

# Understanding Climate Change

## Part 10

### Low Carbon Development

In previous articles we discussed Guyana's approach towards developing its Low Carbon Development Strategy (LCDS) and reducing emissions from deforestation and forest degradation (REDD+).

This week we continue to explore low carbon development focusing on developing countries including Guyana.

#### **Background to Low Carbon Development**

Over the last 200 years, many first world countries pursued a development pathway that involved energy-intensive industrialisation with heavy reliance on fossil fuels, and conversion of forests and other ecosystems to make way for agriculture, industry and human settlements. These activities were considered economically rational decisions at the time, but they injected high levels of greenhouse gases (GHGs) into the atmosphere and contributed greatly to climate change.

Within recent years, many countries around the world have begun to recognise the important role of low carbon development as a means by which they can reduce dependence on fossil fuels and manage forests and other ecosystems sustainably, while still pursuing economic growth and development.

Over the last decade, with the evolution of the global framework for addressing climate change, especially the United Nations Framework Convention on Climate Change (UNFCCC), many developed countries have taken on commitments to take stronger actions to reduce GHG emissions.

Subsequently, many developed countries started to propose actions towards low carbon development according to their national circumstances. Some developing countries such as Guyana have also started the process.

For low income countries, the challenge is how to address economic development and poverty alleviation while at the same time engaging in climate change adaptation and low carbon development efforts.

The approaches taken by countries to support their low carbon development initiatives vary according to many factors including their major economic activities, the natural resource base of the country, energy consumption patterns, land-use activities, their level of development and developmental goals, inter-alia.

The 2010 Climate Competitiveness Index (UNEP& Accountability), a new analysis of how countries create enduring economic value through low carbon technology, products and services, indicates

that in spite of uncertainty surrounding international climate negotiations, countries have forged ahead with low carbon growth strategies in the first quarter of 2010.

Even while some countries have not fully implemented their LCDS at this stage, they have indicated their commitments towards reducing GHG emissions. At this stage more than 120 countries have now associated themselves with the Copenhagen Accord which indicates a willingness to take actions to address climate change.

The European Union (EU), for example, pledges to cut emissions by 20% from 1990 levels by 2020; China promises to improve carbon intensity by 40-45% by 2020 compared against 2005; and Australia pledges an emissions cut of 5-25% on 2000 levels by 2020. The U.S. has pledged to reduce emissions in the range of 17% of 2005 levels by 2020, in conformity with anticipated U.S. energy and climate legislation. The anticipated legislation is expected to define the U.S low carbon development initiatives.

The response of tropical forested nations like Guyana has been to pursue innovative efforts whilst awaiting the outcome of international climate change negotiation. Already, countries within Latin America and the Caribbean region including Guyana (LCDS), Costa Rica (carbon neutral economy), Brazil (new Amazon initiative) and Suriname (green development strategy), have initiated efforts (UNDP, 2010).

### **Implementing LCDS in developing countries – challenges and opportunities**

As discussed in previous articles, the UNFCCC and Kyoto Protocol make special provisions for the specific needs and special circumstances of least developed and developing countries and apply the principle of “common but differentiated responsibilities” with regard to such countries. The principle recognizes that the developed country parties should take the lead in combating climate change and the adverse effects thereof.

Under this principle also, Non-Annex I countries (many developing and least developed parties) that have ratified the protocol do not have to commit to specific targets at this stage, as they are not legally obligated to any emission reduction target.

Despite this, however, there has been increasing international pressure on certain Non-Annex 1 countries to make voluntary commitments to reduce their emissions.

At this stage, a new mechanism called Nationally Appropriate Mitigation Actions (NAMAs) is being negotiated to include scope for developing country actions to take on mitigation actions to address climate change. Since the Copenhagen Accord was established, thirty-six developing countries have submitted their NAMAs to the UNFCCC.

This type of shift can be a major challenge for developing countries that are already faced with many developmental challenges. At this stage, funding targeted to support developing countries efforts to address climate change is weak.

According to a report by the UNDP (2009), ‘Charting a New Low-Carbon Route to Development’, the sums involved in a shift to a low-carbon economy are daunting. For example, the IEA estimates

that limiting GHG concentrations to 450 ppm CO<sub>2</sub>eq would require US\$550 billion to be invested in clean energy from now to 2030. UNDP estimates the cost of adaptation at US\$86 billion.

In addition to funding, developing countries will require other types of support, including adequate technology transfer, institutional and technical capacity building and effective domestic plans and policies to effectively enable low carbon development.

Concurrently, developing countries can also seek to maximize on opportunities from low carbon development.

According to a report by Beinhooker et al, 2008 (McKinsey & Company), ‘taking strong steps to restrain climate change need not invite economic gloom’. For example, the report highlights that developing nations would find that strengthening energy efficiency can not only help them contribute to reducing global emissions but also lead toward a more socially equitable as well as economically positive outcome. The report emphasizes that while the emerging technologies to support low carbon development will require substantial investment flows, those investments will create jobs and economic growth. Also, such a burst of investment can have ripple effects, stimulating growth and innovation in other parts of the economy.

### **Guyana’s LCDS - a model for developing countries**

Even while the details of a global framework to address REDD+ are being worked out, Guyana has moved ahead to develop its LCDS.

Guyana’s LCDS is the first of its kind. It provides a framework on how interim payments and future REDD+ payments could be used to realign the country’s economy along a low carbon development trajectory and support efforts to adapt to the negative impacts of climate change. This will help to catalyse Guyana’s efforts to diversify its economy and provide new economic opportunities, employment and more efficient use of resources, while maintaining the valuable forest ecosystem.

According to the UNDP (2010), Guyana’s forest benefits regional and global climate change mitigation efforts because of the large amounts of carbon stored in its extensive forests, which could be released into the atmosphere, should Guyana pursue a development model different from the low-carbon emission development path.

Guyana’s LCDS highlights several key areas for action in creating a low carbon economy:

1. Investment in low carbon economic infrastructure, including the development of hydropower to reduce reliance on non-renewable energy sources, the upgrading of sea defences to protect against future sea level rise, investment in high technology telecommunications facilities, and improving roads, drainage and irrigation to unused, non-forested land that can be converted to agriculture.
2. Investment and employment in high-value, low carbon economic sectors, including the production of fruit and vegetables, aquaculture and sustainable forestry and wood processing.
3. Reformation of existing forest-dependent sectors, including forestry and mining, to ensure operating standards are sufficient to sustainably protect Guyana’s forests.

4. Investment in low carbon business development opportunities such as business process outsourcing and ecotourism.
5. Investment in communities and human capital, thereby ensuring that indigenous Amerindian communities and the broader Guyana citizenry have improved access to health, education, renewable energy, clean water and employment, without threatening the sustainability of forest resources.

Another major component of the LCDS regards the further protection of Guyanese people and productive land from changing weather patterns. The LCDS proposes urgent, near-term investments in the highest priority areas where the population and economic activities are concentrated. These investments include:

1. Upgrading infrastructure and assets to protect against flooding through urgent, near-term measures.
2. Addressing systematic and behavioral concerns. These initiatives include strengthening building codes, expanding the early warning system and building an emergency response system.
3. Developing financial and risk/insurance measures to boost resiliency post flooding.
4. Switching to flood resistant crops.
5. Establishing the climate change adaptation needs of Guyana's hinterland regions, including forest communities

Guyana's draft LCDS was launched in June 2009. Since then the document has been subject to a national multi-stakeholder consultation and extensive outreach sessions. This process allowed for the inclusion of a wide range of stakeholders in the process of finalizing the LCDS.

The LCDS has been revised at this stage and actions are being taken to enable the implementation of the strategy.

### **Moving ahead with low carbon development in developing countries**

According to the Potsdam Institute for Climate Impacts Research (2010), pledges made at December's UN summit in Copenhagen are unlikely to keep global warming below 2 degrees C. Given the pledges on the table so far, a rise of at least 3 degrees C by 2100 is likely. Between now and 2020, global emissions are likely to rise by 10-20%.

At this stage it is quite clear that developing countries would gradually have to take on domestic actions to address climate change to prevent the catastrophic impacts that it could have on economies, human livelihoods and ecosystems.

Guyana's LCDS can be seen as an innovative approach to combating climate change while simultaneously promoting economic growth and development. It is a workable model that could be adopted by many developing countries as they phase into a low carbon path of development.

Next week we will continue to explore important aspects of Guyana's LCDS.

\*Information used in this feature was extracted from the following reports and sources: Guyana's LCDS- Draft (2009), Potsdam Institute for Climate Impacts Research, UNDP, McKinsey & Company, UNEP& AccountAbility. 2010. Climate Competitiveness Index.

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