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## PRESS RELEASE

On World Environment Day

# UNEP Foresight Report Warns of Increased Climate Vulnerability and Emerging Threats to Small Island Nations

## Enhanced Disaster Preparedness and Green Economy Options for Better Resilience

## Report Released Alongside Green Economy Study of Barbados on World Environment Day

**Bridgetown, 5 June 2014** – Emerging environmental and socio-economic issues, such as the impacts of climate change and an increase in the frequency and intensity of extreme events, threaten sustainable development and poverty alleviation in Small Island Developing States (SIDS), but adopting green economy approaches can ensure future prosperity, according to two new reports from the United Nations Environment Programme (UNEP).

Released during celebrations in the World Environment Day host nation Barbados, the *SIDS Foresight Report* outlines 20 key emerging challenges and opportunities facing these nations—such as the disproportionate impact of climate change, the loss of biodiversity and forests, and overfishing.

However, it also demonstrates that SIDS can transition to an inclusive green economy and ensure a sustainable prosperous future by taking advantage of opportunities in areas such as renewable energy, sustainable exploration of unexploited resources, developing an ocean-based green economy and leading the world in the development of inclusive indicators that go beyond Gross Domestic Product to include natural resources.

The second report, the *Barbados Green Economy Scoping Study* provides a practical roadmap for policymakers and businesses on the greening of tourism, agriculture, fisheries, building/housing and transportation in Barbados—lessons that can be also be applied in other SIDS.

“Rio+20 emphasized that SIDS have unique vulnerabilities and require special attention during the evolution of the sustainable development agenda in order to achieve the gains required to lift people out of poverty, create green jobs and provide sustainable energy for all,” said UN Under-Secretary-General and UNEP Executive Director Achim Steiner.

“For example, these 52 nations, home to over 62 million people, emit less than one per cent of global greenhouse gases, yet they suffer disproportionately from the climate change that global emissions cause.”

“Fortunately, the *SIDS Foresight Report* and *Barbados Green Economy Scoping Study* demonstrate that we have the tools and capabilities to head off future developmental setbacks,” he added.

“It is up to the international community to support SIDS—not least through building momentum towards a robust climate agreement — to be agreed in 2015, which will cut emissions and minimize the threat of climate change for these nations.”

### **Disproportionate Climate Change Impacts**

The SIDS Foresight Report identifies climate change impacts and related sea-level rise as the chief concern among twenty identified emerging issues.

For example, while the global average of sea-level rise is 3.2 mm per year, the island of Kosrae, in the Federated States of Micronesia, is experiencing a sea-level that is rising at a rate of 10 mm per year. The tropical Western Pacific, where a large number of small islands are located, experienced sea-level rise at a rate of 12 mm per year between 1993 and 2009—about four times the global average.

SIDS’ vulnerability to climate change is magnified due to their relatively small land masses, population concentrations, and high dependence on coastal ecosystems for food, livelihood, security and protection against extreme events. Among the threats are increased flooding, shoreline erosion, ocean acidification, warmer sea and land temperature, and damage to infrastructure from extreme weather events.

Coupled with the potential damage in terrestrial areas are threats to vital coastal ecosystems. Most notable of which are coral reefs, which are already impacted by rising sea temperatures in all SIDS regions.

In the Insular Caribbean, for example, up to 100 per cent of coral reefs in some areas have been affected by bleaching. Climate-related threats are projected to push the proportion of reefs at-risk in the Caribbean up to 90 per cent in the year 2030, and up to 100 per cent by 2050.

Apart from its direct impacts, climate change will have a compounding effect on several of the other emerging issues highlighted in the *SIDS Foresight Report*, particularly in tourism, fisheries, agriculture, freshwater, human health and infrastructure.

For example, fisheries play a significant role in the economy, livelihoods and food security of SIDS, estimated at up to 12 per cent of total Gross Domestic Product (GDP) in some nations. In Pacific SIDS, fish accounts for up to 90 per cent of animal protein in the diet of coastal communities.

Yet climate change is expected to negatively impact fisheries, posing a clear challenge to meeting the nutritional needs of growing populations, damaging livelihoods and hampering efforts to lift people out of poverty.

Climate change will also impact tourism, which represents more than 30 per cent of SIDS total exports. For example, a 50-centimeter rise in sea level would result in Grenada losing 60 per cent of its beaches.

Then there is the financial cost of adaptation to climate change: under business-as-usual models, the capital cost of sea-level rise in the Caribbean Community Countries alone is estimated at US\$187 billion by 2080.

The report calls on the international community to gear up actions towards reducing climate change impacts, especially in SIDS, and to adopt a legally binding agreement that includes clear ambitious targets for reduction of greenhouse gas emissions.

In parallel to the global process, a comprehensive package that outlines agreed mitigation, adaptive, technological and cooperative measures, to implement at the earliest possible time, should be developed, the report says.

### **Developing Appropriate Indicators**

A cross-cutting issue identified in the report is the need to develop appropriate growth indicators that take into account climate change, poverty, natural resource depletion, human health, and quality of life. According to the report, GDP-based indicators do not consider many of the features of small and limited economies, like those of SIDS.

New growth indicators already exist—including the Inclusive Wealth Index, developed by UNEP and the UN University—but they are yet to enter into widespread use, even though they clearly show that current economic growth is coming at the expense of depleting natural resources.

Given the particular vulnerability of SIDS, it is imperative that sustainable development indicators are applied to track accurately the growth of these states. The report calls on SIDS to collaborate in encouraging these efforts, which require cooperation among academics, policy makers, and other stakeholders.

### **Other Challenges and Opportunities**

The report highlights a raft of other issues and opportunities, among them:

#### *Harnessing Renewable Energy Opportunities*

On average, more than 90 per cent of the energy used by SIDS comes from oil imports, causing a severe drain on limited financial resources and pushing electricity prices to amongst the highest in the world—in some cases 500 per cent of prices in the United States. At the same time, a large percentage of residents in SIDS do not have access to electricity: for example, 70 per cent of the population in Pacific Islands.

SIDS have bountiful supplies of renewable energy sources such as biomass, wind, sun, ocean, wave, and hydro and geothermal. Accelerated deployment of renewable energy, prompted through appropriate policy interventions and public-private partnerships, offers an opportunity to widen access to sustainable energy and reduce the crippling costs of power.

SIDS are increasingly adopting renewable energy targets and policies, although still only 3 per cent of the energy mix in the Caribbean is from renewable sources.

#### *Unexploited Natural Resources*

Many SIDS possess unexploited natural resources in terrestrial areas as well as in their Exclusive Economic Zones (EEZs) and in the deep sea. Among these are minerals, potential pharmaceutical products, hydrocarbons, renewable energy resources, and fish stocks.

The exploration of these new frontiers of natural resources presents opportunities to meet a broad range of economic and social aspirations. Some countries are already expanding into these new areas, as seen in Papua New Guinea, which has embarked on exploratory activities for mining of seabed manganese nodules and rare earth elements.

SIDS have the opportunity to set a precedent for the sustainable exploration of these resources. Embarking on these new ventures will, however, come with diverse responsibilities; it is necessary, therefore, to conduct detailed scientific resource assessments to aid the development of robust guidelines and frameworks for sustainable exploitation and management.

### *Developing an Ocean-based Green Economy*

For most SIDS, transitioning to a green economy implies an ocean-based green economy because of the socio-economic importance of the ocean to these countries.

There are many practical and political challenges in this transition, and risks and opportunities must be scientifically assessed. Approaches and solutions exist that can be adapted by SIDS and governments and have an important role to play in providing the enabling conditions for this transition.

The Foresight Report was part of a wider process, which included the input of the UN Department of Economic and Social Affairs (UN DESA). A joint session with UN DESA identified 15 linked socio-economic issues that should be addressed, including diversifying the economies of SIDS, innovation in debt relief, and the future of food security.

### **The Barbados Example**

While the *Foresight Report* focused on all SIDS, the green economy study focused on Barbados—although the lessons presented can be applied to many other nations.

A synthesis of the study—carried out in conjunction with the government of Barbados and the University of the West Indies, Cave Hill Campus—was first released in 2012, and the government has already begun to act on the recommendations.

“The issue of the Green Economy is of particular importance to Barbados given our national commitment to advance an inclusive sustainable development paradigm—in the process creating a Barbados that is socially balanced, economically viable and environmentally sound,” said Freundel Stuart, Prime Minister of Barbados.

“The policy, investment and research proposals contained in the Green Economy Scoping Study will not be confined to a shelf,” he added. “This can be witnessed in the integration of the green economic policy proposals into the new Barbados Growth and Development Strategy, and the mobilization of major investments that harmonize with the green economy in areas such as agriculture, tourism, waste, and water.”

The report finds that the green economy approach offers opportunities for managing natural capital, diversifying the economy, creating green jobs, increasing resource efficiency and supporting poverty reduction and sustainable development. It shows that there is massive potential in Barbados—for example in energy, where a saving of US\$280 million can be made through a 29 per cent switch to renewables by 2029.

It also finds opportunities for growth in the following areas:

*Agriculture:* Greening a restructured sugar cane industry and the adoption and promotion of organic agriculture.

*Fisheries:* An increase in utilisation of clean technologies; the conversion of fish into fertilizer, compost and pellets for animal feed; and better collaboration on transboundary marine jurisdictions and resource-use in the region.

*Building/housing:* Improving resource efficiency, reducing waste and the use of toxic substances, and enhancing water efficiency and sustainable site development.

*Transport:* The creation of green jobs, particularly in the provision and maintenance of fuel-efficient vehicles; technology transfer and the management of an integrated public transport system.

*Tourism:* Marketing Barbados as a green destination, developing heritage and agro-tourism, and creating partnerships for promoting marine conservation.

## **Notes to Editors**

To download the SIDS Foresight Report, please visit: [www.unep.org](http://www.unep.org)

To download the Barbados Green Economy Scoping Study, please visit: [www.unep.org](http://www.unep.org)

## **About the Foresight Process**

The 2012 UNEP Foresight Process on Emerging Global Environmental Issues primarily identified emerging environmental issues and possible solutions on a global scale and perspective. In 2013, UNEP carried out a similar exercise to identify priority emerging environmental issues that are of concern to SIDS. The report, produced by a panel of 11 SIDS experts, presents the outcome of the Foresight exercise and is one of UNEP's contributions to the Third International SIDS Conference, to take place in Samoa in September 2014.

## **About World Environment Day**

World Environment Day (WED) is the United Nations' principal vehicle for encouraging worldwide awareness and action for the environment. Over the years, it has grown to be a broad, global platform for public outreach that is widely celebrated by stakeholders in over 100 countries. It also serves as the 'people's day' for doing something positive for the environment, galvanizing individual actions into a collective power that generates an exponential positive impact on the planet. World Environment Day 2014 focuses on the threat to SIDS, running under the slogan *Raise your voice, not the sea level*. 2014 is also the International Year of SIDS. Visit the WED site at: [www.unep.org/wed/](http://www.unep.org/wed/)

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