

DRAFT FOR CONSULTATION

**A LOW-CARBON
DEVELOPMENT
STRATEGY**



Transforming Guyana's Economy While Combating Climate Change

Frequently Asked Questions

June 2009

Office of the President,
Republic of Guyana

Introduction

Guyana has launched its Low Carbon Development Strategy. This Strategy outlines Guyana's approach to promoting economic development while at the same time combating climate change.

A key part of the strategy will involve deploying Guyana's tropical forests towards addressing global climate change. This booklet seeks to provide responses to a number of frequently asked questions on the Strategy and the use of Guyana's forests.

In addition to this booklet, an Office of Climate Change has been established within the Office of the President to provide additional information and to which comments, queries, questions and suggestions can be directed.

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1. What is the Low Carbon Development Strategy?

The Earth's surface has been warming rapidly over the last century compared with thousands of years before. This is due to the amount of carbon dioxide that has been emitted into the air from the use of petroleum fuels in industry, transportation, our homes etc. If we do not stop this warming trend, then globally we face sea level rise of 3 – 6 feet higher than the present. This will increase flooding, droughts, loss of crops, famine and disease worldwide. It will be virtual catastrophe.

Guyana, like most low-lying coastal states is vulnerable to climate change. Our low lying coastlands and all of its infrastructure, settlements and agriculture stand to be destroyed by sea level rise and extreme weather events if global warming continues.

One of the major contributors to global warming is tropical deforestation where globally over 20% of greenhouse gases come from deforestation. Addressing the issue of tropical deforestation is now one of the global priorities for combating climate change.

While most forest countries have high rates of deforestation with their forest areas on the decline, Guyana has over 80% of its land area covered in forest, approximately 16 million hectares. As a developing country we can choose to utilize our forests and to extract its resources to obtain revenue which we need for growth and development as a nation. The question that we face is '*can we avoid deforestation and still get the same or more revenue for national development?*'

The Government of Guyana believes that we can protect and maintain our forests in the effort to reduce global carbon emissions and at the same time attract resources for our country to grow and develop. In order to do this effectively in the long term, we need a clear vision and a plan how to get there. This vision and plan is called our Low Carbon Development Strategy.

The Low Carbon Development Strategy has three main components:

1. Investment in low carbon economic infrastructure

This will include the development of hydropower to reduce reliance on petroleum based fuels, the upgrading of our sea defenses to protect against current and future impacts of sea level rise, improved roads, drainage and irrigation to unused, non-forested lands such as the Canje river lands and the intermediate savannas, and improved hi-tech telecommunications facilities to facilitate the development of low carbon businesses such as call centers.

2. Investment and employment in low carbon economic sectors

This will target investment in commercial production of fruits and vegetables, particularly in areas such as the intermediate savannas; aquaculture and the export of fresh and frozen seafood; sustainable forestry utilizing the high internationally accepted standards of sustainable yield harvesting; and wood processing to produce high value products.

3. Investment in Communities and Human capital

This will ensure that our indigenous and other hinterland communities, as well as our other citizens including the urban poor, will have expanded access to improved social services such as health, education/vocational training, low carbon electricity and clean water, and employment that does not threaten the sustainability of the forest resources.

2. What does a low carbon economy mean?

A low carbon economy is one where economic activities are geared to reduce the amount of carbon dioxide that would otherwise go into the air; and also where other activities and lifestyles seek to minimize the effects of climate change. For example, a Government may decide to develop wind power and solar power to reduce the amount of diesel-generated electricity we use. Production of cars that run on biofuels or electricity will similarly reduce the use of gasoline and carbon dioxide emissions. Governments may also encourage people to be less extravagant in their consumption, recycle containers, use public transit rather than individual cars, use energy efficient bulbs etc., to reduce the overall level of carbon dioxide emissions.

3. Will Guyanese be able to participate in the development of the Strategy?

All Guyanese will have the opportunity to participate through an ongoing process of consultation. Over the next three months, there will be a national awareness campaign using the media (radio, newspaper, television) along with national and sub-national consultations to sensitize, inform, educate, receive comments and suggestions, and generally to share and discuss information and listen to views of all stakeholders. The outcome of the awareness exercise and consultations will be taken into account in finalizing the strategy.

4. How does this Strategy fit with Reduced Emissions from Deforestation and Forest Degradation (REDD) and various other initiatives being undertaken?

The Strategy provides the framework into which REDD, Readiness Planning, and other initiatives will fit. They will all form a part of the implementing of the Strategy with the Readiness Planning activities being one aspect.

5. Will the Strategy require mining and forestry to stop?

Mining and forestry activities will not be required to stop. However, they will be required to strictly comply with standards set by our Mining, Forestry and Environmental Laws and the Low Carbon Development Strategy.

6. Will mining and forest concessionaires be required to reduce their activities?

Mining and forestry will be allowed to continue in accordance with the Low Carbon Development Strategy. There will be more stringent monitoring and enforcement of compliance.

7. What will happen to future mining and forestry projects?

Projects that are currently in the pipeline and future projects must all be sustainable and consistent with the Low Carbon Development Strategy.

8. Can companies that have leases for state forests and state lands sign on as well?

No. Companies that have leases would have obtained these lands from the State for specific purposes which would not include trade in carbon.

9. Does the Strategy include titled indigenous lands?

The Strategy only includes State Forest. It does not include titled indigenous lands. Communities can decide if they would like to have their titled lands be part of the Strategy.

10. If indigenous communities 'opt in' to the Strategy, does this mean stopping logging, agriculture and mining activities on their lands?

Logging, mining and agriculture could continue but will need to be consistent with our obligations under the Low Carbon Development Strategy.

11. If communities sign on to the Strategy, do they have to stop farming and hunting?

Hunting and farming as subsistence activities will be allowed to continue.

12. If communities sign on, for how long are they committed to the conditions?

There will definitely be a time period attached to participation. The details of the length of the commitment period are not fully known at this time. A measurement, reporting and verification system will be established within a year's time, and in this process, the length of the time period will be determined.

13. What happens if communities are not ready now?

If some communities are not ready to sign on, Government will move forward with those who are. However, those communities that did not sign up will have an opportunity to do so once they are ready. Signing on at a later stage will not put them at a disadvantage.

14. Will indigenous peoples be consulted?

Like all stakeholders, our indigenous peoples will have several opportunities to voice their concerns and suggestions through the process of consultation described. There are several consultations planned at the sub-national level in Regions 1,7,8,9 and 10 as well as on the coast in Essequibo and Berbice. There will also be a national meeting with toshaos and specific consultations with communities who choose to 'opt in.'

15. How will lands agreed and earmarked for titling be treated?

Lands which have been agreed between Government and indigenous communities for titling do not form part of the model. Once these lands are demarcated and titled, the communities can then decide if they would like to participate. It is anticipated that some of the resources flowing from the Strategy could accelerate the costly demarcation process.

16. Can communities negotiate directly for carbon credits?

The Strategy seeks to establish a national-level approach as the working model. The Government, therefore will be working with and on behalf of communities.

17. Who will be paying for the standing forest?

It is expected that developed countries as well as large companies would be putting finances into the carbon credit scheme. In the initial phase, it can be expected that it will be done at a country to country level, and once the forest carbon market comes into place, this will be expanded to include companies, NGOs and others.

18. Where will the funds from the forests go?

Financial returns that come from State forests will go to the State Treasury for use by the State for national development.

19. For indigenous communities who put their titled lands to the Strategy, where will the funds go?

Financial benefits derived from indigenous titled lands as part of the Strategy will go to indigenous communities. The mechanisms for this will need to be discussed with the communities. One possibility is for a fund to be set up where a portion of the financial benefits go directly to specific communities for community development and a portion is set aside for indigenous peoples development at a national level. This, however, will have to be discussed and agreed with the communities.

20. What is the value of Guyana's forest?

The value of our forest is not simply the value of the timber in it. Government has been able, through international experts, to calculate how much revenue can be obtained not only for the timber, but for use of the forested land for crops, ranching, mining, ecotourism, etc. This has been estimated at almost US\$580 million per year.

21. How soon can we expect money to flow?

Guyana is currently working with Norway to establish a working model as a example of how the Strategy can work.

22. What are the benefits to Guyanese?

The revenue that comes from carbon credits is expected to exceed what we currently derive from logging and other extractive uses of the forest. Such increased revenue can be used for providing better hospitals and health care, better schools, teachers and education standards. Electricity from hydro will be much cheaper to consumers, and will allow for more industries, jobs and an overall better quality of life for all.

The anticipated revenue will also allow us to improve our sea defences and drainage and irrigation systems and build better roads to new areas of agriculture production such as the intermediate savannahs and the Rupununi area and will ensure greater food security.

23. Will the Strategy still be relevant if we find oil?

The Strategy will be relevant. Even if Guyana finds oil, the majority of this commodity will be for the export market. As part of the Strategy, most domestic demand is expected to be met from renewable energy.

24. How long will we have to lock away our forests under this Strategy?

This will depend on the agreements reach.

25. Will there be some check to ensure the conditions agreed are complied with?

Yes, as part of the measurement, a national reporting and verification system will be put in place. There will be monitoring using satellite images as well on-the-ground visits by local and international bodies.

26. Will Protected Areas be included in the Strategy?

Existing Protected Areas have not been included as part of the Strategy.

27. Will there be a stop to designating new Protected Areas?

Approximately 10% of state forests and lands have been earmarked for Protected Areas. This includes existing Protected Areas and have not been included in the model.

28. Will communities be employed as rangers etc. to monitor the areas?

Yes, there is provision for employment to communities for monitoring activities which could include forest inventories, field checking, establishment and maintenance of field plots etc.

29. How does the Strategy relate to Norway and the Copenhagen meeting?

At present, there is no market for forest carbon. Guyana, along with other forest countries are working within the UN Climate Change Convention to create a new global agreement to allow sale of forest carbon credits. This, however, would not come into place until 2012 or after. Between now and 2012, Guyana and Norway are working to demonstrate how this strategy can work as. This can serve as an example for other countries to follow.

30. Where can more information be obtained on the Strategy?

The Office of Climate Change, within the Office of the President can be contacted for additional information.

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Definitions

What is climate change?

Climate is the long term condition of temperature and rainfall (precipitation) in a country or on the planet as a whole. It is obtained by taking average measurements of rainfall and temperature over a long period of time. For example, we can say that the climate of the Arctic region is characterized by an average temperature of 2 degrees, a precipitation of 100 millimeters and is permanently covered by massive ice sheets.

If over the last 25 years or so, we observe that the average temperature of the same area is 3 degrees and the ice sheets which have been frozen for centuries are now melting due to a higher temperature, we can say that the climate is changing.

Is climate change occurring?

Recent studies are showing that climate is changing all over the world. When we compare temperature readings taken in the last few decades with scientific studies of tree rings, ice core samples from deep below the ice sheets, and corals, we have found that the earth's temperature has risen since the industrial revolution began 200 years ago. The facts are all around us. Arctic ice sheets are melting; sea level is rising; tropical storms are becoming more frequent and more intense. The alarming fact is that these changes in climate have been accelerating over the last 15 years.

What causes global warming?

The earth's atmosphere acts like a blanket draped around the earth. It contains certain gases, such as carbon dioxide, which absorb heat from the sun, reducing the amount that escapes back into space. In this way, it acts very much like a greenhouse which traps heat within an enclosed glass building. Without these gases, the earth's temperature would be very much colder, and life as we know it would be impossible on the earth.

Carbon dioxide and a few other gases are called greenhouses gases, and this trapping of heat around the Earth is called the greenhouse effect. However, carbon dioxide in the air has been increasing over the last 200 years. This is due to the burning of fossil fuels such as coal, gasoline, diesel, bunker fuels and aviation kerosene.

Because carbon dioxide is increasing in the air, the greenhouse effect is also increasing, and so global temperatures are rising. This rise in temperature is called global warming.

Also, because the increase in carbon dioxide in the air has resulted from human activity such as industries, transportation, heating of homes and cutting of forests, carbon dioxide is called an anthropogenic green house gas; the term 'anthropo' refers to 'human',

What causes sea level to rise?

When the earth's temperature rises, two things happen to the water in the oceans. One is called thermal expansion – the volume of water expands when it is heated, and so the level of the sea rises. Two, ice sheets melt, and this adds water to the ocean causing further rise in sea level.

What is the link between forests and carbon?

The leaves of plants and trees, in the presence of sunlight, absorb carbon dioxide from the air and store it as carbon in their trunks and branches. A large percentage of wood is actually carbon, which has been taken from the air in the form of carbon dioxide.

When we drive a car, run an electrical generator, operate machines in a factory etc, we let off carbon dioxide into the air. The forests of the world take this carbon dioxide and convert it into wood, while putting back oxygen into the air. Forests therefore 'cleans' the air and recycles it so that we can breathe good air. By reducing the carbon dioxide in the air, forests reduce global warming and the negative effects of climate change. Because air travels all around the planet, east-west and north-south, a forest in the tropical countries can convert carbon dioxide from Europe or North America. In this way, our forests perform an ecological service to the world.

What do we mean by “emissions”?

When we cut down a tree and burn the wood, the carbon that was stored in the wood goes back into the air. Even if we do not burn the wood, if it decays and rots, the carbon goes back into the air. It is 'emitted' into the air. So the cutting of forests can be seen as an emission, a 'greenhouse gas' emission (GHG emission).

What is REDD?

REDD means Reducing Emissions from Deforestation and forest degradation. REDD was recognized as an important part of the climate change strategy agreed at the Bali climate meeting. This is no surprise. While tropical forests account for 6 percent of the earth's surface, deforestation and degradation account for almost one fifth of all greenhouse gas emissions in the world. However, forests can potentially represent more than one third of the solution to global warming. 'REDD Plus' refers to not only deforestation, but also the preservation of forests and enhancement of the stocks of forests that we have. It is one thing to try to reduce deforestation; but for many countries like Guyana, where deforestation is already low, the preservation of forests and the improvement of the quality and density of the forest are also important considerations. REDD and REDD Plus are therefore an important tools for dealing with the mitigation.

What are the potential effects of climate change?

Changes in the temperature of the atmosphere result in changes in air pressure, cloud formation and precipitation. Over time, some areas may experience more rainfall with greater intensity, while other areas may experience drought. This can lead to agricultural crop failures, food insecurity and starvation ultimately.

Rising sea levels will flood low lying coastal areas such as Guyana, damaging or destroying crops, roads, homes and lives. In the Caribbean, hurricanes will become more frequent, more intense and their tracks will shift. Countries like Guyana which are currently slightly off the known track will begin to experience hurricanes and their associated devastation.

Ecosystems will be destroyed, and some species will become endangered and later extinct. These are only some of the effects which are predicted with the data that we currently have. Because the rate of climate change is increasing each year, the effects are likely to get worse.

How will climate change affect Guyana?

In Guyana we can expect Guyana's temperature to Rise 1°C– 4°C by the end of the 21st century. Sea level is expected to rise by 1-3 feet by the end of the century also. There will be changes in the pattern of rainfall leading to more intense periods of rainfall and longer dry periods.

With 90 percent of our population living on the coast which lies below sea level, and on which much of our agriculture and food production is located, sea level rise and high intensity rainfall will damage our agriculture and destroy our food security. Our road and housing infrastructure also stand to be destroyed.

What can we do to reduce climate change and its effects? What is meant by mitigation and adaptation?

When you put mesh on your windows to prevent mosquitoes from coming in, you adapt; when you ensure that there are no stagnant pools of water for the mosquitoes to breed, you mitigate. You can see here that adaptation is responding to the effect of something – responding to the mosquito itself. Mitigation is trying to deal with the cause - making sure there are fewer mosquitoes around. Similarly, in climate change, adaptation is responding to the threat of rising sea levels, more intense weather patterns etc. The building of sea walls to keep out the sea; developing hydro power or solar power to reduce dependence on gas and diesel, diversification of agriculture away from the low lying coast, are all ways of adapting to climate change. Mitigation looks at the source of the problem – trying to reduce the amount of Co2 and other harmful gases that go into the air. This can be done by proper management and preservation of forests to absorb Co2; by providing financial incentives to countries and industries to reduce the amount of Co2 they let off (emit) into the air.

What is the UNFCCC?

UNFCCC is the United Nations Framework Convention on Climate Change. It is an Agreement that seeks to control the level of greenhouse gases, such as carbon dioxide, in the atmosphere thus controlling global warming and sea level rise.

It was adopted in 1992 at the Rio Earth Summit and entered into force March 21 1994. Since then, some 184 countries have signed on to the Convention.

Every two or three years, representatives of all the member countries (Parties) meet in a Conference of the Parties (COP) to review progress and make decisions that will guide action to reduce greenhouse gas emissions. The last meeting in Bali, Indonesia set forth a plan to try to forge a new agreement by the end of 2009. The next COP is slated for Copenhagen, Denmark December 2009.

What is the Kyoto Protocol?

The KP is an international agreement which is linked to the UNFCCC. It is a legally binding agreement with commits 39 developed countries including the EU (Annex B Parties) to reduce greenhouse gas emissions by specified amounts.

The Kyoto Protocol was adopted in Kyoto, Japan, on 11 December 1997 and entered into force on 16 February 2005. The detailed rules for the implementation of the Protocol were adopted at COP 7 in Marakesh, Morocco.

Whereas the UNFCCC encourages countries to reduce greenhouse gas emissions, the Kyoto Protocol commits them to do so because it is legally binding agreement,

What is meant by 'cap and trade' and a 'carbon market'?

Parties with commitments under the Kyoto Protocol (Annex B Parties) have accepted targets for limiting or reducing emissions. These reductions average about five percent of 1990 levels over the period 2008 - 2012. These targets are expressed as levels of allowed emissions, or 'assigned amounts', over the 2008-2012 commitment period. The allowed emissions are divided into "assigned amount units" (**AAUs**).

If a country reduces carbon emissions below what they are assigned, they are allowed under Article 17 of the Kyoto Protocol to sell this excess capacity to countries that have gone over their targets. So we start with a 'cap' on emissions, and if we keep emissions below that cap, we can 'trade' it. This is the Cap and Trade mechanism under the Kyoto Protocol.

This has led to emissions trading, and because the major greenhouse gas is carbon dioxide, it is called carbon trading. So carbon has become like a commodity to be traded. This is known as the "carbon market."

What is wrong with the existing Kyoto Agreement?

Under the existing Agreement, projects that reduce carbon dioxide emissions can attract funding, providing a source of revenue for countries that try to lower their Co2 emissions. However, the present rules only reward projects that re-plant forests after they have been cut, or plant new forests where no forest existed before. It does not reward countries like Guyana that have conserved their forests through responsible forestry practices. In effect, it encourages such countries to cut down forests and re-plant to get funding. This is why it is sometimes called a perverse incentive.

Why must we protect forests to stem global warming?

Deforestation accounts for about one fifth of all green house gas emissions which cause global warming. This is more than the combined emissions of all of the cars, trucks, trains and planes in the world. Therefore forests have great potential to curb global warming.

Furthermore, forests provide valuable ecosystem services to the world, and serve as a habitat for a wide range of smaller plants. The total carbon content of forests is more than the amount of carbon in the entire atmosphere. It is vital to protect this reservoir of carbon if we want to cut back on GHG and global warming.