’ role in this process and the challenges ahead.

Development co-operation in the context of a changing climate

The changes occurring to our climate can seem remote compared with such immediate problems as poverty, disease and economic stagnation. Yet without addressing climate change, progress towards resolving these other core development priorities will be seriously undermined.

Climate change will increasingly affect basic elements of life for people around the world: water availability, food production, health and the environment (Figure 5.1). If left unchecked, climate change could cause significant economic and ecological disruption (IPCC, 2007a), especially for already vulnerable populations, including women and children.

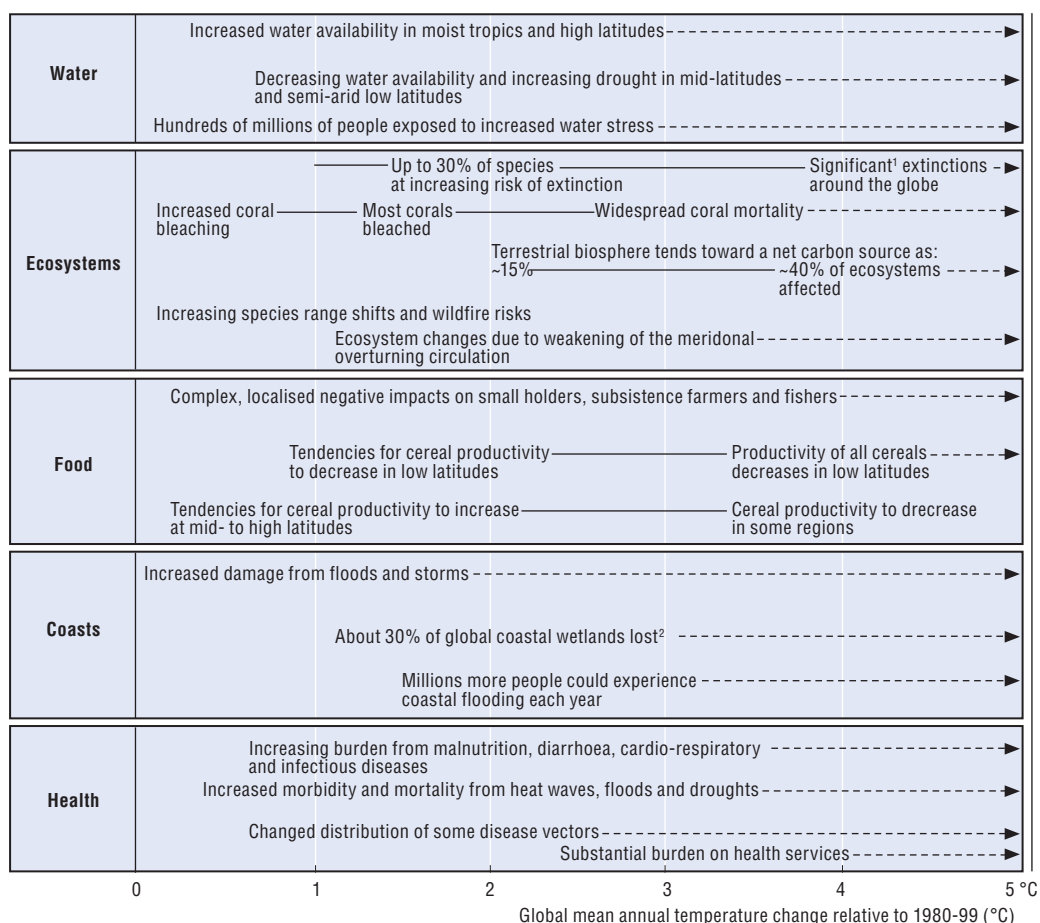
“Development as usual” without considering climate-related risks and opportunities will not resolve these challenges. Although many development activities may help to reduce vulnerability to many climate-change impacts, other development initiatives may increase vulnerability. For example, coastal zone development plans that fail to take into account sea level rise will put people, industries and basic infrastructure at risk and prove unsustainable in the long term. This type of negative impact is called “maladaptation”. In addition, climate change considerations may raise the importance of supporting such sectors as agriculture, rural development and water resource management.

Table 5.1. Potential impacts of climate change on selected Millennium Development Goals

Millennium Development Goal	Examples of links with climate change
Eradicate extreme poverty and hunger (Goal 1)	Climate change is expected to reduce the assets of many poor people, alter the path of economic growth, and worsen regional food security. Water resources are likely to be stressed through increased evaporation losses and increasing water demands resulting from rising temperatures. Food production, which is closely linked to water availability, will face increased stress in regions where water is scarce.
Promote gender equality and empower women (Goal 3)	In the developing world in particular, women are disproportionately involved in natural resource-dependent activities, such as agriculture, which are particularly vulnerable to climate change.
Health-related goals (Goals 4, 5 and 6)	Climate change may affect health directly through increased temperatures, heat waves, floods, droughts and storms; and indirectly through increased disease incidence and reduced quantity and quality of food and water.
Ensure environmental sustainability (Goal 7)	Climate change is likely to alter the quality and productivity of natural resources and ecosystems which contribute a significant share of income in developing countries. Coastal zones are particularly vulnerable to the impacts of sea level rise, storm surges, and increases in the intensity of cyclones in certain regions.

Source: Multi-Agency report (2003), *Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation*, report by the African Development Bank, Asian Development Bank, UK Department for International Development, Federal Ministry for Economic Co-operation and Development (Germany), Ministry of Foreign Affairs – Development Co-operation (The Netherlands), the OECD, United Nations Development Programme, United Nations Environment Program and the World Bank, Washington DC; IPCC (2007b), *Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge; WEDO (Women’s Environment and Development Organization) (2008), *Gender, Climate Change and Human Security*, policy report developed for the Greece Government Chairmanship of the Human Security Network, WEDO, New York/Athens.

Figure 5.1. Key impacts as a function of increasing global average temperatures
Impacts will vary by extent of adaptation, rate of temperature change, and socio-economic pathway



Note: The black lines link impacts; dotted arrows indicate impacts continuing with increasing temperature. Entries are placed so that the left-hand side of the text indicates the approximate onset of a given impact. Quantitative entries for water stress and flooding represent the additional impacts of climate change relative to the conditions projected across the range of *Special Report on Emissions Scenarios* (SRES) scenarios A1FI, A2, B1 and B2. Adaptation to climate change is not included in these estimations. Confidence levels for all statements are high.

1. "Significant" is defined here as more than 40%.

2. Based on average rate of sea level rise of 4.2 mm/year from 2000 to 2080.

Source: IPCC (Intergovernmental Panel on Climate Change) (2007), "Climate Change 2007: Impacts, Adaptation and Vulnerability", Working Group II Contribution to the *Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge.

Poor people and poor countries will bear the brunt of climate change. This is because developing countries, and notably the least developed, rely heavily on climate-sensitive sectors, and have high levels of poverty, low levels of education and limited human, institutional, economic, technical and financial capacity. Unless tackled urgently, climate change will prevent several of the Millennium Development Goals (MDGs) from being achieved (Table 5.1), undermining national poverty eradication and sustainable development objectives.

Against this background, this chapter explores how the threats to the planet's climate are being dealt with, and what is being done to incorporate adaptation into development co-operation policies from the local and project level up to the national level.

How are we dealing with climate change?

There are two main ways we can respond to climate change:

1. Mitigation: reducing climate change itself, by lowering emissions of greenhouse gases.
2. Adaptation: taking action to reduce the adverse consequences of climate change, as well as to harness positive opportunities.

Mitigation

Historically, the majority of greenhouse gas emissions have come from developed countries. The United Nations Framework Convention on Climate Change recognises that all countries should protect the climate system for the benefit of present and future generations, on the basis of equity and in accordance with common but differentiated responsibilities and respective capabilities. Accordingly, the developed countries should take the lead in combating climate change and its adverse effects. The most advanced developing countries also have an important role to play.

At the same time, against the background of a projected doubling of world greenhouse gas emissions by mid-century, it is essential for all countries to move towards low-carbon growth paths. Development choices made today will not only influence adaptive capacity; they will also determine future greenhouse gas emissions.

A recent joint high-level meeting of the OECD Development Assistance Committee (DAC)¹ and the Environment Policy Committee (EPOC) has recognised the need to support developing countries in achieving low-carbon development pathways. Meeting participants highlighted that low-carbon development can simultaneously stimulate growth, promote energy security and contribute to climate change mitigation and adaptation. Furthermore, the Declaration on Green Growth (OECD, 2009a), which was endorsed by the OECD Ministerial Council Meeting in June 2009, underlines the special need to co-ordinate development co-operation activities in order to help developing countries promote green growth. It recognises the role of the DAC in contributing to OECD-wide efforts in these areas.

Simple measures and technologies to facilitate low-carbon growth and its associated benefits are already known. Renewable energy technology, policy and measures for improved energy efficiency, and promotion of improved urban planning and public transportation may all simultaneously contribute to climate change mitigation and economic growth. International co-operation can provide incentives to encourage the adoption of such win-win strategies.

Adaptation

While mitigating climate change is absolutely critical, there are clear signals that the climate is already changing, and some countries are already feeling the effects. Therefore, adaptation is all the more urgent and needs to become integral to economic policies, development projects and international aid efforts. In 2006, development and environment ministers from OECD countries endorsed the Declaration on Integrating Climate Change Adaptation into Development Co-operation (Box 5.1), in which they called for “meaningful co-ordination and sharing of good practices” (OECD, 2006a). *Integrating Climate Change Adaptation into Development Co-operation: Policy Guidance* (OECD, 2009b) was published in response to this request. The rest of this chapter summarises its main messages.

Box 5.1. **How the DAC countries intend to provide effective support for climate change adaptation**

The DAC-EPOC Policy Statement on Integrating Climate Change Adaptation into Development Co-operation states that support to developing countries to address the new challenges of climate change adaptation will:

- Be guided by the commitments in the Monterrey Consensus, the Paris Declaration on Aid Effectiveness and the Accra Agenda for Action (Annex).
- Be aligned to partner countries' long-term visions, development plans and programmes, such as National Adaptation Programmes of Action (NAPAs, Box 5.5).
- Seek to use partners' own systems and harmonise approaches. Capacity development support will enable partners to lead and manage all aspects of climate change adaptation.
- Use a variety of aid approaches, emphasising programme-based and sector-wide approaches rather than specific projects.
- Be efficient and effective, and mobilise private sector support.
- Ensure that climate risks are adequately taken into account in all programmes which development agencies support.

Specific attention will be paid to the most vulnerable: least developed countries; small island developing states and African states affected by drought, floods and desertification; vulnerable communities and groups, including women (Box 5.3), children and the elderly.

A key approach will be to identify and implement win-win adaptation-development solutions and to seek synergies between climate change adaptation and mitigation, notably in sectors such as energy, agriculture and forestry, and with the other Rio conventions (on biological diversity and desertification). In addition, links will be reinforced between climate change adaptation and disaster risk reduction and management.

Source: OECD (2009c), *Policy Statement on Integrating Climate Change Adaptation into Development Co-operation*, OECD, Paris, available at www.oecd.org/dataoecd/26/36/42747468.pdf.

Implementing and mainstreaming adaptation

It is fundamental to integrate climate change adaptation measures into existing country-led and -owned development processes and activities at several levels, *i.e.* the project, local, sectoral and national. Further, adaptation should not be treated as a stand-alone agenda, but be integrated into other environmental and socio-economic policies (“mainstreamed”). Adaptation within each of these levels is discussed in turn in the sections which follow.

Adapting projects to climate change

A development project may be directly or indirectly vulnerable to the impacts of climate change. At the same time, a project may increase or decrease the vulnerability of recipient communities or systems to climate change. This vulnerability depends on the type of infrastructure it establishes, the activities it supports, and its geographical location. In addition, the expected lifetime of project activities is likely to be a critical factor determining the need to assess climate change vulnerability. For example, investment in long-lived infrastructure (such as a dam or irrigation network), should consider the effect of future climate conditions on the viability of the project, since climate change impacts will most likely become increasingly relevant over its planned useful life.

In order to integrate adaptation at the project level, considerations of climate risks and adaptation need to be incorporated into every step of the project cycle: identification, appraisal, design, implementation, and monitoring and evaluation.

Donor agencies can play two roles in integrating climate change adaptation at the project level. First, if they provide development co-operation through project support, they can integrate adaptation within the projects in which they are involved. Second, they can develop and share assessments, frameworks and tools that can be of use to other partners. Various donors have developed tools and instruments for screening their project portfolios for climate risk, and for selecting and integrating adaptation measures within projects (Box 5.2). More work will be needed, nonetheless, to harmonise these methodologies across donors.

Box 5.2. Some donor-developed methods for climate change screening

The United States Agency for International Development has prepared generic guidance on how to incorporate climate change considerations into project development, using a six-step process to examine whether modifications are needed to account for climate change. The World Bank has designed a computer-based tool for the assessment and design for adaptation to climate change. Working together, Intercooperation (the Swiss Foundation for Development and International Co-operation), the International Institute for Sustainable Development, the International Union for Conservation of Nature and the Stockholm Environment Institute have developed the Community-Based Risk Screening Tool – Adaptation and Livelihoods; this tool helps users to foresee possible negative effects of community-level projects on climate resilience and to adjust the projects to enhance local adaptive capacity. The UK Department for International Development has developed a computer-based tool to assess opportunities and risks of climate change and disasters. This process-based tool offers a light-touch screening process for donor programmes. On behalf of the German Ministry for Economic Co-operation and Development, GTZ (German Technical Co-operation) has developed a climate check tool which covers both adaptation and mitigation issues associated with development projects.

Source: For more information, see OECD (2009b), *Integrating Climate Change Adaptation into Development Co-operation: Policy Guidance*, OECD, Paris.

Adapting to climate change locally

Some policy initiatives of development assistance agencies have clear implications for adaptation at the local level (Box 5.3). For example, donor support for decentralisation in partner countries – whether focused on political, fiscal, or administrative decentralisation – may have important implications for climate change adaptation. The process usually has the overarching aim of increasing participation and government accountability, as well as making the delivery of public services more efficient, accessible, equitable and responsive to local needs. As the process of decentralisation continues, local-level adaptation to climate change may provide a means through which donors can better understand the relationship between decentralisation and local vulnerability reduction.

Box 5.3. Climate change adaptation and gender issues at the local level

Within poor communities, women and children tend to be particularly vulnerable to environmental degradation and natural disasters. For this reason, when developing and implementing adaptation strategies at the local level – whether in rural or urban settings – it is critical to recognise and respect the greater vulnerability of women and children to the impacts of climate, as well as the difference in the way women and men are affected. Further, it is critical to include women as equal participants in any adaptation strategy. This will help to avoid contributing to differences in the relative vulnerability to climate change.

Women can be supported through livelihood activities that are more tolerant and/or less vulnerable to an increasingly extreme and variable climate. In Bangladesh, for example, in light of the growing risk of floods, women have been supported in moving away from raising chickens to raising ducks for household consumption and income generation purposes (CARE Canada, 2008).

Sources: CARE Canada (2008), *Bangladeshi Women Are Knowledge Keepers in Mitigating Climate Change*, online article, <http://care.ca/main/?en&BangladeshiWomen>, accessed 15 Dec. 2009; IUCN (World Conservation Union) (2007), “Women and Climate Change – Women as Agents of Change”, IUCN Climate Change Briefing, Dec. 2007, available at http://cmsdata.iucn.org/downloads/climate_change_gender.pdf.

Climate change adaptation within key economic sectors

Certain sectors are particularly sensitive to climate variability and therefore need to factor climate change into sector policy and planning as a matter of priority. Some of these sectors are directly affected by climate, such as agriculture, while others incur mainly indirect impacts. For example, industrial production can be affected if climate change reduces (or enhances) hydropower production for electricity. This has happened recently in Ghana, where drought conditions have limited hydropower production, cutting economic growth by 2%. Key climate-sensitive sectors include agriculture, forestry, fisheries, water resource management, human health, nature conservation, energy, and infrastructure.

Development co-operation is often earmarked for specific sectors. In these sectors, taking into account climate change information at the policy-making stage can allow adaptation actions to be identified, avoid maladaptation, risks and reveal new opportunities. For example, in the agricultural sector, increased temperatures in some regions may make certain crops more suitable than others. Identifying this long-term prospect can help guide sectoral policy and, subsequently, the rural development options pursued for the region. For long-lived infrastructure facilities, climate change concerns may prompt the revision of sector-wide plans, construction and design criteria, and site selection.

Strategic environmental assessment (SEA) can be a useful tool for applying a “climate lens” to sectoral policies, strategies and plans. The term refers to “a range of analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programmes and evaluate the inter-linkages with economic and social considerations” (OECD, 2006b). Although SEAs have mainly been used to evaluate the impact on the environment of policies, plans and programmes rather than the other way round, they provide a generic framework and sound methodology for integrating environmental considerations into policies, plans and programmes (Box 5.4).

Donor agencies can support many of the above actions through sector-level budget support and sector-wide approaches. They can also support capacity development in

Box 5.4. SEA of land-use planning for the Nhon Trach District, Viet Nam

SEA was conducted in 2007/08 to integrate environmental issues into the land-use planning for Nhon Trach District near Ho Chi Minh City. As part of the SEA, an assessment of the possible consequences of climate change for the district was carried out. The SEA report proposed, therefore, not only environmental protection solutions, but also measures for adapting to expected climate change impacts, including estimated costs and implementation considerations. The assessment of climate change impacts included analyses of possible temperature increase, precipitation changes, sea-level rise, and salt water intrusion. Proposed recommendations and measures for adapting to climate change included:

- Maintain and further develop dike systems to prevent the invasion of seawater in the district.
- Identify new varieties and species of crops, and adapt cropping systems in order to reduce the vulnerability of the agricultural system to climate change impacts.
- Maintain a minimum of 15% tree coverage on agricultural land converted to other uses, such as dwellings or construction land, to contain soil erosion.
- Improve the maintenance and extension of the drainage system at the same pace as urban development; enhance environmental management of urban and industrial parks, including regular dredging, in order to avoid local flooding in the rainy season.
- Continue to preserve existing mangrove forests in the district in order to mitigate increasing hazards from high tides.

Source: ADB (Asian Development Bank) (2009), *Strategic Environmental Assessment as a Tool to Improve Climate Change Adaptation in the Greater Mekong Subregion*, Asian Development Bank, Manila; SEMLA, Viet Nam-Sweden Cooperation Programme on Strengthening Environmental Management and Land Administration in Viet Nam (2008), *Evaluation of SEMLA SEA Projects*, SEMLA, Hanoi.

adaptation assessment and planning. Finally, donor agencies can provide financial and technical support for monitoring and evaluating progress towards integrating climate adaptation into sectoral strategies, plans and programmes.

Adapting to climate change at the national level

The national level is critical for mainstreaming climate change adaptation. Strategic decisions taken at this level create the enabling environment for public and private sector actors as well as for communities and households. Medium- to long-term development and poverty reduction strategies and objectives are also established at this level through national visions, development plans and strategies.

Priorities at the national level include:

- Improving the coverage and the quality control of climate monitoring data.
- Commissioning national-level assessments of climate change impacts, vulnerabilities and adaptation options. This will lead to improved and more targeted information on how climate change affects specific national priorities and core government functions.
- Moving the co-ordination for adaptation into powerful central bodies, such as the Office of the President or Prime Minister, or the planning agencies.
- Including considerations of climate change risks in long-term policy visions, as well as in poverty reduction and sustainable development strategies.

- Making a sound economic case for investing in adaptation and ensuring adequate resource allocation (for example through a horizontal fund for adaptation) for the incorporation of adaptation considerations in policies, plans and programmes (Box 5.5).

Box 5.5. Integrating climate change adaptation into national policies and development strategies

Although to date there has been little integration of climate change adaptation at the national level, some countries have integrated climate change concerns into their national policies, such as development and poverty reduction strategies.

Several of the least-developed countries have recently created national adaptation programmes of action (NAPAs). NAPAs focus on activities to address the urgent and immediate adaptation needs of the country. NAPAs are action-oriented, country-driven, flexible programmes based on national circumstances. They establish priorities for action and are therefore useful for development planners.

Bangladesh has created clear links between its NAPA and its Poverty Reduction Strategy Paper (PRSP) in order to mainstream adaptation to climate change. The PRSP recognises climate change as a cause of grave concern to the country, highlighting the challenges posed by sea-level rise. It analyses extensively the relationship between natural disasters, growth and poverty. Climate change is considered an important challenge for water resource management and environmental protection. The PRSP has 19 policy matrices for implementing the strategy, one of which focuses exclusively on comprehensive disaster management. One of its key targets is to “factor vulnerability impacts and adaptation to climate change into disaster management and risk reduction plans, programmes, policies and projects”. This, together with an acknowledgement of the NAPA as a national implementation programme, helps to ensure policy coherence for adaptation activities. The priority adaptation strategies identified in Bangladesh’s NAPA specifically complement the PRSP. In devising strategies to address climate change and raise awareness, the NAPA also refers to PRSP policy matrices on “comprehensive disaster management” and “environment and sustainable development”.

There are many international initiatives, such as the United Nations International Strategy for Disaster Reduction, that can support the design and implementation of national adaptation policies. These initiatives could be enhanced and strengthened so that developing countries can use them to integrate climate change adaptation into national policies.

While developing country partners must lead efforts to integrate climate change adaptation, international donors have a critical role to play in supporting such efforts. They can promote capacity building, for instance in monitoring climate and in assessing future climate change impacts and adaptation priorities at the national level. In this context, it is fundamental to raise awareness within donor agencies about the risks posed by climate change. Donors can also use high-level policy dialogue to raise the profile of adaptation with partner countries’ senior officials in key ministries, such as finance and planning. In addition, donor agencies can provide financial support. For example, they could contribute to an adaptation fund managed by a central body such as a planning or finance ministry for funding the costs of integrating adaptation measures into their activities. International donors can also encourage action on adaptation through joint assistance strategies.² It is fundamental, however, that donors co-ordinate and harmonise their adaptation efforts at the country level.

Notes

1. The DAC's work on environment and climate change is carried out through its Network on Environment and Development Co-operation (ENVIRONET), an international forum that brings together practitioners from bilateral and multilateral development agencies. Representatives from partner countries, regional development banks, non-governmental organisations and research institutions also participate in its work.
2. Joint assistance strategies are comprehensive frameworks for managing the development co-operation between the government and the various bilateral and multilateral donors which operate in a partner country.

Bibliography

- IPCC (Intergovernmental Panel on Climate Change) (2007a), "Climate Change 2007: Impacts, Adaptation and Vulnerability", Working Group II Contribution to the *Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge.
- IPCC (2007b), *Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge.
- OECD (2006a), Declaration on Integrating Climate Change Adaptation into Development Co-operation, OECD, Paris.
- OECD (2006b), *Applying Strategic Environmental Assessment: Good Practice Guidance for Development Co-operation*, DAC Guidelines and Reference Series, OECD, Paris.
- OECD (2008), *Economic Aspects of Adaptation to Climate Change: Costs, Benefits and Policy Instruments*, OECD, Paris, available at www.oecd.org/env/cc/ecoadaptation.
- OECD (2009a), Declaration on Green Growth, OECD, Paris, available at www.greengrowth.org/download/2009/news/OECD.declaration.on.GG.pdf.
- OECD (2009b), *Integrating Climate Change Adaptation into Development Co-operation: Policy Guidance*, OECD, Paris, available at www.oecd.org/env/cc/adaptation/guidance.
- OECD (2009c), *Policy Statement on Integrating Climate Change Adaptation into Development Co-operation*, adopted by the OECD Development Assistance Committee and the Environment Policy Committee at the joint high-level meeting in Paris on 28-29 May 2009, OECD, Paris, available at www.oecd.org/dataoecd/26/36/42747468.pdf.



From:
Development Co-operation Report 2010

Access the complete publication at:

<https://doi.org/10.1787/dcr-2010-en>

Please cite this chapter as:

OECD (2010), "Climate Change: Helping Poor Countries to Adapt", in *Development Co-operation Report 2010*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/dcr-2010-8-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.