



CENTRAL BANK OF  
TRINIDAD & TOBAGO

*FEATURE ADDRESS*

by

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at the

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Salutations:

Let me first of all thank the organizers for inviting me to speak at this inaugural International Conference on Science and Technology for Economic Diversification, which goes by the very exhilarating acronym of INSCITED.

The OAS, NISTADS and NIHERST need to be commended for bringing together such an excellent group of leading professionals in science and technology, higher education, training and labour markets to exchange views with us on critical socio-economic transformation issues facing developing countries.

This INSCITED Conference is particularly timely, since it is set against the backdrop of global policymakers searching for the holy grail of economic growth after nearly half a decade of battling a global financial crisis. Many green shoots of recovery have sprouted and withered over the past five years, a stark reminder that the path to sustainable economic development is neither straight nor smooth.

The IMF's most recent forecast suggests that the world economy is gradually strengthening. Global activity is expected to increase from below 3 percent in the middle of 2012 to 3 ¼ per cent in 2013. The IMF is more optimistic about prospects for 2014, projecting a modest acceleration of growth to 4 per cent for the world economy. But we still are not seeing economic growth anywhere near the levels prior to the onset of the crisis in 2008 that would offer policymakers sufficient

opportunity to rebuild buffers without resorting to more painful austerity measures.

In fact, we are now witnessing what the IMF's Managing Director has labeled a "three-speed" world economy. Emerging markets and developing countries are doing well as the main driver of world growth even though their output has slowed compared with the pre-crisis period. Some advanced economies like the United States are on the mend, but further policy uncertainty could derail the gains made. Others such as Japan and those in the Euro area still have some distance to travel in restructuring their economies and regaining fiscal sustainability.

Notwithstanding the fallout from the global financial crisis, we should acknowledge that the world has still seen some milestones of major progress. Perhaps the most laudable of these milestones is that the first Millennium Development Goal to "halve the proportion of the world population" living in extreme poverty by 2015 was met five years ahead of time. In 1990, almost 45 per cent of the developing world lived on less than US\$1.25 a day. In 2010 – 20 years later - the global poverty rate dropped to just over 20 per cent.

Buoyed by this success, the World Bank boldly committed two months ago at its Spring Meetings to work with countries to end extreme poverty worldwide within a generation by 2030. According to the World Bank's President, for the first time, an expiration date has been set for global poverty.

We should also acknowledge the fundamental positive transformations that have taken place in developing countries over the past few decades. Please allow me to highlight just four of these changes.

First, the UNDP's March 2013 Human Development Report notes that, in the last decade, all countries accelerated their improvements in education, health and income dimensions as measured in the Human Development Index (HDI) to the extent that no country had a lower HDI ranking in 2012 than in 2000. The pace of HDI progress has been fastest in countries in the low and medium human development categories.

Second, for the first time in history more than half of the world's population is living in cities. We reached this tipping point in 2008. By 2040, two in three people are expected to live in cities and the developing world will be home to 29 of the biggest megacities with populations of ten million or more.

Third, people are becoming more connected through disruptive innovations in technology, which is creating, a smart mobile world. In the insightful words of futurist Ramez Naam, *"More than three-quarters of humanity, in the span of one generation, have gotten access to connectivity that is greater than any U.S. President before 1995. A reasonably well-off person in India or Nigeria has better access to information than Ronald Reagan did during most of his Presidential career."*

Finally, global economic power is shifting faster from the North to the South than most could have imagined just a few years ago. By 2020, the combined economic output of three leading developing countries alone - Brazil, China and India - will surpass the combined GDP of Canada, France, Germany, Italy, the United Kingdom and the United States. This fundamental shift in the world's economic centre of gravity is likely to induce a deep-seated change in the governance of international institutions, including the United Nations, the IMF, the World Bank and the World Trade Organization, to promote a fairer, more equal world.

Against this backdrop, Caribbean small island states appear to be gradually recovering from the global crisis but unfortunately the region's recovery lags that of other small states, and reflects part of a worrying longer-term trend in which the Caribbean's growth performance has been weakening over the past three decades. According to World Bank data, in 1980, the Caribbean's average per capita income was twice as high as that of the average developing country. Today, the region's average per capita income is only a third higher than the developing world.

In effect, the Caribbean has been losing its comparative advantage due to a variety of external shocks for which the region was not well prepared. The Caribbean has grappled with the drying up of aid flows, dismantling of traditional preferential trade arrangements for sugar and bananas, interventions related to anti-money laundering and combating the financing of terrorism, and, of course, the international financial crisis.

The Caribbean has also earned the unenviable reputation as one of the most natural disaster-prone and high debt regions in the world. Sir Dwight Venner, Governor of the Eastern Caribbean Central Bank captures the interaction between natural disasters and debt quite vividly: *“Almost every year, we [St. Lucia] have a hurricane season, which can destroy the country’s GDP. In some countries, it can also lead to high debt levels. Their infrastructure is destroyed before they paid for it, so they borrow again. Then it is destroyed a second and sometimes even a third time”*.

The brutal reality is that the Caribbean must find new sources of growth in a very uncertain external environment. In the words of the Honorable Prime Minister of St. Lucia, Dr. Kenny Anthony, addressing the 24<sup>th</sup> Meeting of the CARICOM Heads of Government in February 2013, *“We need a big conversation about the future of our economies.”* A credible growth and diversification strategy is not merely a desirable policy option, but absolutely necessary for the region’s very own survival.

It is in this context that I would like to highlight three potential frontiers of opportunity that, in my respectful view, Caribbean policymakers can leverage for inclusive growth and economic diversification. Each new opportunity would require the support of science and technology.

The first new opportunity relates to unlocking the tremendous potential of the **“Blue Economy”** – the Caribbean Sea and its coasts

– from which the Caribbean region draws its name, identity and economic sustenance.

The Caribbean Sea is the second largest sea in the world, after the Mediterranean. It is a natural asset whose resources provide an endowment of goods and services. The following examples are worthy of note:

- The Caribbean Sea is home to one-tenth of the world's coral reefs and has an outstanding biodiversity of seagrass beds and mangroves, all of which are attractions to almost one-third of the world's tourists;
- Seafood accounts for more than 7 per cent of the animal protein consumed by the people in the Caribbean;
- Fishing is a significant provider of jobs and income in the Caribbean. More than 1.5 million people in the Caribbean rely for their livelihood on commercial fishing, which generates more than US\$1 billion annually in export earnings;
- Marine and coastal tourism form the lifeblood of many Caribbean economies. According to the World Travel and Tourism Council, in 2011, tourism accounted for 13 per cent of total regional employment, 14 per cent of the Caribbean's GDP and 17 per cent to total export earnings;

- The Caribbean Sea is one of the principal waterways in the world, harboring in excess of 80,000 ship calls per year, and is classified as having one of the most intensive maritime traffic in the world; and
- The sea floor of the Caribbean Sea may yield many important minerals available for extraction, including silver, gold, copper, manganese, cobalt, and zinc. Technology is emerging to commercially tap new sources of marine-based renewable energy from the Caribbean Sea as well medicines that can improve many millions of lives.

Notwithstanding its importance, in common with ocean regions across the world, the Caribbean Sea has seen overexploitation and degradation of its marine resources over the past three to four decades. Reports from the Food and Agricultural Organization (FAO) suggest that the sustainability of fisheries in the Caribbean Sea is in jeopardy and that precautionary management is critical. Coastal fish stocks depletion has been worsened by the threats of ocean acidification and pollution associated with both marine and land based activities. Today, these problems are compounded by climate change.

In effect, the livelihoods of communities, national economies and the biodiversity of the ecosystems of the Caribbean Sea are threatened.

If Caribbean countries can make the institutional reforms needed to reduce open access to its marine resources and to provide secure

incentives for responsible husbandry of these resources, there is significant potential for the Caribbean Sea to contribute even more to food security, livelihoods and inclusive economic growth for the region.

Science and technology has a key role to play in helping to capture some of the economic opportunities likely to arise from investing in a healthier Caribbean Sea. Some areas are as follows:

- Promotion of responsible fisheries and aquaculture in a green economy;
- Adoption of green technologies and investments to lower fossil fuel use to dramatically reduce the carbon footprint of the sector;
- Harnessing the potential of marine-based renewable energy (wind, wave and tidal); and
- Improving the understanding of deep-sea minerals ecosystems which are a possible new revenue stream.

The second growth frontier for the Caribbean lies in taking advantage of “**Green Economy**” opportunities to reduce its vulnerability to climate change.

Caribbean countries are expected to be among the earliest and most severely impacted by climate change in the coming decades. Warmer temperatures are likely to fuel stronger hurricanes in a region already battling frequent natural disasters. Increased ocean temperatures are also leading to coral deaths. Recent studies suggest that some 80 per cent of living coral in the reefs of the Caribbean have been lost in the past 20 years.

More than half of the Caribbean population lives within 1.5 kilometers of the coast where houses, hotels and other infrastructure are at significant risk from stronger winds, more forceful wave surges and heavier rains. Sea level rise would deal the region's tourism industry a deadly blow.

And these devastating impacts are likely to occur regardless of the fact that Caribbean nations produce extremely low levels of global greenhouse gas emissions that drive climate change.

A 2008 study by the Stockholm Environment Institute and Tufts University found that for just three categories - increased hurricane damages, loss of tourism revenue, and infrastructure damages - the Caribbean's annual cost of inaction is projected to total US\$22 billion by 2050 and US\$46 billion by 2100. These costs represented 10 per cent and 22 per cent, respectively, of the 2008 GDP of the Caribbean economy.

The Caribbean therefore must redouble efforts to support inclusive green growth and climate smart development. This requires increased investment in mitigation. We need to identify renewable

energy projects that can help conserve foreign exchange and ultimately improve fiscal space. It also requires ramping up investments in adaptation. We need to identify ‘bankable’ adaptation projects.

At the same time, tailored support is needed to help Caribbean countries and other small island states access climate related funds especially those offered by the Global Environment Facility (GEF) and the Climate Investment Funds (CIF).

Here again, science and technology can help to leverage economic opportunities in the Green Economy. Some areas are as follows:

- Devising engineering solutions such as sea defenses, hurricane resistant buildings and the provision of water storage;
- Developing technological solutions such as using more resilient crops to protect critical biodiversity conservation;
- Creating new incentive mechanisms such as payment for ecosystem services; and
- Facilitating the transition to a low-carbon economy.

The third frontier of growth opportunity relates to the “**Silver Economy**.” Population ageing is a global phenomenon, which is having major implications on all aspects of human life in every society. This process is enduring and irreversible. In the Caribbean, people are also living longer than ever before but not healthier. At the

start of the 21<sup>st</sup> century, the elderly in the Caribbean - persons 60 years or older - represented at least one-tenth of the population, larger than ever before in the history of the region.

World Bank research warns, however, that Non-Communicable Diseases (NCDs) are rising rapidly as the Caribbean population ages. Today, the four leading causes of death in the Caribbean are all NCDs – heart disease, cancer, stroke, and diabetes. In the Caribbean, five times as many people are dying from NCDs as from all other illnesses combined. In fact, these findings have spawned the creation of a rather interesting World Bank blog entitled “*Is fried chicken setting back development in the Caribbean?*” alluding to the fact that unhealthy eating habits are a major risk factor for NCDs.

The expansion of NCDs is increasing the economic burden on families and on already strained public health systems in the Caribbean. In Jamaica, for instance, an average individual suffering from NCDs spends approximately one third of household income on healthcare services and medicine purchases. In the Eastern Caribbean, the annual cost for treating a diabetic is more than annual per capita spending for health care in the six countries of the Eastern Caribbean.

Again, there is a unique opportunity for scientists and economic policymakers to take advantage of the growth opportunities that arise from reducing the future burden of NCDs, promoting healthy aging, and increasing the potential benefit from the demographic transition in the Caribbean. And they must do it while ensuring that out-of-pocket health expenses do not inflict severe financial hardship on families,

and while narrowing the gap in access to health services and public health protection.

In closing, Ladies and Gentlemen, let me say that I have faith in the ability of the Caribbean leadership to move beyond talk about the “big conversation” to actual action - seizing opportunities in the Blue, Green and Silver Economies. Science and technology would, of course, be critical to successfully actioning these opportunities. Success will also depend on putting in place sound policy frameworks and effective institutional arrangements. And, in some cases, it may require strong commitment and funding from the international community.

I look forward to this INSCITED Conference becoming a model platform for stimulating new thoughts and ideas on how science and technology can help contribute to generating more inclusive economic growth.

I also look forward to further collaboration among the OAS, NISTADS and NIHERST that will be of benefit to science, society and state.

I thank you.