Department of Economic and Social Affairs
Division for Sustainable Development

TRENDS

IN SUSTAINABLE DEVELOPMENT

Small Island Developing States

United Nations
New York, 2010

DESA

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FOREWORD

Small Island Developing States (SIDS) face unique and special challenges. The special case of Small Island Developing States (SIDS) within the context of sustainable development was first formally recognized by the international community at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992. Chapter 17, paragraph 124 of Agenda 21 states, "*Small island developing States, and islands supporting small communities are a special case both for environment and development. They are ecologically fragile and vulnerable. Their small size, limited resources, geographic dispersion and isolation from markets, place them at a disadvantage economically and prevent economies of scale*." Since UNCED, a number of international frameworks were established that shed light on the limitations faced by SIDS in achieving sustainable development. Agenda 21 highlights that there are special challenges to planning for and implementing sustainable development in SIDS, and that SIDS will be constrained in meeting these challenges without the cooperation and assistance of the international community. In 1994, the Barbados Programme of Action (BPOA) translated Agenda 21 into specific actions and measures to enable SIDS to achieve sustainable development. In 2005, the Mauritius Strategy (MSI) for the further Implementation of the BPOA was adopted with a view to addressing the implementation gap that still confronted SIDS. In 2010, a high level meeting will be convened during the sixty-fifth session of the United Nations General Assembly to carry out a five-year review of the progress made in addressing the vulnerabilities of SIDS through the MSI.

In support of the five-year review of the MSI, this report highlights key developments and recent trends for SIDS in a number of areas. Notwithstanding the importance of all the issues contained in the MSI, this publication will present those themes for which sufficient statistical data has been found to be available, comparable among all three SIDS regions (i.e., Caribbean, Pacific and AIMS), and reflective of clear trends that illustrate the uniqueness of SIDS. Based on these three criteria, the report will focus on climate change, disaster management, trade and finance, tourism, energy, natural resources, and social development.

In summary, the report notes progress in a number of areas while, at the same time, acknowledging that significant further efforts will be needed to advance implementation of the intergovernmentally agreed goals outlined in the MSI, as well as those set forth in the Millennium Development Goals (MDGs).

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Introduction

Since the international meeting in Mauritius in 2005, substantial progress has been achieved in SIDS in a number of areas. The Millennium Development Goals Report 2009 noted this progress, but also highlighted the importance of renewed and sustained action, especially in light of the high vulnerability of the natural, economic and social systems of SIDS. This vulnerability is largely due to intrinsic characteristics of SIDS, including: small size; remoteness; vulnerability to external (demand and supply-side) shocks; narrow resource base; and exposure to global environmental challenges[1].

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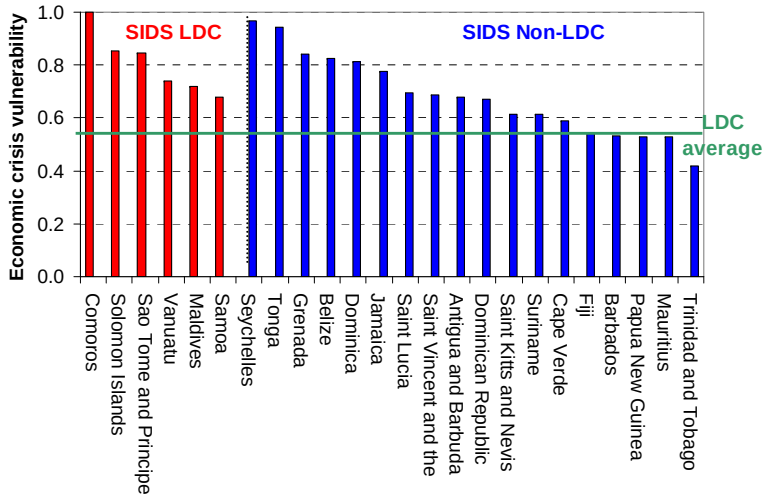
FOTO ----------

The risk is that these and other related vulnerabilities could jeopardize the progress achieved thus far. In some cases, improved economic and governance capacity in SIDS has been offset by reduced resilience to external shocks[2].

The continuing global economic and financial crisis has had dire consequences for the economies of SIDS, while the global food and energy crises, coupled with the uneven pace of insertion into global trade and development processes, and the negative impacts of climate change, have exacerbated the structural vulnerabilities of these countries.

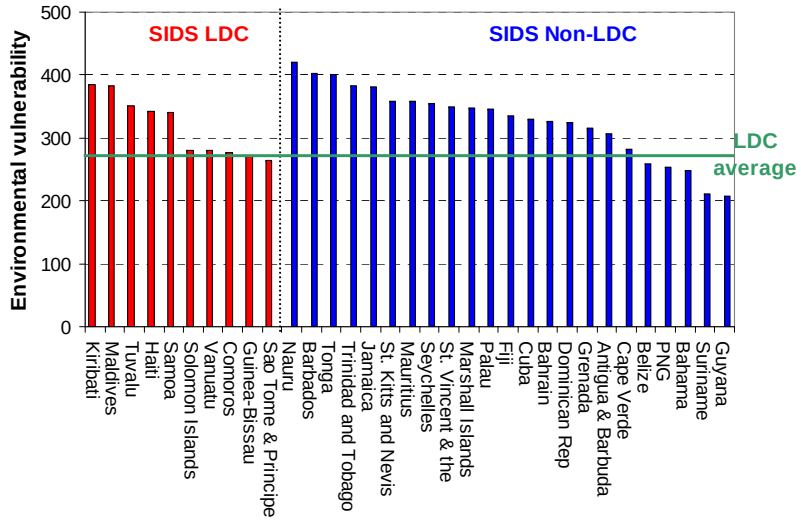
ESCAP economic crisis vulnerability index for 24 SIDS compared with the average for all LDCs (SIDS and non-SIDS)[3]



Source: ESCAP and DESA, based on ESCAP research and methodologies in the ESCAP/ADB/UNDP (2010) *Asia-Pacific Regional Report 2009/10*.

The vulnerabilities of SIDS include exposure to global environmental challenges, such as climate change (sea level rise, destruction of coral reefs critical to food security and tourism), biodiversity loss, waste pollution and acidification of the oceans.

Environmental vulnerability index for 33 SIDS compared with the average for all LDCs[4].



Source: DESA calculations based on United Nations Environment Programme/SOPAC methodology.

Through its 19 themes and seven means of implementation, the MSI offers a platform for addressing the challenges faced by SIDS in achieving sustainable development. Over the past five years, some of the major contraints in the implementation of the MSI have included: declining levels of official development assistance; lack of technical expertise; and financial, technical and institutional challenges in terms of monitoring and evaluation.

Although SIDS[5] are confronted with increasing challenges, the growing international consensus surrounding the need to support SIDS offers an unprecedented opportunity to advance their sustainable development efforts.

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Sources

ESCAP/ADB/UNDP (2010) *Asia-Pacific Regional Report 2009/10*.

Endnotes

[1] UN ECOSOC (2010), *Review of the implementation of the Mauritius Strategy*, Report of the Secretary General, E/CN.17/2010/9.

[2] UN ESCAP (2010), *Sustainable Development in the Pacific: Progress and Challenges*, Pacific Regional Report for the 5-year review of the Mauritius Strategy for the further implementation of the Barbados Programme of Action for Sustainable Development of SIDS, ESCAP Subregional Office for the Pacific, Suva, Fiji.

[3] The economic crisis vulnerability index is defined as the normalized difference between an exposure index and a coping capacity index. Five indicators are used to measure the exposure to the economic crisis: (a) EXPY (index of export sophistication) per GDP per capita; (b) foreign direct investment (as a percentage of GDP); (c) official development assistance (as a percentage of GDP); (d) workers' remittances (as a percentage of GDP), and (e) inbound tourism (as a percentage of GDP). The capacity to mitigate the crisis is assessed using five different indicators: (a) external public debt stocks to GDP ratio; (b) total reserves in months of imports; (c) gross savings to GDP ratio; (d) government effectiveness: World Bank Worldwide Governance Indicators, and (e) Human Development Index.

[4] The Environmental Vulnerability Index is based on 50 indicators covering natural/anthropogenic risks, resilience and ecosystem integrity, and covers issues related to climate change, biodiversity, water, agriculture and fisheries, human health, desertification, and exposure to natural disasters.

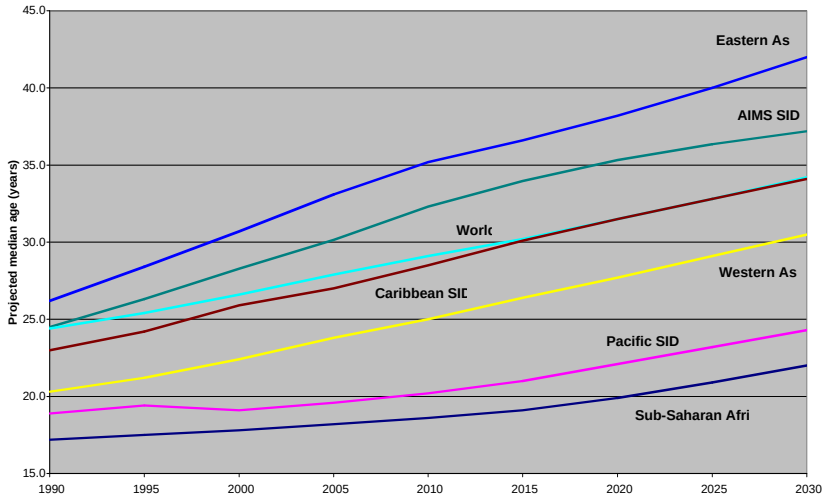
[5] For the purposes of this publication, the term SIDS refers to the following countries and regional groupings: **Caribbean**: Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago; **AIMS**: Cape Verde, Comoros, Guinea-Bissau, Maldives, Mauritius, Sao Tome and Principe, Seychelles, Singapore; **Pacific**: Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, Vanuatu.

I. Demographic Trends

Pacific SIDS have a young population relative to the other SIDS regions and other country groupings, second only to Sub-Saharan Africa.

There are significant differences among the three SIDS regions with respect to the median age of their populations. Pacific SIDS have the youngest population, the median age of which in 2010 was 20.2 years, surpassed only by Sub-Saharan Africa with 18.6 years. This is due in part to lower life expectancy, higher fertility rates, and high rates of emigration of the working age population. Caribbean SIDS are close to the world median with 28.5 years, while the AIMS SIDS are slightly older, with a median age of 32.3 years.

Median population age: 1990 - 2030



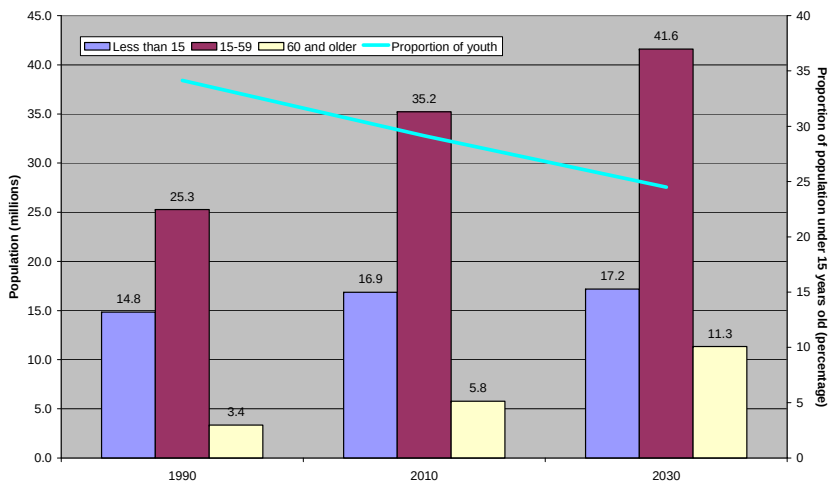
Source: UN DESA, 2010.

---------- **Photo 1.1** ----------

The population will continue to age, due to decreasing fertility rates and longer life expectancy.

From 43.5 million in 1990, population is expected to reach 70.1 million by 2030. The share of people under 15 in the total population is expected to decline, from 34 per cent in 1990 to 24 per cent in 2030. Population aged 15 to 59 is expected to grow from 25 million in 1990 to 42 million in 2030. Population aged 60 and above is expected to grow even more rapidly, nearly doubling from 2010 to 2030.

Changes in population structure: SIDS average



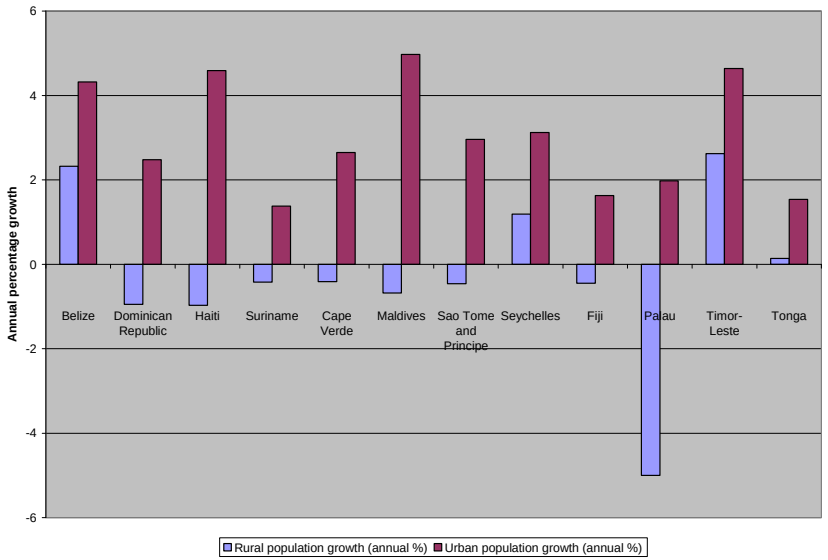
Source: UN DESA, 2010.

Urbanization is widespread and increasing among the SIDS.

While the SIDS vary widely with respect to the share of population living in cities and towns, ranging from Singapore, standing at 100 per cent, to Papua New Guinea and Trinidad and Tobago with 13 per cent, they share the common trend of increasing urbanization. The percentage of the population living in urban areas across all SIDS has increased 11 per cent, from 49.5 per cent in 1990 to 55 per cent in 2008. Increasing urban population density is also an important concern for SIDS, the populations of which are often concentrated on a few small islands. While densities in excess of 5,000-10,000 people/square kilometre are usually associated with urban poverty in Africa and Asia, the capital of the Maldives, Malé, is home to nearly a third of the country's population and has a density of over 17,000/km². Ebeye in the Marshall Islands had a population density of 38,600/km² in 2007.[1] Migration of people to urban settlements, most often located along the coastline, puts increasing pressure on coastal ecosystems and on the settlements themselves, which must be properly planned and responsibly developed to ensure the provision of social services and prevent environmental degradation.

---------- **Photo 1.2** ----------

Annual population growth (urban vs. rural): 2008



Source: The World Bank, World Development Indicators, 2008.

[1] Haberkorn, Gerald (2008), "Pacific Islands' Population and Development: Facts, Fiction and Follies", *New Zealand Population Review*, 33/34: 95-127, 2008.

II. Climate Change

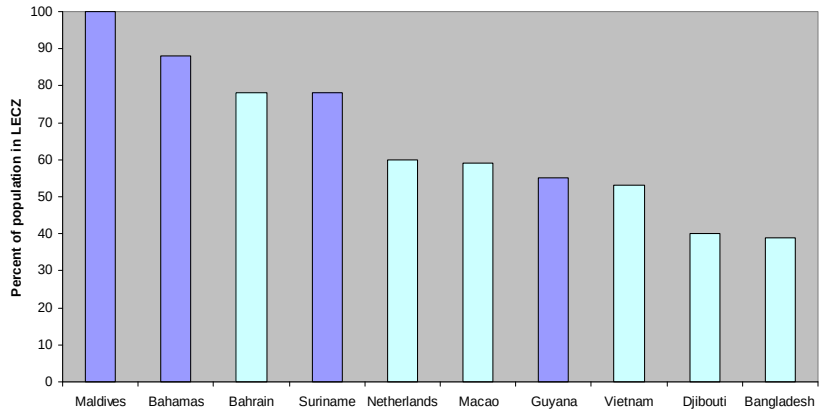
SIDS are especially vulnerable to climate change due to their small size, narrow resource base, high susceptibility to natural hazards, low economic resilience, and limited human and technological capacity for mitigating and adapting to the effects of climate change.[1] The very existence of low-lying atoll nations, such as Kiribati, Maldives, Marshall Islands, and Tuvalu, is threatened by climate change-induced sea-level rise.

Sea-level rise is a key concern for SIDS.

A large proportion of the population of many SIDS lives in the low elevation coastal zone (LECZ), defined as the contiguous area along the coast that is less than 10 metres above sea level.[2] These settlements are extremely vulnerable to sea-level rise, storm surges, floods and other climate change-induced hazards. In 2007, the IPCC estimated that by 2100, global warming will lead to a sea-level rise of 180 to 590 mm, while more recent research suggests that these estimates are likely to be at least twice as large, up to about two meters. Nations such as Kiribati, Maldives, Marshall Islands and Tuvalu will become uninhabitable in this scenario, while a large share of the population of many other SIDS will be displaced or otherwise adversely impacted.

---------- Photo 2.1 ----------

Countries with largest population shares in the Low Elevation Coastal Zone (LECZ)



Note: Countries with less than 100,000 people living in the LECZ are excluded in the methodology used in the source report. Fifteen small island states that are excluded have population shares greater than 39 per cent in the LECZ.

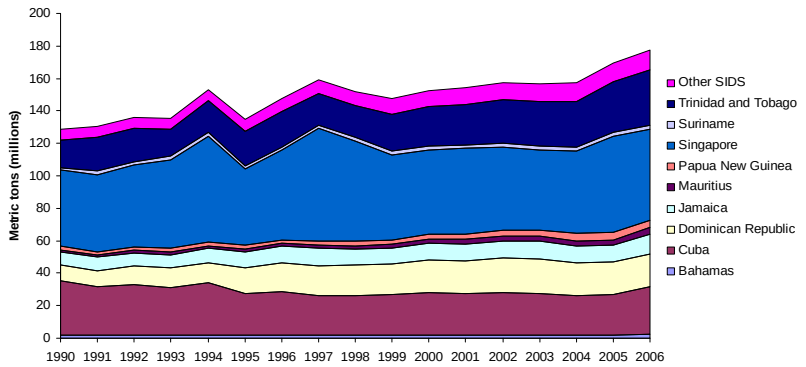
Source: McGranahan, 2006.

SIDS contribute little to the problem of climate change, but greenhouse gas emissions are on the rise.

The combined annual carbon dioxide (CO_2) output of SIDS accounts for less than one per cent of global emissions.[3] However, like other countries, SIDS face serious challenges in reducing emissions and moving to clean energy. From 1990 to 2006, CO_2 emissions of SIDS

increased at an average annual rate of 2.3 per cent. Emissions ranged from as low as 0.16 tons of CO_2 per capita in Timor-Leste to as high as 25 tons in Trinidad and Tobago in 2006.

CO_2 Emissions: 1990-2006



Source: UN MDG Indicators Database, 2010

Note: Other SIDS does not include the Federated States of Micronesia or Tuvalu.

---------- **Photo 2.2** ----------

Addressing climate change in the Maldives

The small size and extremely low elevation of the coral islands that make up the Maldives place the residents and their livelihoods under threat from climate change, particularly sea-level rise. The highest land point is a mere 2.4 metres above sea level, and over 80 per cent of the total land area is less than 1m above sea level. At present, 42 percent of the population and 47 per cent of all housing structures are within 100m of coastline, placing them under severe threat of inundation.[4] Over the last 6 years, more than 90 inhabited islands have been flooded at least once and 37 islands have been flooded regularly or at least once a year. During the 2004 Tsunami, many of the islands were completely submerged, illustrating their critical vulnerability.

Given the severity of anticipated sea-level rise, population relocation is viewed as inevitable. The government has planned to begin diverting a portion of the country's annual tourism revenue for the establishment of an investment fund, with a view to purchasing 'dry land' to ensure a safe haven for future evacuation. Maldives' planned evacuations in anticipation of loss of land will inevitably impact sovereignty and national identity.

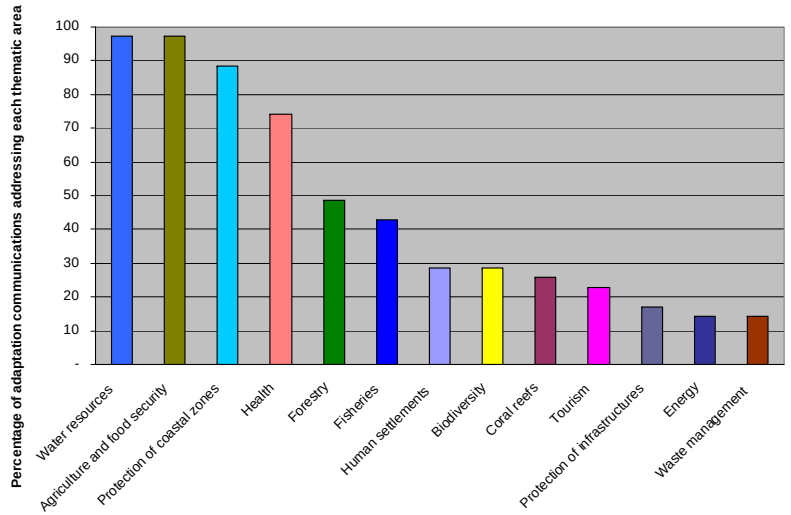
Although Maldives contributes very little to the problem of climate change, the government has pledged to make the country carbon-neutral within a decade. Toward this goal, clean electricity would power not only homes and businesses, but also vehicles. As an added benefit, Maldives would no longer need to import expensive fossil fuels.

In addition to relocation and mitigation options, Maldives has focused on reducing vulnerability to sea-level rise through adaptation measures, including undertaking detailed technical and engineering studies to identify coastal protection options; re-forestation to prevent beach erosion; cleaning litter and debris from the coral reefs – a natural barrier against tidal surges; teaching environmental science in school; and imposing rigorous environmental impact assessment on all new resorts.

Climate change adaptation is a top priority for SIDS.

National adaptation programmes of action (NAPAs) were developed for 11 of the 12 SIDS which are also LDCs. Overall, SIDS have made major efforts to carry out climate change adaptation measures, but progress thus far has seemed to focus on public awareness, research and policy development rather than on implementation, largely due to financial and technological constraints.[5] The extent to which different thematic areas vulnerable to climate change are addressed in adaptation plans varies among the SIDS. Areas of greatest concern are water resources, agriculture and food security, and the protection of coastal zones, found in over 85% of adaptation plans.

Climate change adaptation focus areas across SIDS



Source: SIDS Unit, based on NAPAs and UNFCCC National Communications.

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[1] Nurse, L.A. and G. Sem (2000), 'Small Island States', in J.J. McCarthy et al. (eds), *Climate Change 2001: Impacts, Adaptation and Vulnerability – Contribution of Working Group II to the Third Assessment Report,* Cambridge University Press, pp. 843–875.

[2] McGranahan, G., D. Balk and B. Anderson (2007), 'The rising tide: assessing the risks of climate change and human settlements in low elevation coastal zones,' in *Environment & Urbanization*, International Institute for Environment and Development (IIED), Vol 19(1): 17–37.

[3] UN-OHRLLS (2009), *The Impact of Climate Change on the Development Prospects of the Least Developed Countries and Small Island Developing States*, from http://www.unohrlls.org/UserFiles/File/LDC%20Documents/The%20impact%20of%20CC%20on%20LDCs%20and%20SIDS%20for%20web.pdf

[4] Government of the Republic of the Maldives (2010), National Assessment Report.

[5] UN ECOSOC (2010), *Review of the implementation of the Mauritius Strategy*, Report of the Secretary General, E/CN.17/2010/9.

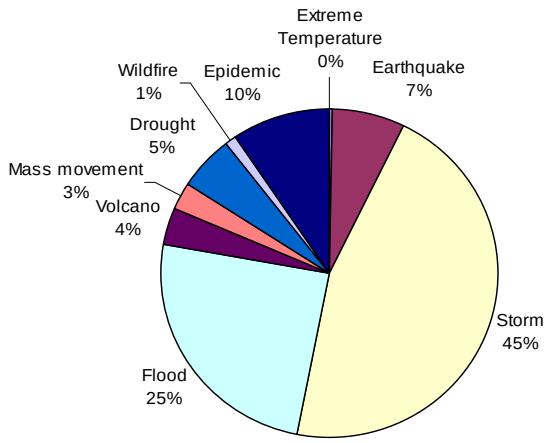
III. Natural Disaster Management

Natural disasters in many SIDS have undone the development achievements of years, even decades. Climate change induced natural disasters, such as cyclones, floods and droughts have increased in frequency and intensity over the past few decades, further hampering SIDS' ability to recover between extreme events. Resources continue to flow primarily to post-disaster activities rather than towards disaster risk reduction and the improvement of coping capacity.[1]

Natural disasters, particularly storms and floods, have been increasing in frequency and intensity

Hydro-meteorological disasters, including cyclones, tropical storms and other windstorm related events, are the most common, accounting for an estimated 45% of all natural disasters in SIDS, but the share of the damage impact is even larger. Significant flooding is one of the after-effects of cyclones, estimated to cause 25% of the disasters.

Total number of disasters affecting SIDS by type of disaster: 1990 - 2009

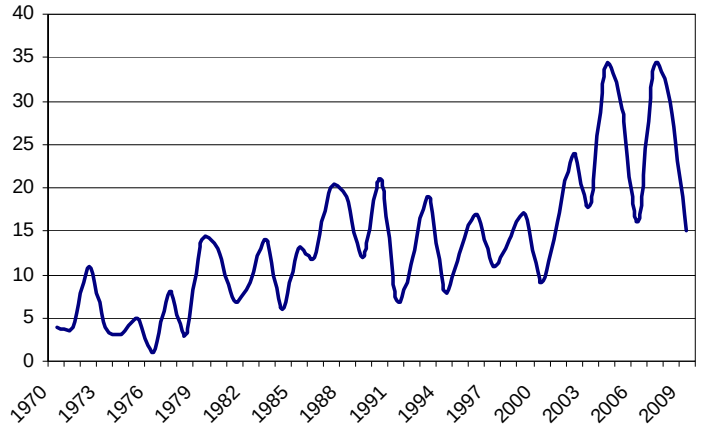


Source: EMDAT: The OFDA/CRED International Disaster Database

Worldwide, ten of the fifteen most extreme events reported over the past half century have occurred in the last fifteen years. In addition to being increasingly vulnerable in terms of exposure to natural disasters, SIDS also face a number of threats which further weaken their coping capacity, including urbanisation and environmental degradation. Increased urbanisation and coastal development concentrate risk, while environmental degradation in the form of deforestation, coral bleaching and loss of mangroves removes natural protective barriers.

---------- **Photo 3.1** ----------

Number of SIDS affected by natural disasters



Source: EMDAT: The OFDA/CRED International Disaster Database

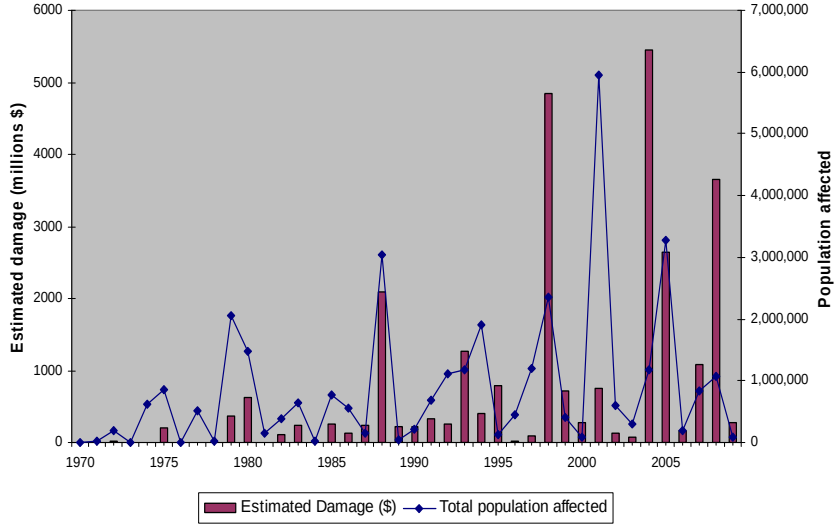
Note: Including extreme temperatures, earthquakes, storms, floods, volcanoes, mass movements and droughts.

The social and economic impacts of natural disasters are especially pronounced in SIDS

SIDS, due to their small size, large share of the population living in hazard-prone coastal areas, and limited capacity for disaster risk reduction, are particularly vulnerable. The increase in the frequency and intensity of natural disasters translates into larger numbers of people affected and greater economic damages. The increasing cost of disaster insurance due to the higher frequency of extreme events has significant implications for resilience.

---------- **Photo 3.2** ----------

Estimated damages from natural disasters and total population affected

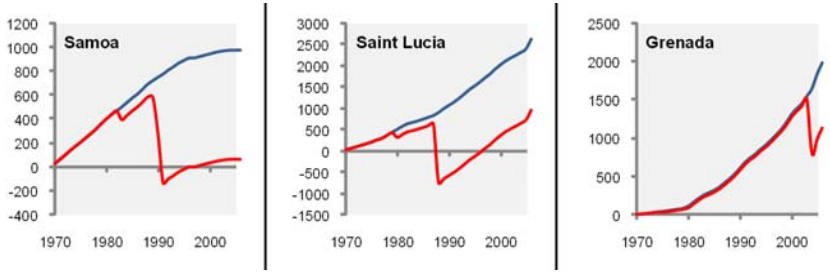


Source: EMDAT: The OFDA/CRED International Disaster Database

SIDS economies have suffered long term consequences from natural disasters

Samoa, Saint Lucia, Grenada, Vanuatu, Tonga and Maldives lead the list of 180 countries with the highest economic losses on capital stock in relative terms due to natural disasters from 1970 to 2006.[2] In the case of Samoa, due to the relatively small size of its economy, the damages from a tropical storm and a forest fire in 1983 as well as three tropical storms in a row from 1989 to 1990, may have set its capital stock back more than 35 years.

Capital accumulation in Samoa, Saint Lucia and Grenada from 1970 to 2006, in relative terms. Red: actual, blue: time trend.



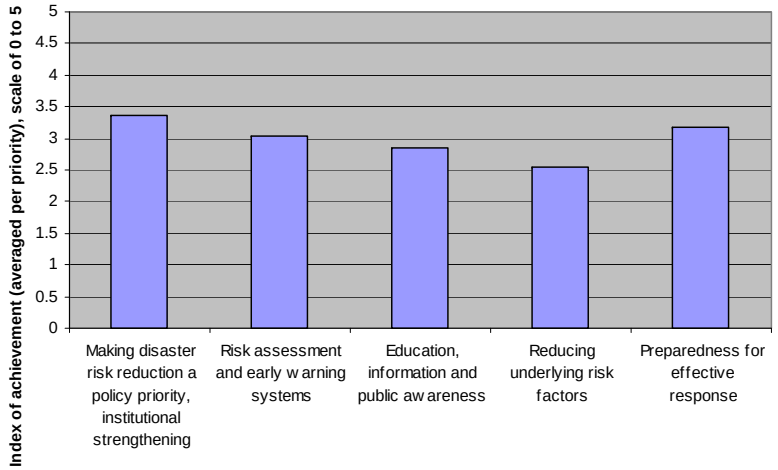
Source: Baritto, 2008

---------- Photo 3.3 ----------

Disaster risk reduction initiatives are lagging in many SIDS

The Hyogo Framework of Action (HFA) for disaster risk reduction aims to substantially reduce disaster losses by 2015 - in lives, and in the social, economic, and environmental assets of countries by offering guiding principles, priorities for action, and practical means for achieving disaster resilience for vulnerable communities. Of the SIDS that adopted the framework at the World Conference on Disaster Reduction (2005), only four currently have national platforms for disaster reduction. Six SIDS submitted reports on progress in the implementation of the HFA in 2007, and seven in 2009.[3] While disaster risk reduction continues to be a policy priority across SIDS, capacity constraints and limited financing hinder implementation, as well as evaluation and reporting.

Progress in implementing the Hyogo Framework of Action



Source: UNISDR, 2010.

Coping with natural disasters in Grenada

In September 2004, Ivan, a category 3 hurricane, struck Grenada, battering and destroying 90% of homes, causing damages estimated at US$900 million – more than twice the country's GDP, and leaving at least 39 people dead. Crop damage was nearly 100 per cent for banana and sugar cane. Only two of the island's 75 primary and secondary schools survived with minimal damage. Then, in April 2005, Hurricane Emily (category 1) struck, causing a further USD $110 million of damage.

In the aftermath of the hurricanes' destruction, the government recognized that the country's public debt was unsustainable and initiated a collaborative debt restructuring process. A home-grown comprehensive medium-term reform program was launched, with the key objectives of sustaining high economic growth, restoring fiscal and debt sustainability, reducing vulnerabilities, and alleviating poverty.

By December 2005, the tourism sector had recovered, as 96 per cent of all hotel rooms had been reopened with strengthened and upgraded facilities based on an improved building code. The country's real GDP growth averaged 7 per cent per year during 2005-06, while inflation fell markedly, from a high of 5.8 per cent in late 2005, to only 2.2 per cent by April 2007.

References

[1] UN ECOSOC (2010), *Review of the implementation of the Mauritius Strategy*, Report of the Secretary General, E/CN.17/2010/9.

[2] Baritto, F., (2008). *Disasters, Vulnerability and Resilience from a Macro-economic Perspective*, Background paper for the 2009 ISDR Global Assessment Report on Disaster Risk Reduction, Nov. 2008.

[3] UN ISDR Website, http://www.unisdr.org/

IV. Trade and Finance

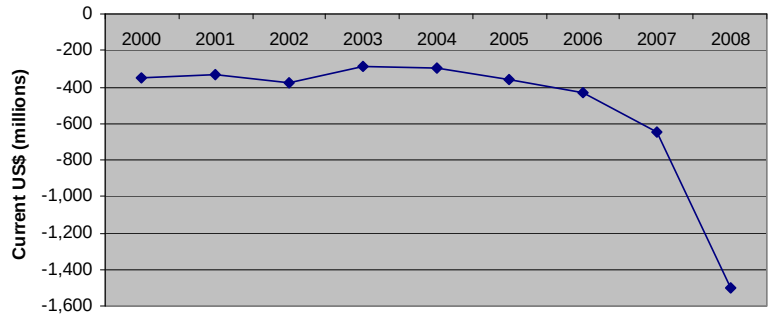
SIDS exhibit highly dissimilar levels of economic development, yet face relatively similar challenges in terms of trade and finance. SIDS are inherently economically vulnerable due to their remoteness and insularity, susceptibility to natural disasters, fragile ecology, limited institutional capacity, limited ability to diversify, strong dependence on a narrow range of exports, and high import content, particularly of strategic goods such as food and fuel, whose prices have exhibited high volatility. In addition, in recent years many SIDS have experienced a rapid rise in their debt burden which, coupled with rising logistics costs and decreasing workers' remittances, has exacerbated the negative impact that the financial crisis has had on their economies.

Many SIDS economies are highly exposed to shocks resulting from their heavy dependence on a few markets and the erosion of trade preferences with these markets. [1]

Over the past ten years, many SIDS have experienced considerable increases in trade deficits. SIDS are among the most trade-open economies in the world, and thus particularly vulnerable to external shocks. The continuing global economic and financial crisis, coupled with the uneven pace of insertion into global trade and development processes, have exacerbated the structural vulnerabilities of SIDS and have had dire consequences for their economies.

These challenges and opportunities are typified by some of the major trade developments being faced by Caribbean and Pacific SIDS. In the Caribbean, challenges include the erosion of trade preferences and the increase of the global market share of the Caribbean's trade competitors[2]. The onging process of regional trade integration that is taking place through the implementation of the Caribbean Single Market Economy (CSME) offers several opportunities to address some of the challenges being faced by the region. However, slow progress in achieving regional integration through the CSME has thus far limited some of the gains from collaboration in the region.[3] In the Pacific, steps have been taken towards establishing a regional free trade agreement through the Pacific Island Countries Trade Agreement (PICTA), which entered into force in 2003. The European Union has also initialed an interim agreement with Papua New Guinea and Fiji for improved market access to the EU. The agreement is open to all interested Pacific SIDS. During 2009, the implementation of regional trade agreements continued at a positive, but slow pace. The capacity among Pacific SIDS to engage on a range of trade issues has been hampered by the ongoing challenges of developing national positions on various issues as well as translating regional commitment into supporting national legislation.[4]

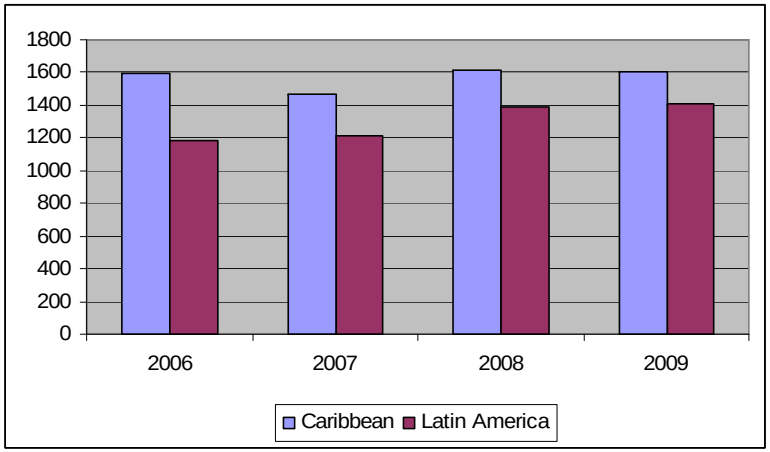
Net trade in goods in SIDS (Balance of Payments)[5]



Source: The World Bank, World Development Indicators, 2009.

Logistics performance is significantly worse in SIDS than in other countries at similar levels of development.

By exacerbating the disadvantage posed by geographical distance, lower trade and transport volumes have contributed to higher overall transport and logistics costs. Notwithstanding important success stories, such as the halving of transport costs in Vanuatu between 2007 and 2008, the overall increase in transport costs has significantly weakened the competitiveness of SIDS vis-à-vis their main competitors, regionally and internationally.

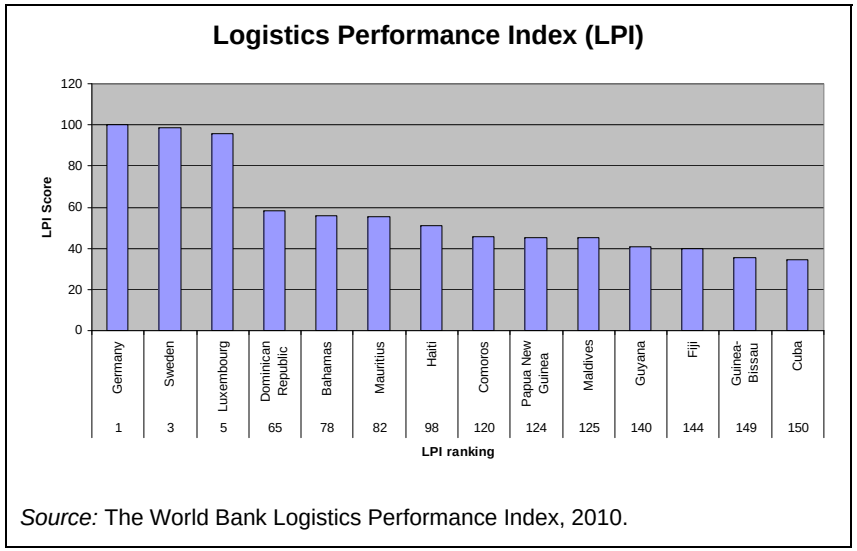


Source: The World Bank, World Development Indicators, 2009.

Based on the ranking of the World Bank's 2010 Logistics Performance Index (LPI), which includes transport costs, quality of infrastructure (e.g., roads, ports, etc), tracking and tracing of consignments, and timeliness of delivery; eleven of the twelve SIDS for which the LPI is available are among the 100 worst performers in terms of logistics. Three SIDS are among the 10 worst performers in the world, performing at nearly one third of the level of top-ranked Germany.[6] In part, this lower capacity is due to the relatively low interest shown by the private sector in SIDS due to the small size of their economies.

FOTO 4.1 ----------

FOTO 4.1 ----------

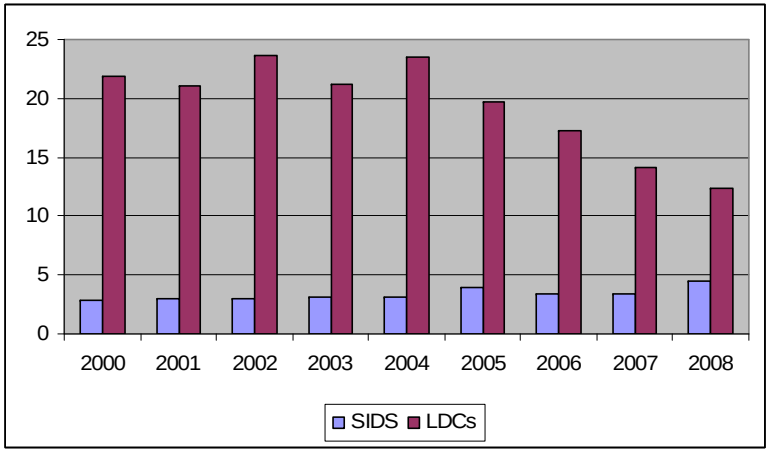


Source: The World Bank Logistics Performance Index, 2010.

Unpredictable external capital flows, such as Official Development Assistance (ODA), Foreign Direct Investment (FDI) and International Private Funds (IPF), coupled with increasing debt burdens, are a matter of concern in a number of SIDS.

Due to the lack of economies of scale, high transport costs, low trade capacities and increasing trade deficits, SIDS typically have large external debt stocks that are often unsustainable unless financed through external capital flows, including ODA, FDI, IPF and workers' remittances. However, unlike Least Developed Countries (LDCs) and certain other groups of countries, SIDS that are not LDCs do not qualify for debt relief assistance and are increasingly considered ineligible for development aid.

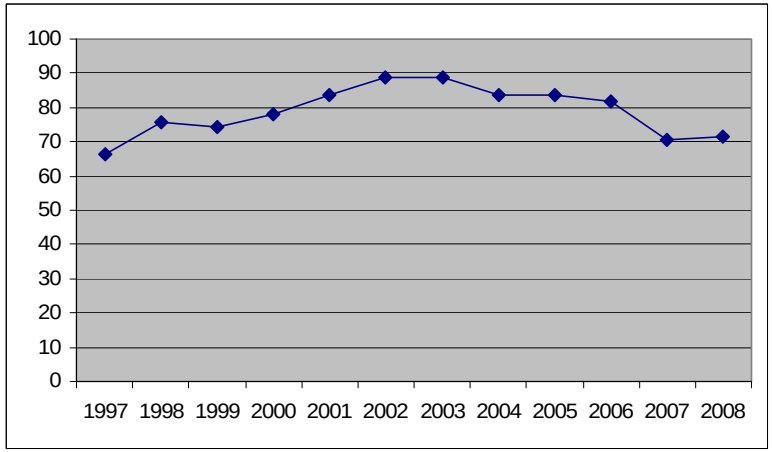
Net ODA received (% of imports of goods and services)



Source: The World Bank, World Development Indicators, 2009.

The lack of reliable external capital flows has negatively impacted external debt levels, which have exceeded sustainability standards in many SIDS. During the past ten years, there has been no clear trend toward reducing external debt levels. On the contrary, in 2008, 12 out of 21 SIDS for which data was available showed external debt stocks that exceeded 50 per cent of their Gross National Income (GNI).

External debt stocks (% GNI) in SIDS



Source: The World Bank, World Development Indicators, 2009.

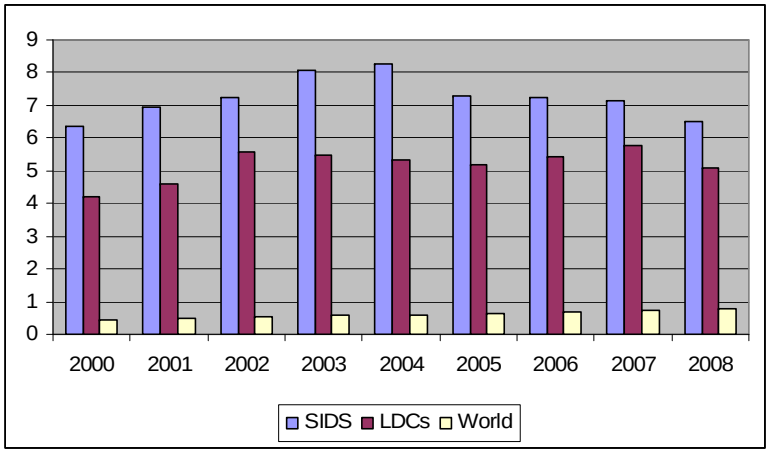
Recent studies have shown that one of the difficulties in achieving debt reduction in some SIDS is achieving the correct balance between their fiscal stance, as measured by the external debt stock, and their export performance, as measured by the current account balance, both in relation to GDP.[7]

Workers' remittances have a bigger impact on the economies of SIDS than on those of any other group of countries in the world.

Workers' remittances as a portion of Gross Domestic Product (GDP) have dramatically fluctuated over time, and have done so at a faster rate in SIDS than anywhere else in the world. In 2005, six SIDS countries – Tonga, Haiti, Jamaica, the Dominican Republic, Cape Verde, Kiribati and Guinea-Bissau – were among the top 20

remittance receiving countries (as a percentage of GDP) in the world. However, research suggests that these flows are more volatile in SIDS than in most other countries. Moreover, given the close relationship observed between migrant transfers and economic conditions in the home country, recent studies highlight that the impact of remittances on local economies may vary significantly as economic activity in SIDS changes.[8]

Workers' remittances and compensation of employees, received (% of GDP)



Source: The World Bank, World Development Indicators, 2009.

Remittances in Guyana

"Officially recorded remittances into Guyana rose to US$ 225.9 million at the end of 2006, from US$29.2 million at the end of 2000. The growing importance of these funds as a source of foreign exchange is reflected in the fact that they have outpaced foreign direct investment and official development assistance.

These figures, however, underestimate the true magnitude of remittances, since they represent only official balance of payments statistics and exclude remittances transferred through informal channels. Although a substantial proportion of remittances are used for consumption purposes and smaller amounts dedicated to productive activities, collectively, these expenditures contribute to the achievement of the development needs of the country."[9]

FOTO 4.2 ----------

FOTO 4.2 ----------

References

[1] The Commonwealth Secretariat (2009), Small States and the global financial crisis: sustaining development in small states in a turbulent global economy, Summary report of July 2009 London Conference.

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[3] ECLAC (2010), *Caribbean regional report for the five-year review of the Mauritius Strategy for the further implementation of the Barbados Programme of Action for the sustainable development of small island developing States*, Subregional Headquarters for the Caribbean, Port of Spain.

[4] ESCAP (2010), *Sustainable Development in the Pacific: Progress and Challenges*, Pacific Regional Report for the 5-year review of the Mauritius Strategy for the further implementation of the Barbados Programme of Action for Sustainable Development of SIDS, ESCAP Subregional Office for the Pacific, Suva, Fiji.

[5] Data from Singapore was not included in the calculation of this graph.

[6] The World Bank Logistics Performance Index. Available at: http://go.worldbank.org/88X6PU5GV0

[7] ECLAC (2007), *Debt accumulation in the Caribbean: origins, consequences and strategies*, (LC/L.2710-P), Port of Spain, May.

[8] M. Jackman, R. Craigwell and W. Moore (2009), *Economic volatility and remittances: evidence from SIDS*, Journal of Economic Studies, 36(2), pp. 135-146.

[9] ECLAC (2010), *Caribbean regional report for the five-year review of the Mauritius Strategy for the further implementation of the Barbados Programme of Action for the sustainable development of small island developing States*, Subregional Headquarters for the Caribbean, Port of Spain, Trinidad and Tobago.

V. Tourism

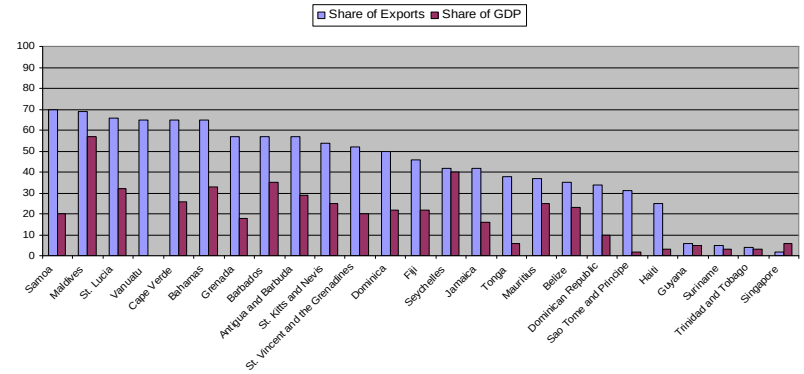
Many SIDS depend on the tourism sector as a key contributor to development and economic growth. However, dependence on tourism is a significant source of economic vulnerability for SIDS, particularly due to the high volatility of tourism revenue growth. Over-development of tourism can be environmentally, culturally and economically disruptive, especially in view of competition for scarce land. The growing emphasis on specialized and eco-tourism aims to address the need for maintaining the ecological balance necessary to ensure the sustainability of the tourism sector.

Tourism receipts account for the majority of exports in many SIDS.

Due to limited resource endowments that have historically hindered the formation of a diversified economic base, among other factors, SIDS tend to be relatively more dependent on tourism than other states. On average, international tourism receipts accounted for 51 per cent of the total value of exports of SIDS in 2007, up from 42 per cent in 2000. This compares to less than 10 per cent in other developing countries. In 2007, the share of international tourism receipts was larger than 50 per cent of exports in twelve SIDS. In the Maldives, the tourism sector accounted for about 57 per cent of GDP in 2007.

---------- **Photo 5.1** ----------

International tourism receipts as percentage of exports and GDP

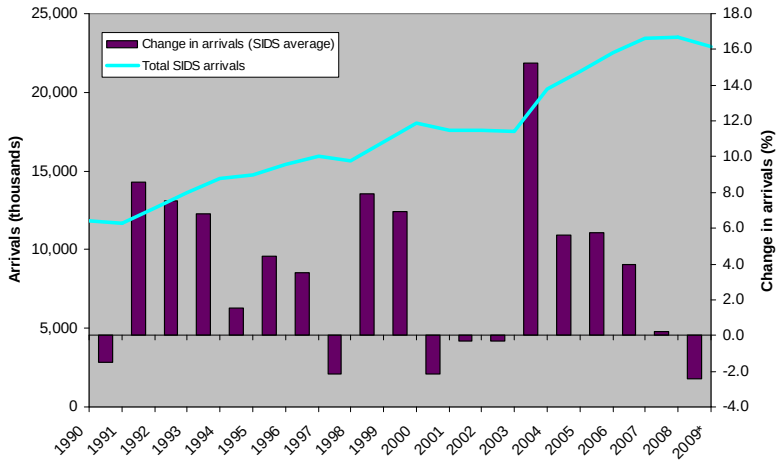


Source: World Bank, World Development Indicators, 2007.

While tourist arrivals have increased over the past two decades, tourism growth has been erratic.

The last ten years have been characterised by a fairly irregular growth pattern in terms of tourist arrivals, worldwide as well as in SIDS, with five very strong years with above long-term average growth (2000, 2004-2007) and five years with little growth or decline (2001-2003, 2008-2009). The periods of slowing down or decline in tourism arrivals may be partly attributed to security concerns and the threat of terrorism, the dotcom bubble, pandemics, and the financial and fuel crises. Additionally, climate change and the resultant increase in the frequency and intensity of extreme weather events may have also caused a decline in tourist arrivals in SIDS – an impact that is expected to worsen. Tourist concern about the carbon footprint of long distance travel, as well as climate change mitigation policies that impose a tax on long haul flights may also negatively impact SIDS tourism growth.[1]

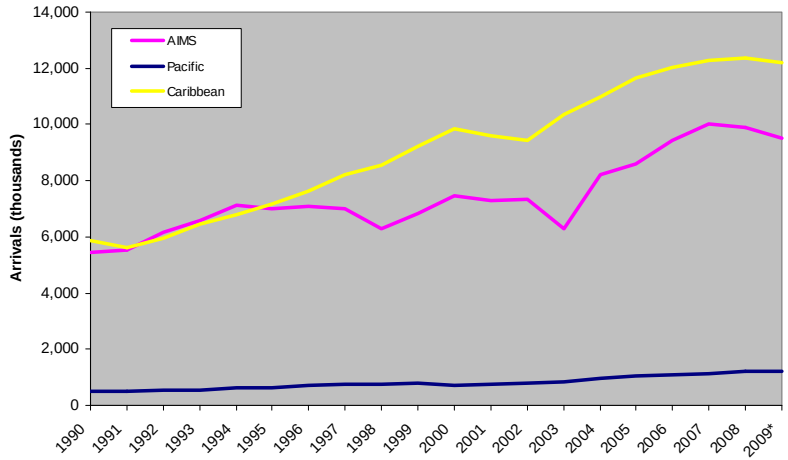
Tourist arrivals and change in number of arrivals



Source: UNWTO, 2009.

The Caribbean and AIMS regions continue to account for the majority of tourist arrivals among the SIDS. The tourism sector in Pacific SIDS grew more slowly than the other regions from 1990 to 2009, however it appears to have continued its growth, at the same time as tourism in the other regions has slowed. Fiji remains the top destination in the Pacific, while the Cook Islands, Samoa, and Vanuatu are becoming increasingly popular.[2]

Tourist arrivals by region



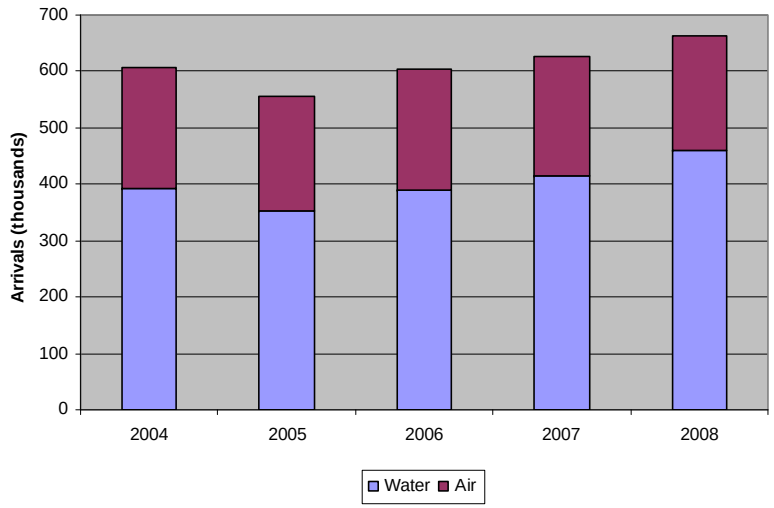
Source: UNWTO, 2009.

---------- **Photo 5.2** ----------

Water transport is increasing in importance as the leading means of tourist arrivals.

The growth of marine tourism, including yachting and cruise tourism requires greater investment in port infrastructure, to accommodate the increased size and number of vessels. Congestion and overcrowding are major concerns, especially in Caribbean ports, due to the resulting environmental pressures and the perception of overcrowding by both residents and tourists.

SIDS tourist arrivals by means of transport

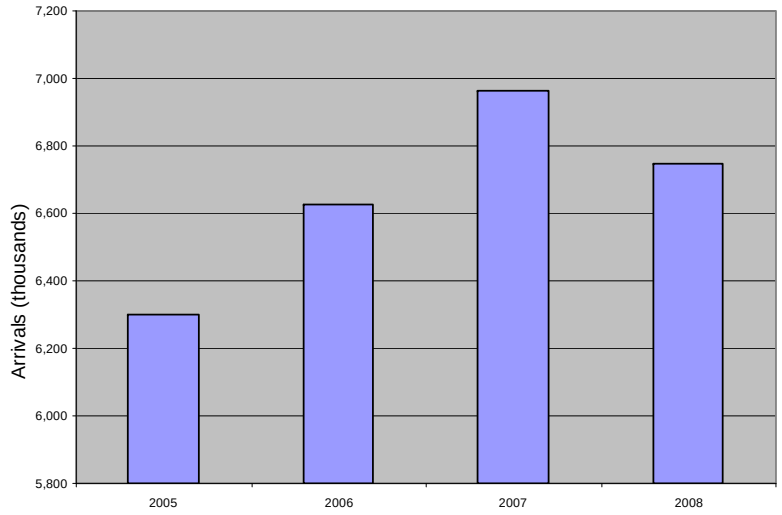


Source: UNWTO, 2009.

Cruise ship tourism continues to be important for Caribbean SIDS, and is growing in imporatnce in other regions.

The Caribbean is a major destination for cruise ships, with up to 18.2 million arrivals in 2008.[3] This represents a 7.1 per cent decline in cruise visitors from 2007, when approximately 19.5 million passengers visited the Caribbean. The Bahamas is one of the main cruise destinations in the Caribbean, hosting some 2.9 million passengers in 2008.

Cruise ship arrivals in Caribbean SIDS



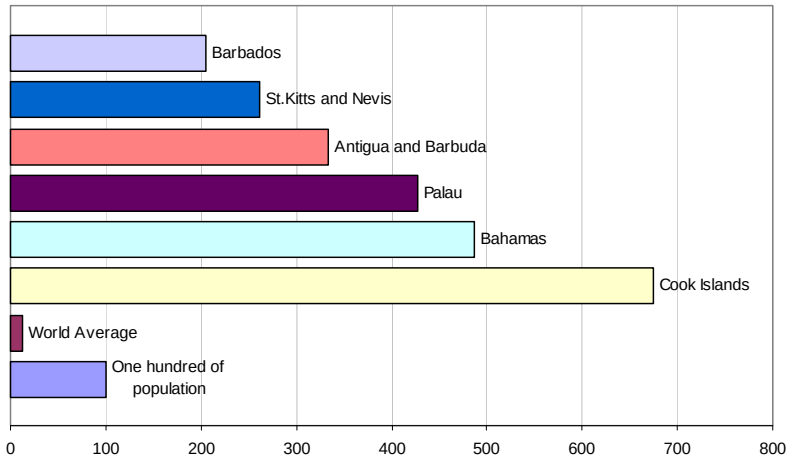
Source: Caribbean Tourism Organization, 2009.

Note: Countries covered: Antigua and Barbuda, Bahamas, Barbados, Dominica, Dominican Republic, Jamaica, Saint Lucia, Saint Vincent and the Grenadines

The social, environmental and economic effects of tourism on host countries can be detrimental if development is not well-planned.

Several SIDS are on the list of the world's top 25 tourism destinations relative to population. The Cook Islands receive nearly seven tourists for every local resident per year, whereas the world average is roughly one tourist for every 10 local residents. Large inflows of tourists can put pressure on local cultures and social systems. Fragile ecosystems are at risk from over-development, particularly in coastal areas. SIDS have prioritized sustainable tourism development policies, working to establish safeguards designed to minimize the environmental impacts of tourism.

Top tourism destinations relative to population



Source: UNWTO, 2007

Diversifying the Tourism Sector in Mauritius

Mauritius has established itself as a recognized destination offering high levels of tourism products and services. The basis of its success has been the natural beauty of the island, which has been widely publicized to attract international visitors. In 2009, the Mauritius tourism sector accounted for 8.9 per cent of GDP, created 26,922 direct jobs and generated $1190 million USD as tourism receipts.[4]

In order to achieve its target of 2 million tourists by 2015, the government has taken a series of measures during the past five years, including gradually liberalizing air access; positioning Mauritius as a cruising destination; taking measures to protect the environment (pollution control, sound environmental management, protection of natural resources, landscaping, etc.); and promoting sustainable tourism through use of renewable energy and eco-friendly technologies.

Mauritius has performed well in developing a distinctive form of relatively high-end tourism. However, the sector faces a number of challenges, including climate change induced loss of beaches and degradation of coastal ecosystems, damage to coastal infrastructure, potential decline in the appeal of Mauritius as a tourist destination due to concern over carbon dioxide emissions generated by long haul flights, fluctuating fuel prices and external economic shocks.

To maintain a competitive edge as an up-market destination, Mauritius has sought to maintain its attractiveness through the diversification of its tourism product. Given the scarcity of beach frontage sites, emphasis is being laid on the development of nature based inland tourism, eco-tourism and cultural tourism. Additionally, Mauritius is focusing on attracting investment to position itself as a hub for medical tourism, targeting clientele from continental Africa, who would otherwise travel to Asia for specialized medical treatment.

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[2] UN ESCAP (2010), *Sustainable Development in the Pacific: Progress and Challenges*, Pacific Regional Report for the 5-year review of the Mauritius Strategy for the further implementation of the Barbados Programme of Action for Sustainable Development of SIDS, ESCAP Subregional Office for the Pacific, Suva, Fiji.

[3] Caribbean Tourism Organization (2009). Including non-SIDS countries and territories.

[4] Government of Mauritius (2010), National Assessment Report.

VI. Energy

High dependence on oil imports has placed a great strain on the economies of many SIDS, especially in the wake of the energy crisis. During recent years, the increasing cost of fuel and transport to remote islands has exacerbated the cost disincentive to foreign investment, contributing to undermining competitiveness. Many SIDS have also been relatively slow to adopt energy efficiency practices and designs, mainly due to lack of appropriate policy, information, awareness and education, and a general reluctance by consumers and energy suppliers to make the initial investment required to achieve future savings.

With few exceptions, most SIDS are highly dependent on imported fossil fuels for energy.

The vulnerability of SIDS in terms of energy resources is mostly characterized by their dependence on imported oil and other fossil fuels for electricity generation and transport. On average, more than 90 per cent of energy is sourced from oil imports, which account for the largest claim on foreign exchange earnings in SIDS. Fuel imports account for a greater percentage of merchandise imports in SIDS than in LDCs. This percentage is also increasing at a faster rate in SIDS than in most other countries in the world. Given the multi-island nature of many SIDS, transport is the fastest growing consumer of oil, with fuel needs for transport to remote islands especially high. Consequently, SIDS are increasingly exposed to the volatility of oil prices, as demonstrated by the severe impacts that the global energy crisis has had on the balance of payments of many SIDS. In monetary terms, an increase of US$10 in the world crude oil price translates to a 1.5 per cent decrease in GDP in Pacific SIDS. In some cases, these economic stresses have also translated into social instability.

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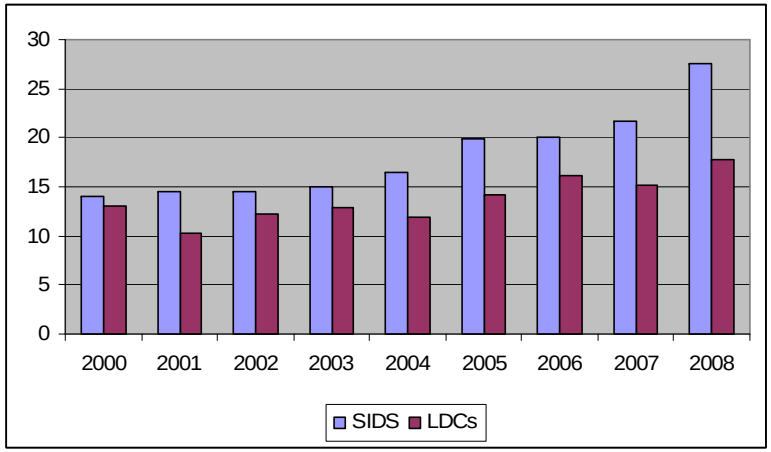
Fuel imports (% of merchandise imports)



Source: The World Bank, World Development Indicators, 2009.

The Bulk Procurement of Petroleum Initiative

In 2008, the Cook Islands, Nauru and Tuvalu signed a memorandum of understanding (MOU) outlining the central tenets of how the Bulk Procurement of Petroleum Initiative would be implemented. In 2009, Niue joined the initiative, while the Governments of both Tonga and the Solomon Islands have indicated that they also intend to sign the MOU.

The purpose of the bulk procurement of petroleum initiative is to capture significant savings and benefits from more efficient import management by aggregation of demand, and to provide opportunities for strategic cost reductions at various stages of the procurement process such as coastal shipping, handling at ports and distribution. In addition, the initiative also strives to provide a strategic focus to the procurement of core energy needs, including security of supplies, management of strategic petroleum storage, risk management, and increased private sector participation in the downstream petroleum distribution sector, as well as helping to achieve optimum resource allocation, avoiding duplication of efforts, and ensuring that procurement planning reflects energy security goals and priorities as set out in the Regional Pacific Islands Energy Policy and National Energy Policies.

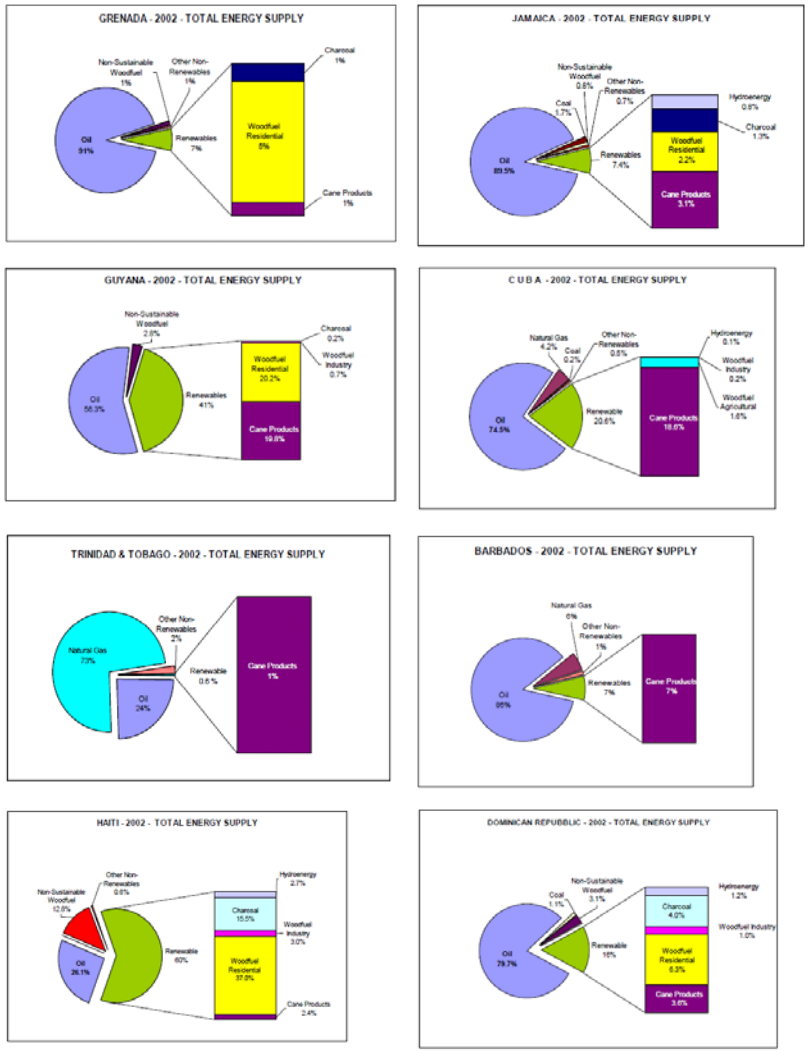
More extensive use of renewable energy in SIDS would significantly contribute towards reducing their vulnerability and building their resilience.

Although renewable energy potentials vary greatly between SIDS, most SIDS have adopted strategies for promoting renewable energy such as solar, wind, ocean, wave, geothermal, biomass and hydro power. However, despite a large number of initiatives, relatively little progress has been achieved in replacing fossil fuels with low-carbon energy sources. As a result, oil is still by far the most important commercial energy source for the vast majority of SIDS. This is partially due to the use of fossil fuel for transport, where viable alternative technologies are often not readily available.

Although there are no comprehensive energy statistics for SIDS, in most SIDS the increasing rate of fossil fuel consumption continues to outpace clean energy production. This may be attributed to lack of information, limited local technical and institutional capacity for the implementation of renewable energy technologies, the absence of policies to promote their research and development, and, most significantly, inadequate financing and investment opportunities for their development, whether from private sources or through international support.

Despite these challenges, positive steps have been taken and the promotion of renewable energy technologies is high on the agenda of many SIDS. In the Pacific, the national energy policies of Fiji and Vanuatu promote the production of biofuels through planting on degraded lands. The government of Vanuatu uses coconut oil (blended with diesel or kerosene) for its vehicle fleet, and in the Marshall Islands there are cars and boats running on coconut oil. The oil will also come from outer islands once mini-electricity systems have been installed for processing copra into oil. Furthermore, in Fiji, Solomon Islands, Samoa and Vanuatu hydropower is being increasingly used for electricity production. In the Caribbean, government incentives in Barbados and Antigua and Barbuda have encouraged the successful installation of 35,000 solar water heaters, while in Jamaica, Dominica and Haiti hydropower is being increasingly used for electricity production. More recently, biomass has become an important sources of renewable energy in many SIDS, mostly in the form of fuel wood and bagasse coming from the production of sugarcane. For example, in Mauritius, approximately 15 percent of the energy requirements of the island are being met from bagasse, and this proportion is expected to increase in the coming years. Furthermore, given the challenges of waste management and disposal, SIDS are increasing their attention to waste-to-energy solutions in order to convert organic waste into fertilizers and energy.

Total energy supply in Caribbean SIDS



Source: ECLAC, GTZ (2004), *Renewable Energy Sources in Latin America and the Caribbean: situation and policy proposals.*

Note: Complete energy data sets were available only for the SIDS shown.

FOTO 6.2 ----------

FOTO 6.2 ----------

Fiji's National Energy Policy

The development and approval in 2006 of Fiji's National Energy Policy (NEP) has provided a common framework for both the public and private sector to work towards the optimum utilisation of energy resources for the overall growth and development of the economy. The policy focuses on four key strategic areas that include: national energy planning, energy security, the power sector, and renewable energy development.

As a result of these efforts, around 66.8 per cent of the country's electricity requirements are met from renewable energy sources, which include: 62.1 per cent hydro, 4.1 per cent biomass and 0.6 per cent wind and other renewable resources. Imported petroleum for diesel back-up generators meets the remaining balance of 33.2 per cent.

By 2012, the Fiji Electricity Authority (FEA) plans to invest up to $350 million in parallel with some $150 million of private investment in Independent Power Producers (IPP) and Public Private Partnership (PPP) arrangements.

VII. Natural Resources

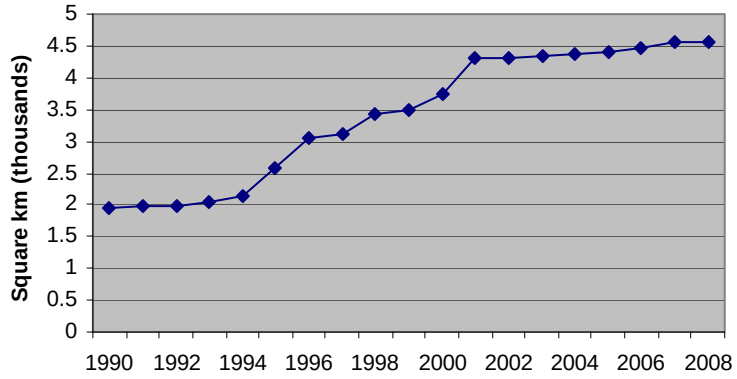
SIDS derive much of their economic, environmental and social well-being directly or indirectly from the rich natural resources in their immediate environment. While notable progress has been achieved over the past decade in the management of natural resources, much remains to be done. The introduction of invasive and alien species, deforestation, overexploitation of land, pollution, natural disasters, coral reef deterioration and habitat degradation are just a few of the serious threats facing SIDS. The impact of these threats has been especially grave on island biodiversity, which stands as a record of millions of years of evolution and has an inherent value to humankind.

As a result of both national and international efforts, the average proportion of terrestrial and marine protected areas has been steadily increasing in SIDS.

The sound management of terrestrial and marine resources is of particular importance for SIDS, given limited land resources and increasing population pressures in coastal areas. Population pressure, deforestation, land degradation, erosion and unsustainable agricultural practices have increased the vulnerabilities of many SIDS and led to intense competition among land-use options, exacerbated by a lack of integrated approaches to coastal and marine resource management.

In recent years, coastal zone management plans have been developed by a number of SIDS to address degradation of marine and coastal environments due to land-based activities and climate change and to optimize the contribution of coastal areas to development. Furthermore, a number of international conservation initiatives have been developed, including the Coral Triangle Initiative (2007), the Micronesia Challenge (2006) and the the Western Indian Ocean Challenge. These 'challenges' are commitments to protect between 20 and 30 per cent of marine and coastal resources by the year 2020.

Proportion of terrestrial and marine areas protected in SIDS

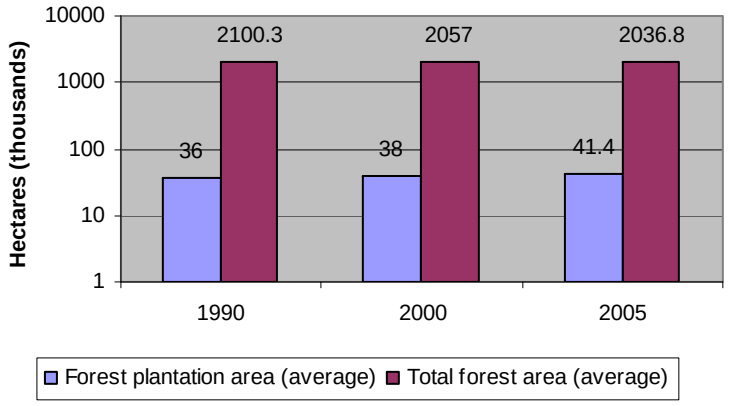


Source: UN MDG Indicators Database, 2010.

The increase in forest plantation areas is outpaced by rising deforestation rates in SIDS.

Decline in the coverage as well as the quality of forests has undermined the natural capacity of SIDS to buffer against extreme weather events, thereby increasing the severity of the impacts of natural disasters. Landslides and floods, which killed over one thousand Haitian nationals following heavy rains in 2004, typify the vulnerability of SIDS in this regard.

Deforestation and inappropriate land use practice in SIDS have also adversely affected groundwater recharge and water retention capacities of soils, directly contributing to the loss of rivers, decreased rainfall, watershed degradation and decline in freshwater sources.



Source: FAO (2005), *Global Forest Resources Assessment 2005: Progress towards sustainable forest management*, Forestry Paper 147, Rome.

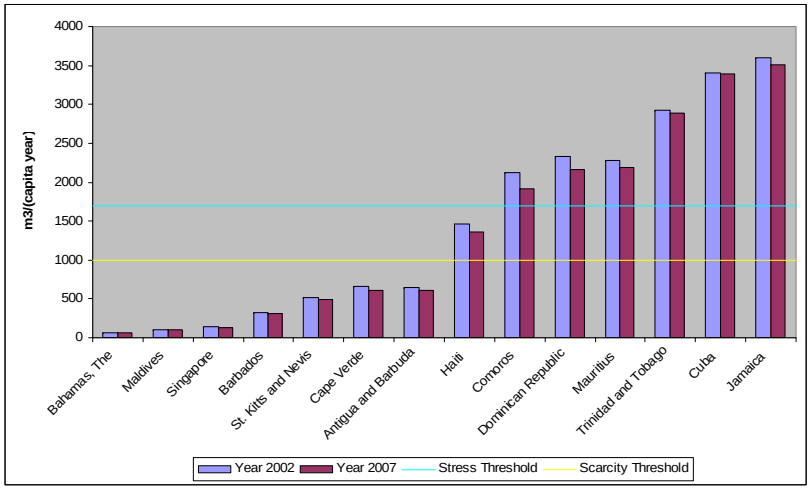
---------- **Photo 7.1** ----------

Salt-water intrusion in the freshwater aquifers of many SIDS is an increasing phenomenon. As a result, per capita renewable internal freshwater resources are decreasing.

SIDS face major constraints in terms of the quantity and quality of freshwater resources, given that they have scarce surface freshwater aquifers and often rely on groundwater. These constraints are further exacerbated by sea-level rise and flooding, with consequent increased salt-water intrusion into surface and groundwater sources.[1]

Some countries, like Barbados, Cape Verde, Kiribati and Tuvalu, have chronically limited freshwater resources, low annual rainfall and shallow water tables. Even where rainfall is abundant, access to clean water has been restricted by the lack of adequate storage facilities and effective delivery systems. In addition to salinization, long-term threats to water quality include rapid population growth in urban areas, contamination of freshwater sources by human and livestock waste, industry-related pollution and, in some cases, pesticides and other agricultural chemicals. As a result, per capita renewable internal freshwater resources are decreasing.

Renewable internal freshwater resources



Source: The World Bank, World Development Indicators, 2009.

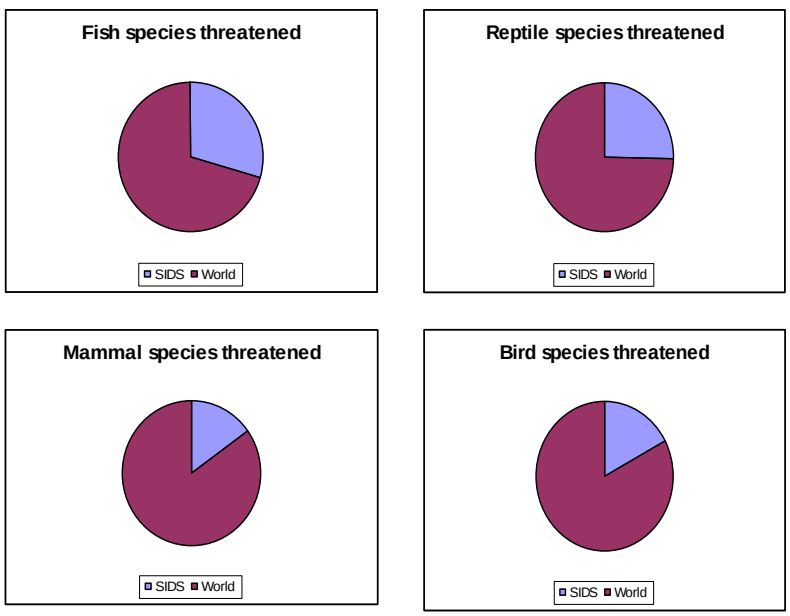
Note: Renewable freshwater resources of a country are conventionally defined as the sum of the mean annual surface runoff and groundwater recharge. This represents the amount of water that can be withdrawn on an annual basis without violating the concept of sustainability[2]. Non-renewable groundwater is not included. 1000 m3/p/y and 1700 m3/p/y are the critical values for the water stress index (WSI)[3]. These values are important because the World Bank and other international aid organizations use them to prioritize and to direct aid to developing nations[4].

To address these challenges, some SIDS have been working to develop and implement comprehensive water management strategies that include technologies for improving irrigation, groundwater extraction and rainfall catchment. Water management programmes that promote capture and storage, conservation, and sustainable use, especially for agriculture, have been integral to meeting local water needs for both domestic and commercial use.

SIDS make a contribution to global biodiversity that far outweighs their collective land area. In this sense, they can be thought of as biodiversity 'hot spots'.

SIDS boast a truly unique assemblage of life. Many island species are endemic – found nowhere else on Earth. Given the strong correlation between isolation, island size, topographic variety, and the number and proportion of endemic species, SIDS host higher concentrations of endemic species than many continents. Examples include Mauritius, where aproximately 50 per cent of all higher plants, mammals, birds, reptiles and amphibians are endemic; Cuba, which is home to 18 endemic mammals, i.e., six times more than nearby Guatemala and Honduras; and the Seychelles, which has the highest level of amphibian endemism in the world. As a result, SIDS also host a disproportionately large percentage of the world's threatened species.[5]

---------- **Photo 7.2** ----------



Source: IUCN (2007). *IUCN Red List of Threatened Species*, Gland, Switzerland.

The relatively small number of island species coupled with their strong interdependency and co-evolution, which makes them highly reliant on each other for survival, makes island species highly vulnerable to extinction. The growing number of threatened and rare island species is highlighted by the disproportionate number of extinctions compared to those of continental systems. Almost 50 per cent of the 724 animal extinctions recorded during the past 400 years were island species. This percentage reaches 90 per cent if we only consider bird species.

Biodiversity in the Seychelles

Biodiversity depletion and transformation are not just conservation issues in the Seychelles. Through the provision of a support resource base biodiversity is at the very core of the Seychellois economy. Today, major threats to terrestrial and marine biodiversity include habitat destruction; introduction of invasive species; over-harvesting; coral bleaching; coastal reclamation; and siltation.

To counteract these and other threats to its biodiversity, the Government of Seychelles has been very proactive over the years. Protected natural areas in Seychelles constitute a total land area of 19,760 hectares (ha), i.e. about 43 per cent of Seychelles' total land area, as well as some additional 23,000 ha of surrounding reefs and marine areas. Consequently, Seychelles has one of the largest proportions of protected conservation areas in the world, both in terms of its surface area and per capita.

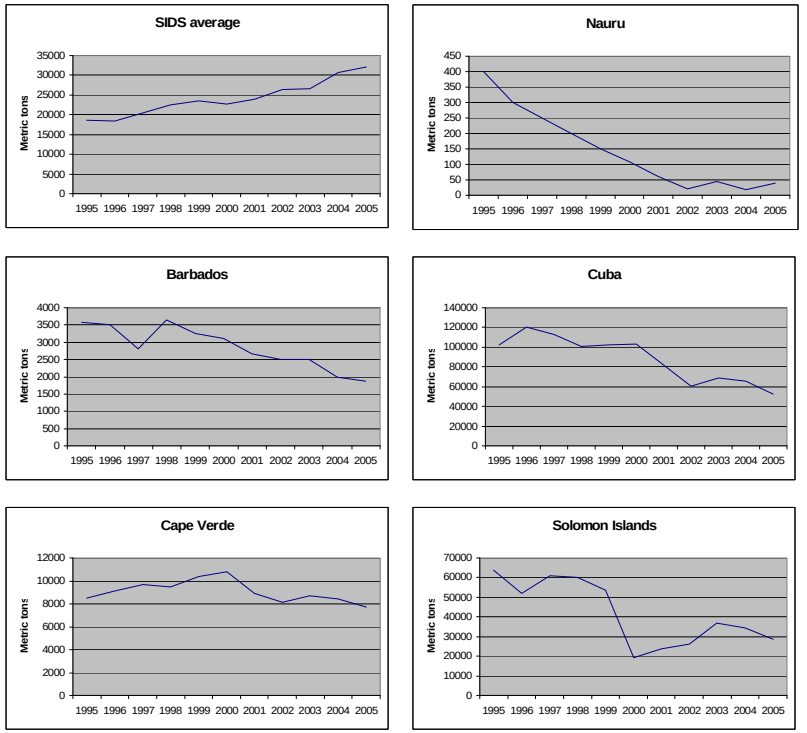
A major step towards safeguarding national biodiversity was the introduction of the Seychelles' first National Biodiversity Strategy and Action Plan (NBSAP). In addition, in 2005, the Government approved the national Policy for Wetland Conservation and Management, and also secured funding for a project entitled Mainstreaming Biodiversity in Production Landscapes and Sectors. Furthermore, in September 2007, the Sea-Level Rise Foundation was launched by the President of Seychelles, H.E. Mr. James Michel, at the First Global Island Partnership (GLISPA) Strategy Meeting.

While overall fishery production levels are increasing, negative trends are visible in a number of countries.

SIDS are highly dependent on their coastal and marine resources, particularly fish stocks, for their livelihoods. In the Pacific, tuna fishery contributes more than 10 per cent of GDP and over 50 per cent of exports in some SIDS; while subsistence fishing supplies 50 to 90 per cent of the animal protein diet of people in rural areas and remote islands. To protect their valuable resources, SIDS have established vessel monitoring systems, introduced national fishery plans and policies, and developmed aquaculture to promote food security. As a result, the overall fishery production levels are increasing in SIDS. However, illegal, unreported and unregulated fishing, harmful fishing methods, and overfishing are severely damaging fish stocks in many SIDS.[6]

---------- **Photo 7.3** ----------

Fishery Production Totals (aquaculture and capture)



Source: FAO (2007), Fisheries and Aquaculture Information and Statistics Service. 2007. Total production 1950-2005. FISHSTAT Plus.

Furthermore, climate change and sea-level rise,[7] as well as the loss of coral reefs, and ocean warming and acidification, may negatively impact fisheries in SIDS. There is a widening gap between the fish needed for food security and the fish available from coastal fisheries in many countries in the Pacific region, exacerbated by population growth. The potential economic loss is cause for equal concern. Western and Central Pacific Ocean tuna fisheries have an estimated annual market value of US$6-8 billion, about half of which is taken from the territorial waters of Pacific SIDS and Territories, providing

revenues of about US$60-70 million in licensing fees from predominantly foreign fishing fleets to the region.

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VIII. Social Development

SIDS have made considerable progress toward the attainment of certain social development goals, including health, education, gender balance, and access to water and sanitation. However, while many SIDS experienced steady economic growth rates prior to the global financial crisis, systematic eradication of poverty has remained a challenge for most countries. Limited human resource capacity is an ongoing issue, particularly due to the high levels of emigration among the most educated population.

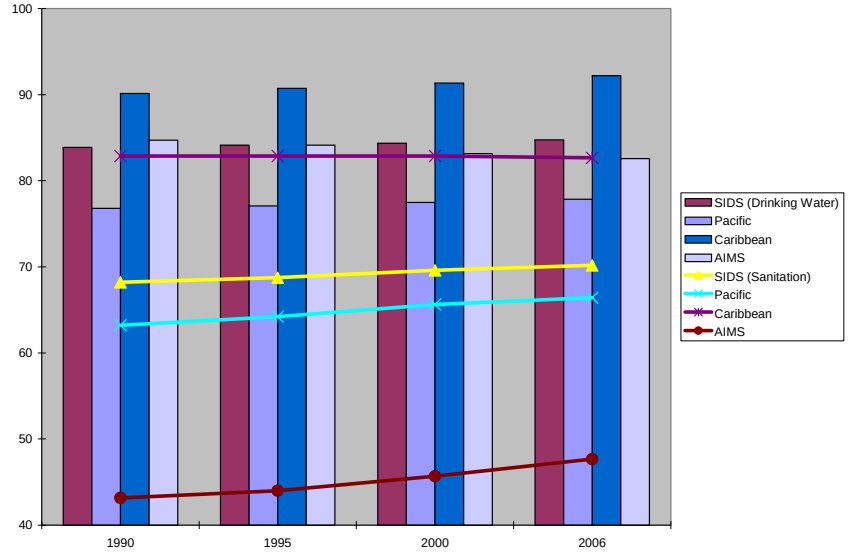
Access to drinking water and sanitation is improving in most SIDS.

There is significant disparity among the regions with regard to access to improved drinking water and sanitation facilities, with the Caribbean region having achieved the highest levels among the SIDS, and the AIMS region lagging behind, though improving more rapidly in recent years. Some countries, such as Comoros, Maldives and Samoa, show a reverse trend for access to drinking water, while Haiti and the Federated States of Micronesia have seen a worsening of access to improved sanitation facilities.

The fragile and sometimes over-burdened water distribution and sanitation systems of many SIDS are further threatened by natural disasters. Following hurricanes, there is often a heightened risk of contamination of these systems due to service interruption, with the increased probability of water-borne disease outbreaks.

---------- **Photo 8.1** ----------

Population with sustainable access to improved drinking water and sanitation



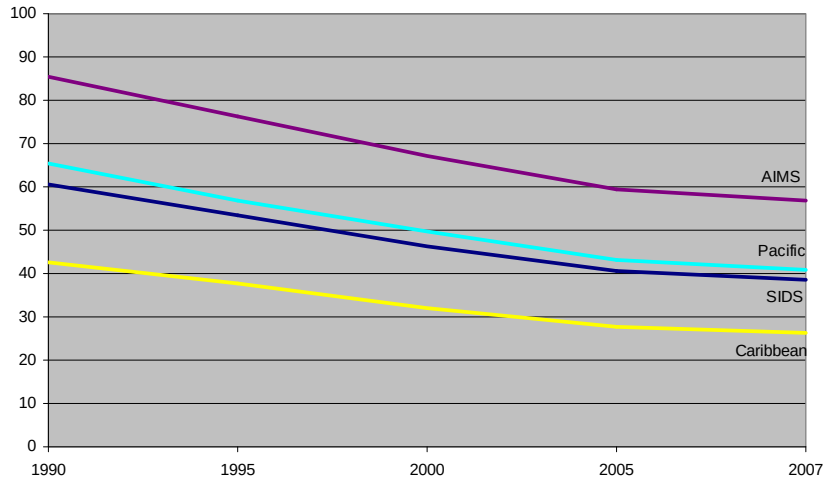
Source: UN MDG Indicators Database, 2010.

Note: Data not weighted by population.

SIDS have made substantial progress in reducing child mortality.

Significant gains in reducing child mortality have been made by Maldives, which lowered its rate to 30 per 1,000 live births, less than one third of its 1990 rate of 111. Haiti and Comoros reduced their child mortality by half, but their respective rates remain high at 76 and 66. Guinea-Bissau (198), Sao Tome and Principe (99) and Timor-Leste (97) had the highest rates of child mortality among the SIDS in 2007.

Children under 5 mortality rate per 1,000 live births



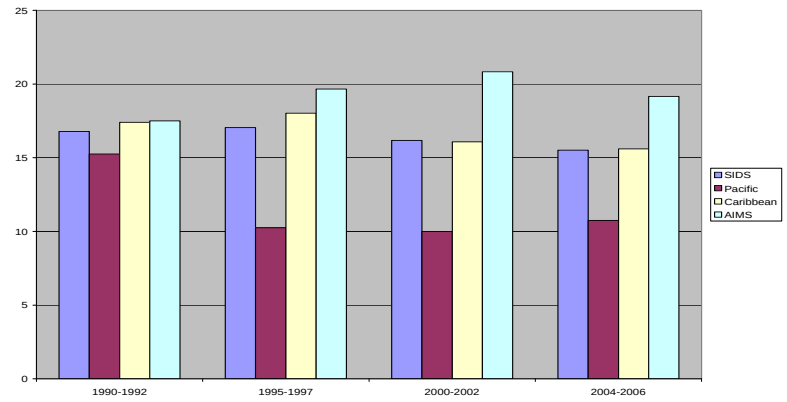
Source: UN MDG Indicators Database, 2010.

Note: Data not weighted by population.

The percentage of undernourished population is declining overall, but adequate nutrition remains an issue.

While the general trend shows a gradual decrease in the share of undernourished population among the SIDS, several countries, including Antigua and Barbuda, Comoros, Grenada, Guinea-Bissau, and Timor-Leste show the opposite trend. Over 50% of the populations of Comoros and Haiti were undernourished in 2004-2006. In addition to undernourishment, malnourishment is a public health problem in many SIDS. The trend towards urbanization and increased dependency on food imports and non-traditional, often processed, foods, which are nutritionally inferior, are leading to higher rates of obesity, heart disease and diabetes. Vitamin and mineral deficiencies (VMDs), which can coexist in populations that are overweight or undernourished, are an ongoing concern. Nutritional anaemia is the most prevalent VMD disorder found in most Pacific SIDS. Anaemia affects the cognitive development of children, reduces adult productivity, increases the risk of pregnancy complications and maternal mortality, and impairs immune response.[1]

Percentage of population that is undernourished



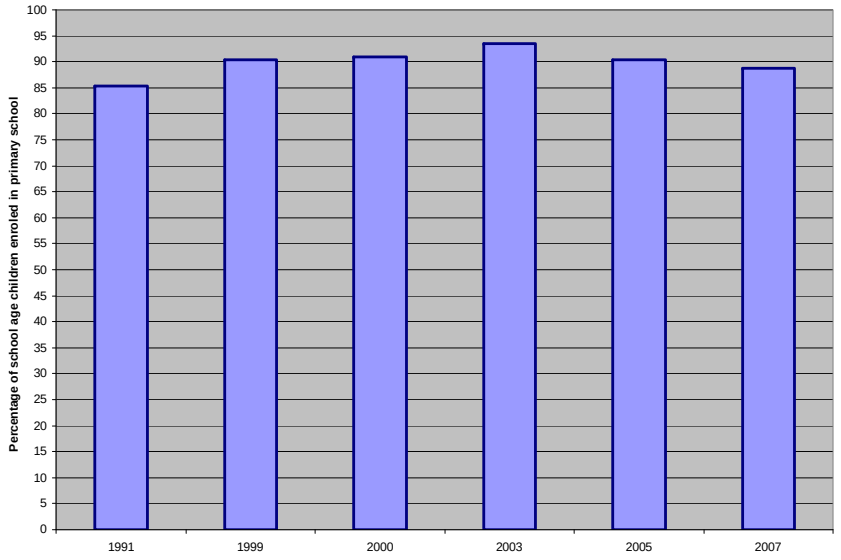
Source: FAO, 2010.

Note: Data not weighted by population. Pacific average reflects only Kiribati, Solomon Islands, Timor-Leste and Vanuatu due to data availability.

Enrolment in primary education shows mixed progress among the SIDS, and there is concern about declining completion rates.

Participation in primary education is relatively high among the SIDS, with net enrolment rates varying from 63 to 99%. However, in some SIDS (Bahamas, Cape Verde, Cook Islands, Dominica, Dominican Republic, Grenada, Trinidad and Tobago and Vanuatu), net enrolment ratios are declining. There has also been mixed progress on increasing the number of children who complete school, with primary school completion rates declining most significantly in Papua New Guinea, Vanuatu, the Dominican Republic and Fiji, but improving in Samoa, Tonga and Sao Tome and Principe.
General literacy rates are high among the SIDS, but literacy is still not universal, with Haiti, Papua New Guinea and Belize being of greatest concern.

Net enrolment rate in primary education (SIDS Average)



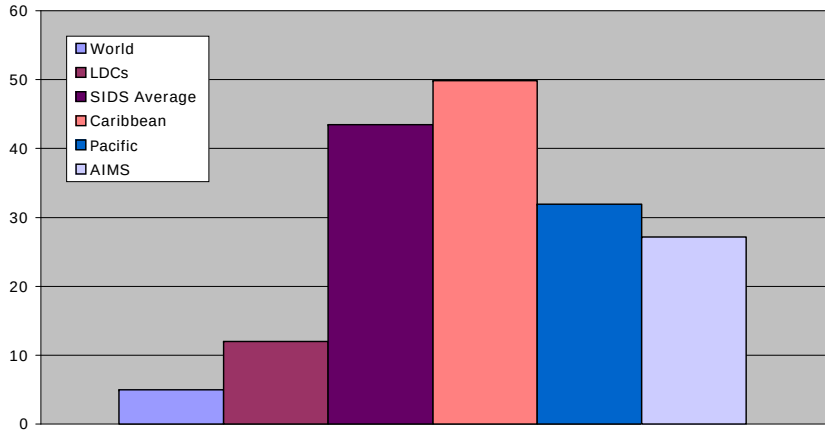
Source: UN MDG Indicators Database, 2010.

---------- Photo 8.2 ----------

The limited capacity of SIDS is further exacerbated by the emigration of their most educated residents.

A university graduate from one of the SIDS is nearly four times more likely to emigrate from his or her country than a university graduate from an LDC. When compared to the world as a whole, SIDS are eight times more likely to experience 'brain drain' as manifested by the emigration of their tertiary-educated populations. Since most SIDS do not have nationally-based universities, students relocate to attend education institutions in regional centres or in developed countries, often staying on to work after the completion of their studies. The growing proliferation of ICT, including increasing availability of distance learning and online degree programs is expected not only to allow a greater number of SIDS residents to access higher education, but may also help stem brain drain.

Emigration rate of tertiary educated (% of total tertiary educated population), 2000

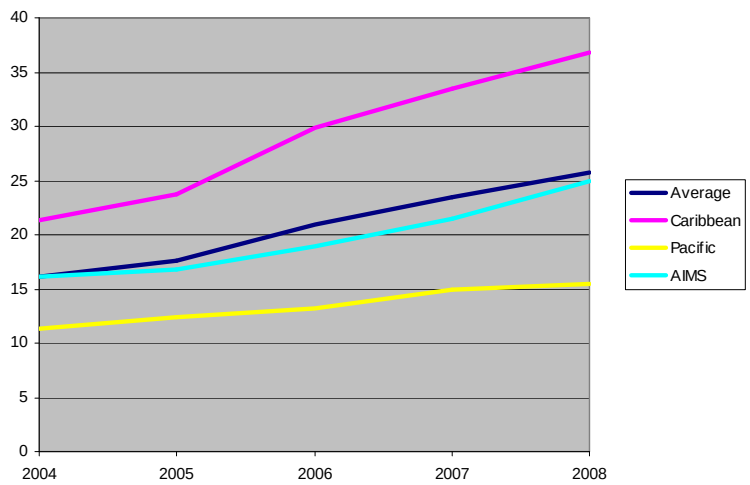


Source: The World Bank, World Development Indicators, 2009.

Information and communication technologies (ICTs) continue to play a major role in the development of SIDS in many areas.

ICTs offer a singular means for SIDS to address their development constraints of remoteness, lack of economies of scale, and limited human resources. SIDS governments, the private sector and end users are becoming increasingly connected to the internet, leading to opportunities for greater economic diversification, improved institutional capacity, and innovative development. Many countries, particularly in the Caribbean and AIMS regions, have developed information-based service industries, including data entry and manipulation, information management, call centers and financial services. E-government and e-learning have increased substantially as countries seek to use ICT to connect their citizens for education, commerce, health and cultural development. This has been facilitated by a number of steps taken in SIDS toward investment in infrastructure, adoption of comprehensive legislation and liberalisation of the communications sector.

Internet users (per 100 people)

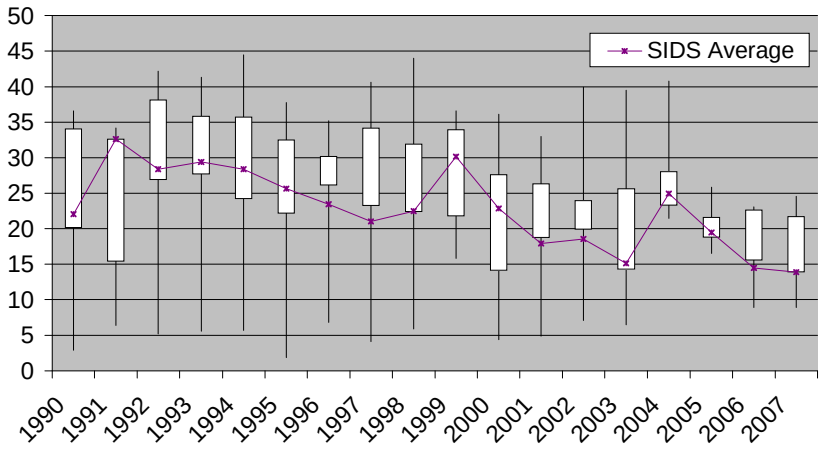


Source: ITU, 2010.

Youth unemployment continues to be a concern for many countries, but the general trend is toward improvement.

The integration of youth into society is challenged by the frequent lack of connectivity between the educational system and the labour market. Youth unemployment is a priority issue, particularly in the Caribbean SIDS such as Saint Lucia, where it reached 41% in 2004. Combined with relatively elevated school drop-out rates, youth unemployment can have detrimental social effects, contributing to crime and teenage pregnancy.

Youth unemployment rate, aged 15 - 24



Source: UN MDG Indicators Database, 2010.

Note: Graph based on sparse data for 18 SIDS, predominantly in the Caribbean.

Improving Social Services in Samoa

In 2008 Samoa ranked 77 out of 177 countries in the Human Development Index due to strong social indicators such as life expectancy, literacy and access to water, health and education services.

The Samoan government maintains a strong commitment to education. Primary education is compulsory and free (as of January 2010). In order to incentivize enrolment in the wake of the recent global crises, the government introduced a School Fee Relief scheme, which also supports the achievement of the goal of universal primary education by 2015. The net enrolment in primary education is 98%, without a marked gender difference. More children are staying in school longer and the transition rate to secondary schooling is increasing. Measures are being taken to resolve limited access to senior secondary education and inequitable access to quality education, to improve the quality of teaching staff and to provide adequate facilities for learning. Since Samoa is not endowed with many natural resources, an educated and skilled labour force is considered the most valuable resource for its development.

The government of Samoa has recognized that a healthy labour force is a pre-requisite for effective and efficient management of the economy. Currently Samoa has health indicators equivalent to those of some developed countries. The under-5 mortality rate (per 1000 live births) has declined from 42 in 1990 to 15 in 2008. Similarly, the infant mortality rate (per 1000 live births) has decreased from 33 in 1990 to 9 in 2008. Health promotion and prevention remain key strategic focus areas. Primary health care services are being improved through strengthening primary and secondary prevention and treatment programs for non-communicable diseases (NCD). An integrated community health service has been established and mobile health clinics are in service to serve better rural communities. [2]

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IX. Summary of Progress on Millennium Development Goals

SIDS have progressed well in terms of the gender, health, and certain education and environment goals. However, the SIDS group has progressed less than most other groupings (or even regressed) in terms of economic growth and poverty reduction, as well as in terms of debt sustainability.

	1	2	3	4	5	6	7	8
Antigua and Barbuda	▲	▲	■	▲	●	■		
Bahamas								
Barbados	▲	●	●	●	●	■	■	
Belize	■	▲	■	▲	■	■	■	
Cape Verde		●	●	●	●	▲		
Comoros		■	▼	▲	■			
Cook Islands	●	▲	▲	●	●	▲	■	
Cuba	▲	●	●	●	▲	▲	■	■
Dominica		●	▲	●	●	■	▲	
Dominican Republic		▼	▲	▲	▼			
Fiji	■	■	■	■	■	▼	■	
Grenada	■	▲	▼	▼	●		■	
Guinea-Bissau		▲	▲	■	■	■	■	
Guyana	■	■	▲	▼	■		■	
Haiti		■	▲	▼	▼	▼	▼	
Jamaica								

								
Kiribati		●	●	■	▲	●	▲	
Maldives	●	●	▲	▲	▲	▲	■	
Marshall Islands		▼	●	■		●	■	
Mauritius	▲	●	▲	■	▲	■	●	▲
Micronesia, Federated States of			●	■		●	■	
Nauru		▼	●	▼		●		
Niue	●	●	●	●	●	●	▲	
Palau		●	●	■	●	●	■	
Papua New Guinea	▼	▼	▼	■	▼	■	▼	
Saint Kitts and Nevis								
Saint Lucia								
Saint Vincent and the Grenadines								
Samoa	▲	●	●	■	●	●	▲	
Sao Tome and Principe	▼	▲	▼	▲	■	▲	▼	■
Seychelles								
Singapore				▲		■	▲	
Solomon Islands			▲	■	▼	●	■	
Suriname	■	▲	▼	■	■	■		
Timor-Leste	▼	▲	▲	■	▼	▲	■	
Tonga			●	■	▲	●	▲	
Trinidad and Tobago								
Tuvalu		●	●	■	●	●	▲	
Vanuatu		▼	▲	■	■	●	■	

Icon legend

 Early achiever

 On track

 Slow, possible to achieve if some changes are made

 Regressing/No progress

Source: UNDP MDG Monitor at http://www.mdgmonitor.org, supplemented with data from ESCAP/ADB/UNDP (2009), *The millennium development goals (MDGs) in the Pacific Island countries: taking stock, emerging issues and way forward*. Where indicator progress data was not available from one source, the other source was used. Where data from the two sources showed different levels of progress, the ESCAP/ADB/UNDP (2009) data was used as the most up to date information for the Pacific SIDS.

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