



National Environmental Education Committee
In Collaboration with
Environmental Foundation of Jamaica
Commonwealth Foundation

National Climate Change Forum for Civil Society
"Getting the Facts so We can Act!"
November 8-9, 2007
Hilton Hotel, Kingston Jamaica

Final Report



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National Climate Change Forum for Civil Society
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Prepared by Dr. Maria Protz

ACRONYMS AND ABBREVIATIONS

ACCC – Association of Canadian Community Colleges
 AIACC – Assessment of Impacts and Adaptations to Climate Change in Human Health
 CANARI – Caribbean Natural Resource Institute
 CBO – Community Based Organization
 CC – Climate Change
 CCCCC – Caribbean Community Climate Change Centre
 CCDMF – Caribbean Comprehensive Disaster Management Framework (CARICOM)
 CDMs – Clean Development Mechanisms
 CERs – Carbon Emission Reductions
 CFLs – Compact Fluorescent Bulbs
 CIDA – Canadian International Development Agency
 COP – Conference of Parties
 CPACC – Caribbean Planning for Adaptation to Climate Change Project
 CTO – Caribbean Tourism Organization
 DRM – Disaster Risk Management
 EFJ – Environmental Foundation of Jamaica
 EIA – Environmental Impact Assessment
 FAO – Food and Agriculture Organization of the United Nations
 GEF – Global Environmental Facility
 GDP – Gross Domestic Product
 GHG – Greenhouse Gas emissions
 IPCC – Intergovernmental Panel on Climate Change (IPCC)
 JEAN – Jamaican Environmental Advocacy Network
 JIEP – Jamaica Institute of Environmental Professionals
 KAP – Knowledge, Attitudes and Practices survey
 JPSCo – Jamaica Public Service Company
 LDCs – Less Developed Countries
 MACC –Mainstreaming Adaptation to Climate Change Project
 MDGs – Millennium Development Goals
 MOA – Ministry of Agriculture
 MHE – Ministry of Health and the Environment
 MOP – Meeting of Parties
 NCCFP – National Climate Change Focal Point
 NEEC – National Environmental Education Committee
 NEPA – National Environmental Planning Agency
 NGO – Non-Governmental Organization
 NHC – National Hurricane Centre
 NJCA – Northern Jamaica Conservation Association
 NOAA – National Oceanic and Atmospheric Administration
 NWC – National Water Commission
 OTEC – Ocean Thermal Energy Conversion
 PDC – Parish Development Committee
 PRPs – Poverty Reduction Priorities
 PSOJ – Private Sector Organization of Jamaica

R&D – Research and Development
RADA – Rural Agricultural Development Authority
S&T – Science and Technology
SBI – Subsidiary Body for Implementation
SBSTA – Subsidiary Body for Scientific and Technical Advice
SLR – Sea Level Rise
UNDP – United Nations Development Programme
UNEP/CEP – United Nations Environmental Programme/Caribbean Environment Programme
UNFCCC – United Nations Framework Convention on Climate Change
UTech – University of Technology
VRA – Vulnerability Rating Assessment
WMO – World Meteorological Organization

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EXECUTIVE SUMMARY

On November 8 and 9¹ 2007, approximately 150 representatives² of Jamaica's civil society (CS) – both rural and urban – as well as government planners, public servants, local government representatives, scientists, and donor representatives came together at the Hilton Hotel in Kingston, Jamaica, to discuss how Climate Change (CC) is likely to affect the country – especially as one of the world's most at risk Small Island Developing States (SIDS). The National Forum was organized and coordinated by Jamaica's National Environmental Education Committee (NEEC), in collaboration with and supported by the Commonwealth Foundation and the Environmental Foundation of Jamaica (EFJ).

The objectives of the National Forum were:

- To bring civil society into the national planning process for Climate Change mitigation and adaptation;
- To raise Civil Society's awareness about the issues related to Climate Change;
- To provide Civil Society input into Jamaica's national preparatory process led by the Meteorological Service, the National Climate Change Focal Point (NCCFP), for meeting the country's obligations to the United Nations Framework Convention on Climate Change (UNFCCC) – particularly in light of the meetings to be held in early December in Bali, Indonesia;
- To identify roles and responsibilities that Jamaican Civil Society would likely have in the preparatory and adaptation process;
- To explore opportunities for community-based CC initiatives;
- And to draft a Civil Society framework for action for climate change mitigation and adaptation.

In terms of 'raising public awareness,' an objective which was central to both days, the Forum specifically sought to ensure that the Civil Society participants were brought fully up-to-date and informed, in terms of: (1) Jamaica's obligations; (2) the activities of Jamaica's National Climate Change Focal Point; and (3) the country's own preparatory process within the context of global Climate Change considerations. In this respect, the Forum was very fortunate to have Professor Anthony Chen (Professor for Applied Atmospheric, University of the West Indies) and a member of the Nobel Peace Prize winning Intergovernmental Panel on Climate Change (IPCC) – as its keynote speaker. Also very significant was the participation of, and presentation by, the Minister of Health and Environment, the Honorable Rudyard Spencer – indicating the importance with which the Government of Jamaica is considering Climate Change for the country as a whole.

Professor Chen set the stage for the two-day public awareness process that focused on the likely impact Climate Change will have on Jamaica's coastal zones, health, biodiversity, energy, economy (especially tourism), agriculture, official national planning processes, built environments & human settlements, and disaster risk mitigation planning – through a series of

¹ See Appendix A for complete agenda

² See Appendix B for participant list

expert panel presentations and discussions. Technical and scientific experts from these fields presented scenarios that focused on the likely impact for each of these sectors.

In addition to the technical presentations, the importance of ‘communication’ in Climate Change, and the need to use culturally relevant methods to engage Civil Society, were also stressed through highly creative and dynamic approaches. The song, “*I Don’t Want to Wash Away*”³, the community publication ‘*Voices from Mocho*’⁴, and a special luncheon presentation on Communication and Climate Change, stressed the importance of communication, and reinforced the need to engage the most vulnerable and marginalized in climate change decision-making, as well as the need to use appropriate tools to get the climate change message out to civil society.

Interesting opportunities for civil society to pilot community based projects within the global framework were also presented by the Global Environmental Facility (GEF) – as Jamaica was chosen out of many countries to be part of GEF’s global pilot programme for community-based climate change adaptation initiatives.

These technical presentations – which laid out Jamaica’s likely risks, costs, and vulnerabilities (both past, present and future) – provided much ‘food for thought’ among the civil society participants in their Day 2 working discussions as they proposed concrete ‘actions’ for the National Focal Point on CC and for civil society to take home for community action. This was the most important part, and purpose, of the Forum.

Civil Society Forum Recommendations for a Framework for Action

In consideration of the civil society recommendations from both panel questions and discussions and working group recommendations, and in terms of the technical representations that were submitted, the National Forum resulted in the following recommendations:

First and Foremost:

Civil society collaboration with Jamaica’s National Focal Point for Climate Change – especially in view of the country’s 2nd Communication preparatory process to the UNFCCC (to be completed by September 2008), now more than ever, needs to ensure principles of good governance and transparency. At the moment, it is not clear how civil society interacts with this important panel. An outcome of the Forum should be a suggested set of civil society representatives, including vulnerable groups (youth, women, poor, rural and urban, and so on), who can engage with the Focal Point, so that their voices are formally included. The NEEC and the Jamaican Environmental Advocacy Network (JEAN) can help to facilitate this engagement and help to identify appropriate representatives.

In terms of the technical considerations, the following major recommendations were also made:

³ Written by the NEEC’s Chair – Marolyn Lucy Gentles, and performed by PANOS ‘youth journalist’ Tameisha Allen and Nicholas Shelton.

⁴ Oral history documentations on Climate Change done with the community of Mocho together with PANOS Caribbean

Coastal Zone Considerations

- We need to commission ‘Jamaican specific’ scientific studies that will clearly show us what the coastal zone implications will be for our country so that we do not model on external data, but plan for the future based on country specific, scientific data
- We need to acknowledge, that our coastal boundaries, realities, and resources – will change with CC. Sea level will rise. Properties will disappear, coastal communities will be uprooted and current investments (Mega hotels, airport reconstruction, parts of downtown Kingston might also disappear);
- We also need to acknowledge that our coral reefs and coastal resources – as we know them now – will be affected by sea level rise and coral bleaching

Fresh Water Resources

- We need to recognize that fresh water will become more and more of a contested resource in the future
- We need to ensure that water conservation and water conservation technologies become a priority and incorporated into all built environments
- We need to link with the ‘planning of human settlements and built environments’ to ensure that building codes change – so that water conservation and catchment strategies are legally required in every home and building
- Implementation of water quality monitoring systems that engage CS

Health

- We need to educate the public on the likelihood that diseases such as dengue and malaria will increase in the future
- We need to educate the public in the skills of eradicating and minimizing these illnesses
- Need also to improve both Port Health and Quarantine facilities
- And improve public health infrastructure

One strong recommendation that came from Ms. Huntley from the Ministry of Health and the Environment (MOEH) were the need for “Inter-sectoral” Adaptation Measures including:

- The need to establish waste management and sanitation monitoring systems
- We need to put in place early warning systems as well as epidemic warning systems and reinvigorate the ‘vector control’ system – including visits by ‘Health Inspectors’ in both home and business places
- Enhance Disaster Preparedness Programmes by adding Climate Change safety considerations

Biodiversity

- We need to acknowledge, that a large part of our endemic biodiversity (and Jamaica is ranked 5th globally in this regard), is in danger. We will have to adapt to new climatic realities – and we might have to brace for entirely new ‘species.’
- Scientific strategies need to be developed now to try and preserve as many of our endemic species as possible

Energy

- We need to find the ‘political will’ which has been missing for the past 20 or so years, to embrace alternative energy technologies instead of carbon-based energy sources.
- We need to allow alternative technologies to link with the official electricity grid – an opportunity which has so far been denied on any economical basis
- Pilot initiatives such as the Wigton wind farm, need to be replicated on a viable economic basis, and further pilot experimentation done with local communities and built structures
- Hydrogen fuel cell technologies also need to be developed and piloted at the community-level
- As a sunshine island, we urgently need to promote solar energy resources
- Also as an island, we need to explore and promote technologies Ocean Thermal Energy Conversion (OTEC) technologies, particularly in light of the fact that the ocean’s temperatures will continue to rise
- As our competitiveness in the sugar industry wanes, we need to invest substantially in sugar-based ethanol – a sector in which we not only may be able to develop a competitive advantage, but which may also allow us to keep our current sugar workers employed
- We need to encourage and provide opportunities for Jamaica’s engineers, technologists and scientists – to invent new and appropriate technologies for us and our region
- We need to create comfortable, safe, viable, affordable and efficient public transportation systems
- We need to mandate energy-efficient systems in the home, corporate and public environments and levy considerable fines for non-compliance
- In the interim, Jamaica also seriously needs to consider carbon-trading arrangements
- Most importantly, Jamaica – together with other SIDS in the Caribbean and elsewhere – need to lobby for the investment of billions of dollars in this sector

Economy

- We need to diversify our economic base and become less dependent on tourism – and/or focus on community-based tourism as well as non-winter based tourism
- We need to train our young people in new CC-based careers and to encourage the development of appropriate technologies for SIDS such as our own and through which we may be able to satisfy economic demand

Agriculture

- We need to see and plan for CC in the context of national food security – first and foremost
- We must explore new “CC-resistant” agricultural technologies now
- We must explore new “CC-resistant” crops for potential production and new agricultural markets
- We must build on our indigenous agricultural technologies
- We cannot assume that irrigation will be possible in the future – and need to develop new alternative water saving technologies that can be incorporated into existing farming systems

- We must develop contingencies and safety plans for the rural poor who are most at risk – the people employed in this sector (and who are still the majority of Jamaica’s workforce) – who will be profoundly displaced. Training needs to take place immediately.

Planning, Built Environments and Human Settlements

- We demand transparency, and clarity on ‘where the buck stops’ within the development approval process so that environmental breaches can be avoided in the first instance and enforced in the second instance, and so that authorities can be held accountable
- We must PREPARE and PLAN now for the ‘worst case scenario’. In other words, we must stop SHORT TERM planning and embrace a LONG TERM PLANNING APPROACH that includes vigilant planning for CC
- We must adopt a ‘culture’ of safety and preparedness – risk preparedness, rather than crisis management
- The engagement of Civil Society in the 2030 planning process needs to be deepened substantially
- We must make use of the many ‘plans’, ‘policies’ and LEGISLATION that we already have in place and in which civil society has invested much time and effort, but for which we’ve seen little use or effect (for example, when it comes to the country’s unplanned settlements and ‘mega’ hotel sectors’)
- Although it is difficult – politically and socially – we must ensure that no citizen of Jamaica ever again builds his or her home in flood or disaster prone areas, as is the case now. This not only costs human lives and personal loss, it costs tax payers money that the country cannot afford.
- We need to create opportunities for encouraging the ‘best and brightest’ of our engineers, planners and architects to invent and design what is best for our country
- We need to reconsider current developments taking place along our shorelines, such as airport refurbishment and expansion, in the light of climate change realities
- The Parish Development Committees (PDCs) need to be strengthened and USED. So much work went into the formation of PDCs through ENACT and other development projects, but they are not fully utilized nor do they have sufficient authority to guide parish planning, let alone CC planning. For the sake of Good governance, the PDCs need to be strengthened not only as part of local government reform, but also in light of the urgency to address CC issues.

Sharing of Best Practices

The National Forum also resulted in the recognition that there was urgent need to promote new appropriate technologies across all sectors and also to garner existing best practices for each. In this respect, while promoting Jamaican best practices was certainly required, it was also recognized that the country could learn through sharing with other SIDS and especially sister SIDS in the Caribbean. Joint regional pilot initiatives, regional training sessions and regional conferences would go a long way in this regard.

Public Awareness and Communication

Throughout all the panels, discussions and working group sessions, the importance of communication and public awareness was confirmed. Evaluations indicated that civil society participants were especially appreciative of the technical ‘realities’ presented by the panelists and

took home ‘information and knowledge’ that they did not have before. Replicating this awareness, in forms culturally appropriate for the general public (and for the non-literate) is critically important. Further workshops and training will be required to do so.

One very important recommendation in this regard, was made by the Honourable Minister of Health and the Environment, Mr. Rudyard Spencer, in his presentation when he suggested that Jamaica instate an annual National Climate Change week to be held at this same time every November.

But the importance of civil society vigilance and advocacy were also reconfirmed. Civil society cannot assume that just because it has been engaged in this dialogue and process to date, that right decisions will be made in the future. Civil society needs to be fully engaged at all steps of the planning and preparatory process for the 2nd communication to the UNFCCC, for 2030 planning and for GEF considerations.

Both Dr. Collins and Prof. Chen in fact made the strong recommendation that SIDS, such as Jamaica, should take a lead role in global advocacy to pressure the governments of Developed Countries to adopt measures to cut carbon emissions drastically and to provide the billions of dollars that will be needed to prepare SIDS technologically.

It was also suggested that ‘easy to use’ glossaries of CC terms and public awareness tool lists be prepared to assist CS in their responsibility to prepare communities.

But the professional media will also need to be given special attention to ensure that they cover CC issues as the news worthy events they are. For the mass media and CS as well, specific recommendations from PANOS included:

- sensitisation seminars for editors on climate change issues
- specialised training for the media to enhance the understanding by media professional of climate change
- There should be a deliberate effort to present people centred climate change stories
- Information sources, such as websites need to be reliable with easy access
- Creation of a public general awareness on climate change issues
- An image bank should be incorporated into websites that enables journalists to download and use images in stories on climate change. This will help combat low literacy levels in some countries
- Policy makers should invest in public media initiatives that will provide space and resources for journalists who want to cover key environmental issues.
- All stakeholders need to engage the interest of journalists
- There should be constant interaction between the people who have the information, the media and those affected.
- Policy makers should make available financial resources for capacity-building programmes for journalists
- The media see a role for themselves in engaging in climate change debates and should be encouraged to do so

Emerging ‘Planning’ Junctures for Civil Society Engagement

One of the critical outputs of the National Forum was the recognition that Civil Society needs to be fully engaged in ALL of the planning and preparatory processes for which there are currently opportunities. These include:

- Most importantly, the National Focal Point on Climate Change (NFPCC) – 2nd communication to the United Nations Framework Convention on Climate Change (UNFCCC) (due September 2008) and in the socio-economic study that is to be conducted as part of this preparatory process;
- The 2030 planning process (The next draft is to be prepared for January to March 2008 with a view to tabling the plan in parliament in April 2008).
- The Global Environmental Facility (GEF) socio-economic baseline data collection for the Vulnerability Rating Assessment (VRA) process

Roles and Responsibilities for Civil Society in Jamaica

Most importantly, the Forum also recognized that civil society has clear roles and responsibilities, and can take very clear actions at the community level, in helping to make Jamaica more aware of climate change implications, to engage civil society in decision-making, and – as the front line guards – to help prepare local communities to become prepared for the new climate change realities.

Within this context, it was also strongly recommended at several junctures during the Forum that Civil Society has a particularly vigilant role to play with respect to lobbying and advocacy and that CS within all the SIDS of the Caribbean region should liaise and join forces to demand compensation from developed countries to address CC.

Civil society also has an important role to play in spear-heading technical adaptation ‘pilot projects’ at the community level. Community-based and community-driven pilot activities need to be initiated in all sectors to be affected by CC so that best practices can be gathered and new mitigation/adaptation practices and technologies replicated and put in place before the CC crisis is full-blown. Pilot initiatives should be initiated with the GEF global initiative, but should also not rely solely on these funds. Other resources need to be urgently obtained and solid working partnerships with private sector and research entities forged as soon as possible.

In addition, the Forum also noted that Civil Society needs to play a strong role in the socio-economic study which will be conducted in the new year (2008) by the NFPCC to inform its second communication to the UNFCCC. Input into the design, types of questions to be raised and addressed should be informed by civil society representatives from the current Forum.

1. Introduction and Background

Climate Change (CC) is increasingly become a global concern of utmost priority. Although debates as the causes and full extent of CC's impact continue, within most global scientific circles there is consensus that CC is indeed a reality. It is no longer *'if'* climate change will happen, but how to respond now that it *'is'* happening.

For Small Island Development States (SIDS) such as Jamaica and other Caribbean islands, the likely impact of climate change on human health, agricultural production, energy, coastal and water resources, human settlements, our biodiversity and our tourism-based economies – is especially dire. While SIDS are only minor contributors to the global problem of CC, they are the most vulnerable to the rising sea level changes and global warming that will accompany climate change in the coming years. Local populations and civil society (CS) therefore not only need to be fully appraised of the expected impact climate change will have in their future, they also need to be fully engaged in the tough choices and decisions that will need to be made if mitigation, adaptation and preparedness measures are to be effective.

As a signatory to the Kyoto Protocol, Jamaica has established a National Focal Point on Climate Change (NFPCC) which has already submitted its first communication to the U.N. Framework for the Convention on Climate Change (UNFCCC) and is now in the process of preparing for its second communication due September 2008. Civil society input into this process is therefore critical, but to date, while there has indeed been some discussion with civil society as to what CC will mean for Jamaicans, there has not been enough of the truly participatory in-depth engagement that is required to both prepare people and to garner their support for the process.

For this reason, on November 8th and 9th⁵, approximately 150 representatives⁶ of Jamaica's civil society – both rural and urban – as well as government planners, public servants, local government representatives, scientists, and donor representatives came together at the Hilton Hotel in Kingston, Jamaica, to take the first step in deepening Civil Society's involvement. The National Forum was organized and coordinated by Jamaica's National Environmental Education Committee (NEEC), in collaboration with and supported by the Environmental Foundation of Jamaica (EFJ) and the Commonwealth Foundation.

This report provides an overview of the Forum discussions and panel presentations, and a series of civil society endorsed recommendations for a future framework for action.

2. Goals and Objectives

The objectives of the National Forum were:

- To bring civil society into the national planning process for Climate Change mitigation and adaptation;
- To raise Civil Society's awareness about the issues related to Climate Change;

⁵ See Appendix A for complete agenda

⁶ See Appendix B for participant list

- To provide Civil Society input into Jamaica's national preparatory process led by the national Climate Change Focal Point (NCCFP) for meeting the country's obligations to the United Nations Framework Convention on Climate Change (UNFCCC) – particularly in light of the **United Nations Climate Change Conference** held in early December 2007 in Bali, Indonesia;
- To identify roles and responsibilities that Jamaican Civil Society would likely have in the preparatory and adaptation process;
- To explore opportunities for community-based CC initiatives; and
- To draft a Civil Society framework for action for climate change mitigation and adaptation.

3. Expected Outcomes

The official expected outcomes of the Forum were:

- Raised awareness about the issues related to climate change
- Input into the national process led by the National Climate Change Focal Point for meeting Jamaica's obligations to the U.N. Framework Convention on Climate Change; and
- A draft framework for action for climate change mitigation and adaptation by civil society.

4. DAY I

4.1 Overview of Opening Ceremony



The Honourable Rudyard Spencer – Minister of Health and Environment, addressing the audience.

The Forum opened with words of welcome from **Mrs. Gina Sanguinetti-Phillips**, Chairperson of the National Environmental Education Committee (NEEC).

Mr. Christopher Corbin - the main facilitator for Day I, brought greetings from Mr. Nelson Andrade of **UNEP's Caribbean Environmental Programme (CEP)** and stressed the importance of the Forum for raising awareness of Climate Change – an issue which he noted has so many implications for drinking water, flooding, coral reef protection, seabeds, food production, human health among others. He noted that the only way small island developing states (SIDS) would be able to successfully mitigate and adapt is by being better informed and making better planning decisions.

The Honourable Rudyard Spencer – Minister of Health and Environment, brought remarks and expressed his pleasure to see the number of participants present given the high global importance of climate change. He expressed his concern over the challenges that Climate Change will pose to countries like Jamaica who to seek reduce poverty while also achieving sustainable development without environmental degradation. He noted that the year 2007 has seen an 'unprecedented level of attention' to climate change globally and the world's United Nations machinery and economic resources were already visibly responding to this issue.

The Minister then made specific acknowledgement of Professor Chen's important contribution as a distinguished Jamaican scientist on the Intergovernmental Panel on Climate Change (IPCC) and congratulated him on his recent award of the Nobel Peace Prize shared among IPCC members and U.S. Vice-President Al Gore.

Minister Spencer then noted the timeliness of the Forum in light of the fact that Jamaica was currently preparing for the 13th Conference of the Parties to the UN Framework Convention on Climate Change to be held in Bali, December 2007. The Forum would help to bring a civil society perspective on the specific issues of concern to Jamaica, which included:

- Funding for adaptation to climate change by small island developing states (SIDS)
- The 2nd commitment period under the Kyoto Protocol following the end of the 1st period in 2012; and
- Appropriate technology transfer.

He stressed the particular urgency to identify adaptation solutions for the unique specificities of SIDS like Jamaica, who are particularly vulnerable to climate change. He emphasized the urgency to also recognize the health threats associated with CC that will occur through increased vector transport.

The Minister also suggested that this same week in November could be considered 'national climate change' week on an annual basis to bring greater recognition to the issue. He noted the significance of starting the Forum on World Town Planning Day and was pleased to see the sharing of information among planners and other sectors, including the private sector.

He urged the Forum participants to support the work of the Meteorological Office in its role as Jamaica's National Focal Point on Climate Change (NFPCC) and especially in its preparation of the 2nd National Communication on Climate Change to the UNFCCC that will need to be completed by September 2008 and which will specifically set out the vulnerability and adaptations for Jamaica to consider with respect to its water resources, coastal zones, health,

human settlements, agriculture and tourism sector as it seeks in order to develop specific recommendations for a structured, national action plan.

Mr. James Rawle – Chairman of the Environmental Foundation of Jamaica – brought special greetings to all EFJ members and grantees at the forum, especially those who had traveled from rural areas to be present. He noted the 990+ projects that the EFJ has supported over the years, in both the environment and child sectors, and pointed out that the EFJ continued to be the number one donor supporting environmental projects in Jamaica. This, he also stressed, was always done through the strengthening of working partnerships – and for that reason he was very happy that the Forum was also the result of a fruitful partnership among the EFJ, the NEEC and the Commonwealth Foundation.

Mr. Rawle noted the critical importance of enhancing education and awareness about Climate Change issues for although it was widely discussed at the global level, Mr. Rawle felt that the most vulnerable groups in society are still not aware of its implications or involved in deciding what strategies should be used for adaptation and risk mitigation. He therefore stressed that Civil Society needs to be involved and in ensuring good governance in the CC adaptation process. For this reason, he concluded, the EFJ was proud to be supporting the Forum as a first step in continued partnerships needed to address this important issue.

Dr. Mark Collins – Director of the Commonwealth Foundation then brought greetings from his organization and stressed that Commonwealth Countries – including Jamaica - should be the countries leading the discussions at the next United Nations Climate Change Conference in Bali. He noted that out of the 53 Commonwealth countries - no fewer than 32 were small island states that are particularly vulnerable. Without attention to new strategies, SIDS would likely face a number of threats, including health threats that might even reverse progress made toward achieving the Millennium Development Goals (MDGs) if malaria, dengue, livestock diseases and agricultural pests start to increase drastically as a result.

Dr. Collins also emphasized the importance of investing in science and technology (S&T) to help SIDS adapt to climate change and noted that S&T doesn't always have to be complicated or expensive. Appropriate technologies do exist now in some cases, but communities may not know about them. As an example, he illustrated how simple hurricane straps on house are being used to help poorer communities better mitigate against hurricane damage.

At the same time, however, Dr. Collins also cautioned against thinking that there could be no quick technological fix to Climate Change. He stressed the importance of 'communication' in this respect and said that communication was not yet being taken sufficiently seriously. A serious communication deficit still needs to be addressed especially if civil society is to be engaged and prepared. He noted the support that his foundation had given to PANOS to support media/journalist training regionally and that the foundation would continue to support communication initiatives.

In conclusion, Dr. Collins also emphasized the importance of supporting local NGOs and CBOs in advocacy and lobbying around CC, but also emphasized the need for grassroots groups to

forge strong partnerships with the private sector and government. And he urged SIDS, such as Jamaica to form likeminded partnerships with other SIDS and to support each other.

With the opening remarks completed, an original song, written by Ms Marolyn Gentles – entitled “*I Don’t Want to Wash Away*” was then sung by Ms. Tameisha Allen (Youth Journalist, PANOS) with musical accompaniment from Mr. Nicholos Shelton (Artistic Coordinator – Youth Hearth Initiative). The song – which was very moving – truly helped to bring the issue home in a more personal and very dynamic way.

The keynote speaker, **Professor Anthony Chen** – Professor for Applied Atmospheric – and former head of the Climate Studies Group, Mona, then provided a scientific overview of the facts associated with CC and clarified the difference between natural variability (caused by events such as volcanic eruptions) and anthropogenic (or man-made) contributions to the problem. He also gave examples of greenhouse gases and explained the greenhouse effect.



The history of the formation of the IPCC was then provided and Professor Chen outlined how the IPCC has been able to merge both natural observations and anthropogenic observations in scientific models to show that it is more than 95% likely that manmade impacts on global temperature have been growing steadily since the 1750s with the dawn of the industrial revolution.

The sobering and frightening point was made that even if emissions were to cease now, global warming would still increase due to the ocean’s memory. For this reason, it is 90% or more likely that the Caribbean temperature will definitely increase by the end of the century, but also – Professor Chen emphasized - that precipitation (rainfall) would decrease substantially. At the same time, however, there was not yet enough data, Prof. Chen noted, to conclusively support that an increase in hurricane activity will occur as a result. However, because it will take less time for mosquitoes to incubate with a rise in global temperature – vector borne diseases will spread and Jamaica should prepare itself for increases in the number of cases of malaria and dengue.

With respect to sea level rise, the professor further stressed that there was wide deviance among models and that more country-specific data needed to be collected. Nevertheless, it was 66% or more likely that the Caribbean region would experience sea rise and that even a 2 metre rise will have serious implications or SIDS such as Jamaica.

Higher temperatures will definitely result in coral bleaching and will see a rise in vector borne diseases. Other serious impacts should therefore be expected in agriculture, tourism, fresh water supplies, biodiversity, and coastal resources. He stressed that Climate Change is an environmental process with delicate thresholds – or ‘tipping points’ at which even slight changes can result in irreversible changes.

In terms of what Jamaica and the Caribbean region has been doing so far, Professor Change suggested that a lot had been done, but we could be doing a lot more as well. He suggested that countries like Jamaica have relatively small environmental footprints. They contribute through CO₂ emissions and methane gas production, but that is relatively minor compared to the high polluting countries – and this needs to be kept in perspective when we consider our position as one of many SIDS.

For this reason, Professor Chen also strongly argued that Jamaica needs to lobby together with other SIDS for the reduction of green house gases by developed countries. He also voiced that Jamaica especially needs to find non-carbon emitting sources of energy, but stressed that Corn/ethanol is not the answer. Rather, Jamaica should turn to hydro-electricity and to wind and solar energy and must be able to sell solar back to the power plant grids.

He emphasized the need for more research and development (R&D) to make hydrogen fuel cells cheaper and more efficient, and urged the country to explore OTEC – Ocean Thermal Energy Conversion – using heat off the ocean to drive engines. And while he acknowledged that nuclear power has a place, it requires more R&D as well – and therefore a better technology for SIDS is solar technology.

Ultimately, however, Professor Chen concluded that “*Not millions but billions* of dollars needs to be invested in developed countries to help prepare them for climate change adaptation” and that despite what we may receive in terms of funding for adaptation, SIDS like Jamaica should not be blind or stop from vigorously advocating the need for reduction of green house gases especially in the developed countries.

After the keynote address, a **multi-media presentation ‘Climate Change and GIS’** was presented by **Dr. Parris Lyew-Ayee Jr. and Ms. Karen McIntyre** of the Mona GeoInformatics Institute. Their presentation showed graphic examples of what will likely happen to sections of Jamaica’s coastline with sea level rise. Particularly affected are likely to be the south coast, and much of Kingston. This precipitated many questions at the end of the presentation by persons who were concerned about: (1) why money was being invested to upgrade both national airports if they were likely to eventually be under-water, and (2) what would happen to coastal property values, as well as why mega-hotel developments were being promoted if CC was an inevitability.

4.2 DAY I⁷ – Panel 1 – Adaptation to Climate Change in Jamaica

The first of four technical panel presentations, “*Adaptation to Climate Change*” was facilitated by **Ms. Leonie Barnaby**, Senior Director, Environmental Management Division at the Ministry of Health and the Environment.

Mr. Jeffrey Spooner (Head) Climate Change Branch – Meteorological Service of Jamaica, provided an overview of the history, roles and responsibilities of the National Focal Point on Climate Change (NFPCC) and expressed his pleasure to participate in the Forum so that the NFPCC could identify additional methods for engaging civil society.

⁷ Appendix C provides the complete list of presenters.

He noted that while Jamaica signed onto the Kyoto Protocol in 1999, it has no specific targets. And in practice, all that has really been implemented so far is the Wigton Wind Farm experience as a registered a Clean Development Mechanism (CDM) project that is generating Carbon Emission Reductions (CERs). However, Jamaica has the potential for more CDM Projects that would likely also have the potential to engage civil society more closely.

The main roles and responsibilities of the National Climate Change Focal Point, according to Mr. Spooner, were to:

- collect and provide information to Decision Makers, Policy Makers other Officials and concerned Government Ministries, and Agencies/Sectors on Climate Change activities that address the current and anticipated adverse effects, including extreme events and their impacts on sustainable development programmes
- highlight key problems arising from the interaction of Climate Change and Sustainable Development so that they may be taken on board in the coordination & integration of national Climate policies with Sustainable Development policies.
- undertake national awareness raising and to develop the capacity in relevant Government Ministries, Agencies/ Sectors (Non-governmental organizations (NGOs), Community Based Organizations (CBO) both at the national and local levels in order to reduce the threats from climate change, thus creating a better management and coordination of climate change activities in the country and integrating policies on climate change into socio-economic and sustainable development programmes/plans at national and local levels.
- Coordinate all Climate Change activities locally with the various stakeholders: Government Ministries, Agencies/ Sectors (NGO's, CBO's etc.) and provide technical advice to these stakeholders on climate related issues, including CDM concerns.
- Collaborate with various institutions locally, regionally and internationally such as (Climate Studies Group at the University of the West Indies (UWI), the Caribbean Community Climate Change Centre (CCCCC), Cuban institute of Meteorology, the National Hurricane Centre (NHC), the National Oceanic and Atmospheric Center (NOAA) the, Hadley Centre among others) with respect to the development of Climate Change scenarios.
- To attend the UNFCCC conferences and Subsidiary Bodies sessions (such as the Conference of Parties (COP) and the Meeting of Parties (MOP), the Subsidiary Body for Scientific and Technical Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) and to ensure that Jamaica's positions on Climate Change are articulated in our best interest. (Jamaica has held various positions in the UNFCCC: Member of the COP Bureau, Alternate member on the CDM Executive Board, co-chair of one of the UNFCCC contact group).
- To report to the international communities through the UNFCCC on our national circumstances and on steps taken by Jamaica on the implementation of all aspects of the

Convention. (To date this has been done through the completion of the NFPCC's first/initial National Communications which was submitted to the UNFCCC in 2000 and in the preparation of the Second National Communications to be completed by the end of 2008.

Several critical areas identified in the first communication, Mr. Spooner noted. These were:

- **Coastal Zones:** The need for comprehensive management of the island's coastal ecosystems, including strategic planning and an assessment of the needs for modification and implementation of identified land-use strategies and guidelines.
- **Water Resources:** Adaptation options for the Water Resources sector will revolve around an improved distribution network incorporating water conservation techniques.
- **Agriculture:** Changes in the climate will obviously affect agricultural production and output, thus the need to examine alternatives is quite clear.

Mr. Spooner also explained that the focus of the 2nd communication will be to answer the following questions:

- What are our current vulnerabilities?
- What are our future vulnerabilities?
- What are the adaptive responses to reduce these vulnerabilities?
- What are the implications for sustainable development? (Policy recommendations)
- Sectors/zones
 - Generation of Climate Scenarios & an integrated assessment of the impacts on Jamaica's Human Health Sector
 - Integrated assessment of the impacts of CC on Jamaica's Coastal Resources & selected Human Settlements
 - Integrated assessment of the impacts of CC on Jamaica's Water Resources & the Agricultural Sector
 - The comprehensive socio-economic impacts of CC on Jamaica's economy.

In terms of the ways in which civil society has currently been engaged in development of the 2nd communication, Mr. Spooner noted that at present, the main means for CS participation is via 'consultations'. The following options were listed:

- Through the national and local level awareness raising and capacity building/development processes.
- Through the various consultation processes which take place from time to time.
- Through the coordination of Climate Change activities nationally and locally.
- Directly at UNFCCC conferences/sessions: Through various NGOs, CBOs and other groupings.
- And through participation at side events at the UNFCCC conferences/sessions.

The purpose of the NFPCC is to raise public awareness about CC, and create better management and planning institutionally.

In the New Year (2008), Mr. Spooner also noted that the NFPCC would be conducting a comprehensive socio-economic survey related to Climate Change and that it would now consider additional recommendations from this National Forum when so doing.

The second speaker in Panel I – **Ms. Elizabeth Emanuel** – Sustainable Development Specialist, Planning Development Unit, Planning Institute of Jamaica spoke on the 2030 visioning process and how climate change was being considered. Ms. Emanuel outlined that the 2030 process especially seeks to ensure that Jamaica reaches fully developed ‘world class’ status by 2030 in the following areas:

- Education
- Health Care
- Improved Nutritional Status
- Basic Amenities (Water, Housing etc.)
- Access to Environmental Goods and Services
- Civility and Social Order

Principles guiding the 2030 process include:

1. Jamaica’s transformation must have PEOPLE at the centre of its development
2. Transformation should be directed by an over-arching VISION for the society, and guided by a cohesive and comprehensive development PLAN. Which fosters:
3. Sustainability – integrating economic, social and environmental issues
4. Balanced development in rural, urban and regional areas
5. Equity – ensuring that the Plan facilitates equality of opportunity and equal rights
6. Social cohesion and partnership

Strategic priorities within the 2030 process include:

1. Developing Human Resources
2. International Competitiveness
3. Environmental Sustainability
4. Health
5. Infrastructure
6. Science, Technology & Innovation
7. Social Protection
8. Effective Governance
9. National Security
10. Gender, Culture & Values
11. Regional Development
12. Population

Within the context of Vision 2030, Ms. Emanuel then noted that climate change is emerging as a cross-cutting issue - strategies related to adaptation are emerging throughout all the plans. Some emerging strategies in the context of CC include:

- Creating mechanisms to enable all government policies and plans fully to consider the potential impacts of climate change and recommend appropriate adaptation strategies
- Identifying strategic priorities for climate change
- Promoting climate change through local and community media
- Adopting best practices for climate change adaptation
- Integration of climate concerns into companies' and government's core business strategies
- Improvements in energy efficiency and conservation
- Integration of climate change considerations into the day-to-day management of all sectors as well as in long-term investment and development decisions
- Platforms to create community-based coping strategies for disaster risk reduction
- Align STI investments to solve national problems and issues
- Promote construction and rehabilitation techniques that enhance the long term usability and affordability of housing
- Develop and apply multi-hazard mitigation and climate change adaptation strategies to the tourism sector

Throughout her presentation of the 2030 planning process, Ms. Emanuel stressed that all planning and “transformation must have people at the centre”. She also stressed the need to promote viable indigenous technology and good governance at all levels. But she also emphasized the need to ‘prepare for the worst case scenario’ – so that real readiness can be achieved. And finally, she promised that there will be additional opportunities for CS input in the 2030 task force for concrete actions and therefore, CS needs to be sure that it is part of all the national planned consultations.

At the end of each panel, there was only limited opportunity for questions from the floor, and therefore, the Forum chose instead to allow feedback and commentary from official respondents. Nevertheless, the questions from civil society were critically important – and while only a few could be voiced during the time available, they were collected on paper and summarized. Many have also been sent back to panelists for further clarification on points raised.

The respondent for this panel discussion was **Ms. Sisporansa Stanford** (Trade and Environment Officer of the Private Sector Organization of Jamaica) who wondered if it was going to be necessary to charge an energy levy to companies in order to achieve specific targets. She was concerned about business's bottom line - always profit – and to what extent energy in the form of fossil fuels will hit the pocket books of the corporate sector.

This precipitated interesting discussion about the commonly held view of ‘business’ that being energy efficient is not cost effective.

The full list of questions for each panel discussion is included in Appendix D.

4.3 Lunchtime Communication and Climate Change Presentation – Ms. Indi McLymont-Lafayette (Programme Officer, PANOS Caribbean)

Mrs. McLymont-Lafayette presented some of the key findings from a “Knowledge, Attitudes and Practices” (KAP) survey completed by the National Focal Point on Climate Change which showed that in Jamaica there was:

- general feeling of complacency and indifference towards climate change and its effects
- Lack of preparedness for disastrous situations – very little home insurance
- Knowledge of certain climate change terms
- strong to moderate interest in climate change
- Most persons (60.9 %) strongly agreed with the statement that the Government should play a stronger role in addressing the impacts of climate change on communities
- A clear trend is seen where people feel that climate change is less important to their own communities than to the country in general
- There was a strong feeling that the private sector should do more to combat weather related impacts, but among the private sector itself – when surveyed – it was felt that measures would be expensive to implement
- Among the public sector sample surveyed, the KAP found that few organizations had units to deal with CC.
- But the public sector also stressed the importance of cross-agency collaboration and planning and the promotion of public awareness

The KAP survey also provided useful information on the types of media that Jamaicans prefer and possible communication channels that should be considered for general public awareness. However, it also stressed how little the professional media is likely to cover CC as a topic, because it is not seen to be ‘news worthy or sexy enough to report on’.

One of the key problems the media faces in reporting on CC is due to the debate in scientific and international circles with respect to whether or not it is or isn’t taking place – hence the media are unlikely to follow it through.

Several key areas for message development were also highlighted and the importance of using alternative media and inter-personal communication channels and strategies was stressed. In this regard, the excellent work that PANOS has been doing in Mocho, St. Thomas – with indigenous oral history testimonies and “local voices” related to CC, and the ‘I don’t want to wash away’ song are excellent examples which should be continued and promoted as part of an forthcoming CC communication strategy.

An overview of regional activities related to CC and communication were also provided, most notably the highlights of a PANOS – CANARI workshop held in St. Lucia.

Additional recommendations coming from the PANOS presentation include:

- Need for more effort to be made to get the message as to the *raison d’etre* for many of the common place Government interventions across to the wider public in general and to the media in particular.
- The tendency to pass the buck to someone else is a real issue that will have to be overcome in any efforts to get the general public to start behaving in a more environmentally responsible manner.

- The schools are ideal for starting this process of awareness and responsible environmental usage and thus should be used more for climate change education.
- The programme of public awareness on climate change be launched as a stand alone programme in the first place but be institutionalized into an overall environmental awareness Plan.

Recommendations for the media include:

- Sensitisation seminars for editors on climate change issues
- Specialised training to enhance the understanding by media personnel of climate change
- Scientists and policy-makers must break down the jargon used in issues relating to climate change
- There should be a deliberate effort to present people centred climate change stories
- Information sources, such as websites need to be reliable with easy access
- Creation of a public general awareness on climate change issues
- An image bank should be incorporated into websites that enables journalists to download and use images in stories on climate change. This will help combat low literacy levels in some countries
- Policy makers should invest in public media initiatives that will provide space and resources for journalists who want to cover key environmental issues.
- All stakeholders need to engage the interest of journalists
- There should be constant interaction between the people who have the information, the media and those affected.
- Policy makers should make available financial resources for capacity-building programmes for journalists
- The media see a role for themselves in engaging in climate change debates and should be encouraged to do so

4.4 Panel II – Climate Change and Natural Resources: What’s Really at Stake?

The second panel was facilitated by **Ms. Denise Forrest** – President of the Jamaica Institute of Environmental Professionals (JIEP).

The first speaker, **Professor Edward Robinson** – Senior Lecturer at the Department of Geography and Geology (UWI) provided an overview of CC impacts for **Coastal Zone Development**. Professor Robinson specifically stressed that:

1. Sea-level rise is a fact that Jamaicans will have to accept as part of their lives since it will continue to rise at least until the next century.
2. Even if Co2 production stopped tomorrow, the ‘ocean’s memory’ – the high response time that it takes for the ocean to respond to changes in temperature, means that sea level rise will still occur
3. Even if there is no increase in frequency of today’s storm systems, sea level rise itself WILL increase the frequency of destructive storms at the coastline
4. If the frequency of storms DOES increase, say to twice today’s frequency, then the scenario is even worse
5. Climate change will be of critical relevance to ports, fishers, the tourism sector, historical sites, developers and the insurance sector.

6. If sea-surface temperatures rise and chemical waste from the land pollutes the near shore ocean, reef growth will not keep up with sea-level rise, and will no longer offer much protection
7. The frequency of destruction will be felt mostly along the coast. Reef damage will also remove existing buffers along the coastal areas.

Sea level rise determinants include:

- Sea-Level Rise (SLR) results from global phenomena, not local phenomena
- Whatever happens, climate-wise, in Jamaica will have little or no bearing on the extent of future SLR here
- Therefore SLR determinations for Jamaica rely on global models
- Although there are considerable regional fluctuations in sea-level change rates, analysis of past SLR suggests that future sea-level change rates in the Caribbean will approximate the global mean rate

The second speaker for Panel II - **Climate Change and Health**, **Mrs. Sherine Huntley**, outlined the very clear and present dangers to health associated with Climate Change. She specifically stressed that CC will bring about marked increases in vector borne diseases such as malaria and Dengue fever, because with even a modest increase in temperature, the lifecycle of the vectors that cause each of these diseases will be shortened greatly, allowing them to reproduce more quickly and hence allowing these diseases to increase.

Cases of water borne illness will also likely rise with flooding, as will cases of leptospirosis, cholera, Gastroenteritis, and similar diseases and as a result CC is expected to result in large losses in life.

Heat waves, such as the type experienced in Europe during 2003, will occur more often and will be particularly devastating. Persons most at risk for all these diseases are the poor, children, the elderly and those with weakened immune systems.

Mrs. Huntley's presentation identified that cross-sectoral measures are therefore needed to reduce vulnerability through public policies to reduce vulnerability includes promotion of social equity, within and between countries; rescheduling of foreign debts, alteration of trade rules.

She noted that public health measures to reduce vulnerability include:

- Improved surveillance of disease incidence and vector populations;
- vector control measures
- epidemic warning systems
- improved Port Health and Quarantine
- Improved public health infrastructure

“Inter-sectoral” Adaptation Measures include:

- Early warning systems
- Planning of human settlements
- Disaster Preparedness Programmes
- Civil engineering planning

- Safe water (monitoring system)
- Waste Management
- Sanitation

Finally, Mrs. Huntley stressed that there is an awful lot that needs to be done with respect to health – and most importantly people really need to get information on the impact of CC. Impact will be greater in informal housing areas that are more vulnerable and at risk because their facilities are in poorer condition.

Additionally, she strongly suggested that there is an urgent need to bring back health surveillance at homes through home inspections especially in the informal sector.

The 3rd presenter for Panel II, **Dr. Dale Webber** – Senior Lecturer, Department of Life Sciences, UWI – then presented on Climate Change implications for **Biodiversity**.

He noted that Jamaica can expect the following impacts from CC:

- 0.09 to 0.88 m sea-level rise between 1990 and 2100
- Area-averaged annual mean warming of Caribbean Sea by $\approx 2^{\circ}\text{C}$ by the 2050s and 3°C by the 2080s;
- Fewer rain days per year but an increase in the daily intensity of precipitation = greater probability of more frequent drought and flood events
- No significant change in hurricane frequency, but a possible increase of 10 to 20 % in hurricane intensity (Nurse and Sem 2001).

Unfortunately, however, Dr. Webber's presentation also suggested that: "Climate change will mean the extinction of some species and over-breeding of other, likely invasive species".

This will have serious impact on Jamaica's biodiversity which will be particularly catastrophic given that as nation, Jamaica ranks 5th globally in terms of endemic biodiversity and has over 8000 species in total. Ecosystems most vulnerable to climate change impacts include coral reefs, highland forests, and coastal wetlands (mangroves).

Higher temperatures will like impact on biodiversity through:

- Change in species abundance & distribution
- Migration to higher altitudes
- Genetic changes in species to new climatic conditions
- Change in reproduction timings (life cycle)
- Increased sand temperatures, can lead to changes in sex ratios (reducing male turtle production).
- Change in length of growing seasons for plants
- Increase in extinction rate

Changes in rainfall will result in:

- Drying of ecosystems leading to loss of species and changes in community composition.
- Changes in species distribution and ecosystem composition.

- Changes in the geographical extent of habitats and ecosystems.
- Flooding of nests of various species and death of young individuals.

Sea-level rise will affect biodiversity by:

- Changes in structure of coral reefs and shallow water marine communities.
- Increased inundation of coastal wetlands and lowlands.
- Loss of estuarine, coastal species and communities.
- Increased intrusion of salt water vegetation into freshwater ecosystems in coastal areas.
- Loss of nesting and feeding habitats particularly for endangered turtle species and crocodiles.
- The cost to protect Jamaica from a one metre sea level rise in 1990 to be US\$462 million (IPCC)

Hurricane intensity will affect biodiversity by:

- Loss of vulnerable island species.
- Changes in species competitive interactions and species and community composition.
- Changes in range of invasive species.
- Increased damage to nests & nesting sites.
- Increased destruction of sensitive habitats:
 - Coral reefs,
 - Mangrove ecosystems
 - Terrestrial (esp. forest) ecosystems.

Higher ocean temperatures will result in

- Mild warming (+2oC), tropical near-shore communities will change from coral-dominance to algal-dominance.
- Creates conditions that may be suitable for some invasive species to become established in new areas
- High temperatures lead to coral bleaching and even coral death
- The elimination of coral reefs would have dire consequences. Coral reefs provide habitats and nursery areas for numerous commercially important species

Threats to Jamaica's forests will impact not only underground water quality, but also the ecosystems and homes for biodiversity.

Dr. Webber's presentation also indicated the following biodiversity 'hot spots' that are most vulnerable to CC:

- Cockpit country
- Hellshire Hills
- Blue Mountains
- Portland Ridge
- Black River
- Canoe Valley
- Port Royal Mangroves

- Harris Savanna
- Mason River
- Portland Bight
- Pedro Banks

Questions from the floor indicated a deep concern among the participants to find out what could be done to prevent damage to the island's biodiversity hot spots.

The specific respondent for the panel - Paula Hurlock of Dolphin Head Trust asked the following questions:

- Have we taken into account mass movements – globalization and tourism such as through the cruise ship industry? Do we know what impact tourism has on our health risks?
- The Ministry of health has to be prepared for vector control at our ports with our cruise ship visitors – do we really have the type of health controls at our ports that we should have

Other comments included:

Dr. Webber: there are programs but we need to put them altogether. Specifically, the Environmental Foundation of Jamaica (EFJ) needs to protect Port Royal's biodiversity

Mrs. Huntley reiterated that vector control would like to work through schools but is told that the existing curriculum is already too full. Therefore, we need to make decisions as a country with regard to WHAT issues are going to be on the table as priorities

Ms Wendy Lee – Northern Jamaica Conservation Agency (NJCA) pointed out that adapting communities to move from vulnerable areas is itself fraught with challenges – what really can be done to safeguard our biodiversity and water, etc? Why is this not a burning issue!!!! Nothing has been done with the Protected Areas Policy and Plan. We need to review the Commonwealth Foundation's Civil Society Statement that was prepared in Guyana in August. Dr. Webber agreed with her and confirmed that – we must be very aggressive and willing to say NO to certain types of development!

Dorothy Campbell – of the Consumer Affairs Association suggested that there needs to be a public education programme of media and people in the private sector- to educate people on how to 'mitigate' against CC.

Denise Forrest also pointed out that it is hard to educate people in the absence of POLICY and without any real alternatives to choose from. CC throws open a whole new ball game now.

Dr. Bartlett – Jamaica Labour Party (JLP) Minister asked if there had been any research on the effects of mining on biodiversity – outside of the Cockpit Country. He hoped to have his question addressed in follow-up sessions.

4.5 Panel III - Climate Change and the Socio-Economic Environment: What is the Bottom Line? This panel was next facilitated by **Mrs. Janet Bedasse**.

The first speaker, **Mr. Hopeton Heron** from the Petroleum Corporation of Jamaica (PCJ) provided an overview of Climate Change implications for the **Energy sector**.

With respect to electricity supply, Mr. Heron noted that only 7% of Jamaica's energy is produced from indigenous sources. 93% of our energy is petroleum-based with only minimal photovoltaics. And there is at least a 20% energy loss in the home/industrial sector. Higher energy costs have socio-economic fall-out and theft including:

- Greater dependence on imported oil, accounting for over 90% of its total energy use
- Exposure to oil price volatility and supply security issues, which threaten long term economic stability
- From 1998 to 2006 petroleum import bill increased from US\$323 million to US\$1.7 billion.
- Only 7% of the nation's energy is obtained from Indigenous sources

Mr. Heron then highlighted certain aspects of Jamaica's **Energy Policy (2006 – 2020 Green Paper)** as follows.

Objectives of the Policy are to:

- Security of energy supply
- Energy diversification
- Energy efficiency & conservation
- Environmental protection
- Maintaining a competitive market environment

In the transportation sector, Mr. Heron noted that Jamaica is extremely inefficient. He stressed that the island has a very poor public transportation system – and car-pooling is virtually non-existent. One thing that needs to happen is the promotion of a 'telecommuting culture'. Jamaica needs more diesel powered engines and should be promoting flex fuel. And we should be promoting a can-based ethanol industry.

However, he noted that there were considerable opportunities for smaller alternative energy research projects in which Civil society can be engaged. We can also explore how to trade carbon credits to enhance the ecological viability of projects.

But what we also really need is enforcement – and the promotion of a conservation society in the use of water and solar water heaters, as well as small wind turbines.

Mr. Heron's presentation also outlined recommendations for Jamaica's electricity, transportation, and renewable energy sectors. He suggested:

- E-10 – Substitute up to 10% gasoline with ethanol
- Transform the sugar industry to a Cane industry (Biomass)
- Ethanol - environmentally friendly fuel
- Car Pooling (reduction of carbon footprint)

- Leverage the telecommunication Infrastructure (telecommute)
- Implement a lower tax on the more efficient diesel powered engines to increase the proportion of diesel-powered vehicles
- Economy of scale is important for the introduction of flex fuel
- Reduce imported fuel consumption and by extension, reduce greenhouse gas (GHG) emissions
- Development of the Bio Diesel Industry
- Opportunities for growth in various agricultural crops leads to greater employment
- Distributed (onsite) Generation
- Reduction of Training and Development losses
- Private sector investment in R.E (smaller individual projects)
- Reduction in GHG emissions (+ve impact on climate change)
- Trading Carbon Credits to enhance economic viability of projects
- Promulgate national energy efficiency building codes to promote energy efficiency and conservation

For home owners, he suggested:

- Promotion of the use of solar water heaters
- Efficient use of major household appliances
- Expanded use of Compact Fluorescent Lamps (CFL)
 - CFLs consume 70% less energy than incandescent bulbs
 - Last 10 times longer (8000-10,000 hrs.)
- Use of Photo Voltaic to get electricity from the Sun
- Use of small wind turbines
- Use of Methane from a bio- digester

For small business and industry, recommendations included:

- Use of high efficacy florescent tubes and electronic ballasts
- Use of timers to reduce operating time for air conditioners
- Power factor correction
- Use of bio digesters to convert organic solid waste to Methane
- Use of efficient machines in the production process
 - Results in lower operating costs to the business and saves energy

For larger industries, Mr. Heron suggested:

- Cogeneration
 - To get multi- End Use of Energy from one source
- Power factor correction
- Time-of-use electricity billing

For the public sector, suggestions included:

- Power factor correction for the National Water Commission (NWC)
- High efficiency electric motors for NWC
- Water pumping by wind power and Hybrid wind/solar solutions
- Time-of-use billing for irrigation pumps

- Retrofitting of all hospitals, health centres and educational institutions for which energy audits were carried out
- Lighting and air conditioning efficiency upgrade

The bottom line, Mr. Heron suggests is that improved profits can be realized from the following:

- Cogeneration in the sugar and electricity sectors
 - Increased use of Bio-mass
- More widespread use of natural gas in the electricity sector
- Employ energy management strategies
- Utilize renewable energy resources
- Use high efficiency motors or switch to less carbon intensive energy sources for water distribution
- Transportation planning and vehicle rationalization
 - Car Pooling and telecommuting
- Exploit opportunities for carbon trading

The final panelist in session III, focused on the likely impact Climate Change will have on the **Jamaican economy** – especially the Tourism sector. This was addressed by **Mrs. Karen Ford-Warner** (Executive Director of the Tourism Product Development Company).

Mrs. Ford-Warner indicated that at least one in 4 jobs in Jamaica are related to the tourism sector – either directly or through backward and forward linkages. This sector, therefore, is one of the ‘vectors’ of climate change because we rely so much on air travel in this industry and air travel is one of the most important contributors to climate change globally.

It is most likely that this industry will definitely suffer in Jamaica. With temperatures rising we will see increased coral bleaching and loss of our coastal resources as well as coastal tourism infrastructure. This will make our tourism product far less attractive. But an increase in vector borne diseases will also make our product less safe, as will the increase in hurricane activity that is also expected to take place due to CC. Likewise, with global warming – there will be less need for northern tourists to seek southern sun, sea and sand. Taxes on jet-fuel travel will make our product less economic and competitive. So, we are going to lose this sector, one way or another. Which will mean huge losses in Gross Domestic Product (GDP), job losses and also losses to the agricultural sector.

So, Mrs. Ford-Warner stressed, Jamaica needs to see CC as a double-edged sword – with both disadvantages, but possibly also new advantages and opportunities for us to consider.

At the recent 30th Caribbean Tourism Organization (CTO) conference held in October 2007, it was suggested that to offset some of the costs associated with CC mitigation, the region should begin to impose a \$US 5.00 levy on every visitor. Such levies of course, are not politically or economically palatable in the short-term, but it was argued that tourists from developed countries – the greater polluters – wish to travel here – then they should expect to pay the costs.

She also suggested that there needs to be some coherence among all the different goals that Jamaica has signed on all the different internal agreements and protocols. There needs to be

coherence among targets for CC, the Millennium Development Goals (MDGs), and Poverty Reduction Priorities (PRPs) whereas there are none at the moment.

Mrs. Ford-Warner then also stressed the need to focus locally and to come up with local strategies. She pointed out that in Jamaica's own Tourism Master Plan, local strategies were emphasized.

She also suggested seeking new markets for warmer seasons in order to minimize the risk of losing winter markets as climate change raises Northern temperatures during what are now our high season months. And she also made note of the need to develop incentives for mitigation – as has been done through promotion of the Green Globe and Blue Flag programmes. Such programmes need to be emulated and duplicated.

The bottom line, Mrs. Ford Warner suggested is that – despite the challenges – nothing would be more catastrophic than to do nothing. We need to be pro-active ‘*Destination Jamaica*’ needs to get into the drivers’ seat.

The final panelist in panel three was **Professor Elizabeth Thomas-Hope** (Professor of Environmental Management and Head of the Environmental Management Unit (EMU), Department of Geography and Geology at UWI), who provided an overview of **agricultural implications**.

Dr. Hope suggested that there may be both harmful but also possible beneficial implications to Jamaica's agricultural sector through climate change. She noted though that there were currently a lot of uncertainties. No one is sure how much temperature change may take place or what the geographical distribution will be.

However, whatever happens, there will be impact on farming systems that will be especially important for the small farming sector.

She argued that Jamaica needs to look at CC and its impact on the agricultural sector in the context of ‘food security’ and our current situation with respect to global food imports.

There will likely be significant changes in the amount of rainfall and fresh water availability for the sector as well as decreased soil fertility due to soil erosion. Also, the sector should expect increased crop pest diseases, as well as increased livestock pests and diseases that may force the sector to reconsider entire crop and livestock production choices.

Farming systems will have to change as a result. Sea level rise may eliminate most of best land on the flatter plains along our coast lines. The sector will also likely experience increased periods of drought, which will mean a drastic reduction in the amount of fresh water available for irrigation. We cannot assume that irrigation is the only technology that will be required.

It is also likely that plant physiology will change since they will be absorbing more CO₂ – but that will result in enhanced leaf growth, which is not necessarily good for food production. With warmer temperatures, there will be faster plant growth and shorter growing seasons.

Dr. Hope also pointed out that the region is already experiencing the impact of more frequent hurricanes and the costs are high as witnessed most recently by Hurricane Dean which cost the country a total of JA \$1.03 billion in the agriculture sector alone.

To mitigate against hurricane impacts, entire new farming systems will need to be put in place and adaptive strategies will need to be developed. At the minimum will be changes in cropping patterns and sowing/harvesting systems. But at the other end of the spectrum, entire cropping systems will need to be changed – either by using climate resistant crops.

To prepare therefore, we will need to generate models for different scenarios and research technological solutions for adaptation. We will also need considerable public education especially in the small farming sector – which is often traditional and resistant to change.

And most importantly, Jamaica will have to mobilize considerable financial resources for research and to support the changes that will be required to implement new farming systems.

Panel III discussion was very lively. Questions from the floor resulted in considerable discussion about “the lack of political will over the past 18 years to really invest and support research and development (R&D) and science and technology (S&T) in the alternative energy sector.” Some participants suggested that the Wigton wind farm was only a token project – while behind the scenes there are vested political interests to ensure that the Jamaica Public Service Company (JPSCO) remains our sole source of energy. What exactly is the barrier to moving forward in the alternative energy sector, some participants asked?

Another question was asked regarding how alternative energy solutions would be financed? Mr. Heron suggested that the sugar industry sector is going to be devastated by all accounts, and steps should be taken now to move from sugar to a cane for ethanol industry using private sector investment.

Other persons voiced concern that Jamaica has adequate environmental policies and plans, but has consistently lacked the political will to enact and enforce them. It was acknowledged that hard choices need to be made – but as a country we have to face these decisions. The concern was again focused on mega-hotel development initiatives that consistently seem to be breach of both environmental laws and it seems human rights/labour regulations. One participant asked, “why is that when the new government has come to power, ‘with a stroke of a pen we can stop scrap metal exports’, but we cannot stop environmental breaches?”

A point was made that there is a disconnect between mining and the tourism sector since there is clearly growing evidence of salinity intrusion in Jamaica’s underground fresh water supply which will not only affect our own domestic supply, but the tourism industry on which Jamaica’s economy is founded.

Closing remarks at the end of Day 1’s deliberations were provided by Mr. Chris Corbin of UNEP. Participants were also invited to attend the EFJ-Annual Public Lecture at the Courtleigh

Auditorium – “Climate Change and Jamaica – Sustainable Development as Strategic Adaptation” by Dr. Michael Witter.

5. Day II

Day II’s deliberations opened with a morning session on possible funding opportunities for CBO-based initiatives. **Mr. Dale Rankine** – the **GEF Small Grants** National Coordinator with the United Nations Development Programme (UNDP) provided an overview of a new GEF Small Grants initiative specifically focused on Climate Change adaptation.

Mr. Rankine stressed that the new fund was specifically set to find and support ‘community-driven’ strategies for addressing climate change and that Jamaica was privileged to be one of only a few countries globally who were participated in this pilot phase. Each country would be allowed to identify 8-20 projects for a length of five years from 2008 to 2012. Projects to be supported should be:

- Community based
- Community driven
- Locally relevant – addressing local priorities
- And have opportunities for providing training.

Likewise, although locally based, projects should also relate to specific global CC priorities – thereby reflecting an intersection of both local and global realities. So for example, based on Jamaica’s current realities – issues such as landlessness, hurricane mitigation, soil degradation and so forth – need to be presented in the context of global CC. The objective at the end of five years would be to also garner a set of significant lessons learnt for future mainstreaming of CC initiatives.

To assist with this effort, and to also truly show impact, the initiative is also going to conduct generate a socio-economic baseline – using qualitative, global indicators for ‘Vulnerability Rating Assessment’ (VRA). Each CBO that qualifies for a project will also be trained in qualitative sampling techniques at their start of their project – using very participatory methods – to determine their community’s starting point.

In Jamaica’s case, national adaptation priorities will include both coastal zone and agriculture sectors.

Mr. Rankine encouraged participants to begin considering possible community-driven pilot projects for submission to the GEF and asserted that the GEF’s planning process – which will also include the development of a baseline study – will incorporate findings for the current National Forum.

5.1 Panel IV – Climate change and the Built Environment: Raising the Stakes – was facilitated by **Ms. Janet Hyde** (Manager – Planning and Development Branch, NEPA).

Mrs. Eleanor Jones, in her presentation on Disaster Risk Management (DRM), focused on:

- Population and key sectors at risk

- Adaptation strategies are urgent and critical.
- Build and manage DRM knowledge
- Turn talk into Disaster Risk Management Results

She discussed the difference between a ‘crisis management’ approach to DRM and the advantages of adopting a strategic, planned approach to risk management. But she also discussed the importance of making hard choices and decisions – especially with respect to the allocation of resources, since there are several competing interests involved in the Climate Change scenario and different stakeholders involved with contesting interests.

She stressed that we are still “living in denial” – believing that CC will not happen, and that another problem to strategic planning and preparedness is the high degree of ‘turfism’ and distinctions between roles and responsibilities with different agencies and organizations responsible for different aspects of the problem – each of which is acting without necessarily communicating with others who are also responsible. The result is an ad hoc approach that is not appropriate or sustainable.

Mrs. Jones also highlighted the specific things that need to be achieved in DRM. These include:

- Reduction of loss and dislocation
- Disaster Management as a development issue
- Strengthened commitment
- A culture of disaster loss reduction and SAFETY.
- Management of disaster risk
- Mainstreaming of DRM in all activities and planning

By ‘mainstreaming’ Climate Change in the planning process, Mrs. Jones also stressed that:

1. Disaster risk management – is not a stand alone function
2. It is also not purview of only ODP or planners or decision-makers
3. Involves all agencies, ALL sectors
4. Requires clarification of roles and responsibilities
5. Involves individuals and community
6. Ensure development programmes and projects:
 - Are designed to resist hazard impact
 - Do not increase vulnerability
7. Ensure reconstruction and rehabilitation programmes and projects
 - Do not rebuild vulnerability
 - Contribute to developmental aims.

Lessons learned based on 2004-2005 events include:

- Timing of recovery and rehabilitation is critical.
- Remedial works to infrastructure need to be priority immediately after event.
- Insure public assets + assets of vulnerable.
- Needs assessment – public and private
- Design - public and private
- Approval

- Implementation
- Enforcement
- Maintenance

To build capacity, she stressed:

- Break down Institutional blockages /barriers
- Enhance Institutional capacity
- Weaken Professional resistance
- Manage Workload
- Foster leadership
- Soften Control
- Build skills and knowledge
- Make Time

6. Methodology for Working Groups

With the all of the technical presentations completed, it was next time for the participants to roll up their sleeves - consider all of the recommendations and technical realities presented – and to then make specific civil society recommendations for each of the sectors presented.

The Panel discussions presented the FACTS for Jamaica with respect to Climate Change, but the Civil Society working groups were designated the task and responsibility of discerning priority ACTIONS – especially for both the National Focal Point on Climate Change and for Civil Society to undertake. Participants were asked to consider the facts and considerations presented by the panel discussions – gaps, opportunities, strengths and weaknesses and to review a handout that had been prepared outlining these considerations (presented in Appendix E). Then they were given a specific set of questions and consideration (Appendix F) – to look at specific opportunities for civil society involvement in decision-making; to look at critical junctures where civil society definitely needs to be engaged in the planning and preparation for climate change mitigation and adaptation; and to also consider specific actions that can be taken almost immediately by civil society directly.

Finally, to try to ensure an equal number of participants in each group , and to ensure that the particular expertise and/or interest of the participants was focused on related technical areas, participants were grouped and allocated to specific topics, with one working group per topic for a total of nine working groups a follows.

The workshop was originally designed to have a total of nine (9) working groups on Day II as follows:

1. Health
2. Biodiversity
3. Coastal resources
4. Fresh water resources
5. Agriculture
6. The economy

7. Energy
8. Human settlements
9. Planning and built environment

However, there were insufficient participants in attendance at Day II's activities to have all nine groups working separately, and as a result, groups were merged as follows:

1. Health and fresh water resources
2. Coastal resources
3. Human Settlements/Built Environment/Planning
4. Energy and the Economy
5. Biodiversity and Agriculture



Although each working group was asked to consider all the questions listed on the task sheet, in plenary they were specifically asked to report 2-3 priority activities that Civil Society could adopt almost immediately, and 1-2 priority action recommendations for the National Focal point to consider.

7. Working Group Recommendations and Considerations

Despite the time constraints, however, a solid set of recommendations were generated from each group as presented below.

7.1 Coastal Resources

Issues and challenges:

Main challenges facing civil society are:– community mobilization, insufficient capacity and training, illegal dumping of garbage in rural areas.

What needs to take place to ensure that youth, vulnerable groups and gender considerations are taken into account in this sector? Enforcement

What needs to take place in order for civil society to fulfill its responsibilities? Lobbying legislature, new policies and high fines for infringements comprehensive development plans for each area with Environmental Impact Assessments (EIAs) for all construction

- Need greater public awareness
- Greater research on the actual impact for Jamaica, not only guesstimates using GIS data
- Need a National Coastal Development Plan with concrete Do's and Don'ts
- Enforcement and compliance – need to review the penalty costs
- Implement a coastal zone plan

7.2 Biodiversity

Issues:

- Not much support for scientific research
- Lack of baseline data to really know our current situation
- Local knowledge not recorded especially as it relates to plants and their uses (that knowledge is lost with modernization)
- Institutions are harvesting our resources without acknowledging the country where it is found
- Scientific data on biodiversity to be fed into IPCC

Recommendations:

- Scientific information on biodiversity to be fed into IPCC so that proper adaptation strategies can be developed
- Links need to be forged between these two sectors - Information to be shared between sectors because each one affects the other
- Intellectual property needs to be respected and to protect our resources from being harvested by their countries who then use them without acknowledging or compensating us
- An inventory and risk assessment of biodiversity of various areas to be done

7.3 Agriculture

Issues:

- Farmers need information on new technologies
- RADA needs to train communities on new technologies
- Greater involvement of local farmers
- Information needs to be disseminated at a level that it can be understood
- Don't force technology on a community – use a bottom-up approach
- Local knowledge to be fed into researched technologies
- Farmers are 60 years and older – so will face difficulties in adapting
- 48% of Jamaica depends on farming for a living – solutions have to keep them employed
- Not all farmers can read – adaptation strategies and training need to be mindful of literacy
- We aren't considering food security – CC has to be seen in this context
- There needs to be greater involvement of local farmers
- There are global implications for our agricultural sector
- We need to be self-sufficient in food so we are not so dependent on developed countries

Recommendations:

- Clear information presented to farmers on the inevitability of climate change
- Rural Agricultural Development Authority (RADA) marketing network to be reinstated where volumes and types of produced generated can be monitored
- RADA and other agencies to be involved in training communities: let the communities know why newer technologies are better (where applicable) use a bottom up approach

- Local knowledge be integrated with new technologies; communities to know what works best in their own areas
- Communication needs to be in local languages
- Farmers need to become aware of CC

7.4 Human Settlements/Planning and the Built Environment

Issues:

- Lack of empowerment – people are not sufficiently empowered to join the decision-making processes
- Strengthen the PDCs to Establish democratic decision-making processes that will genuinely allow people to voice options without fear
- Civil society needs access to information and planning with respect to rules and recommendations – on what and what is not allowed
- Encourage communication and joint planning between and among ALL ministries to be responsible for Climate Change adaptation – stop ‘pillaring’ planning activities and responsibilities – determine where the ‘buck stops’
- Legislation and enforcement of legislation: enforcement has been a problem. Persons don’t feel sufficiently empowered to address issues occurring in their own communities
- Out of date development laws need to be changed in light of CC
- Out of date standards and policies
- Ordinary people are not given an integrated view of the problem
- There is a disconnect between agencies and ministries
- Acceptance of hazards – adapt to the underlying factors
- What is the interface between the NRCA and research on climate change – what is the mechanism for planning?
- Enormous gap between reality and unfolding disasters – the people who actually make decisions aren’t directly affected by the consequences of our natural disasters
- Few parishes actually have Development Orders and those that do don’t follow them.
- Runoffs and flooding affect improper human settlements – which in turn causes coastal degradation and coral reef bleaching
- Over development of wetlands – why are we building in them?
- Dumping in mangroves and other wetlands
- Fishers will be gravely affected
- Lack of resources to mobilize communities
- Lack of enforcement
- High ignorance
- Natural disasters are occurring with greater frequency and intensity
- Short-term thinking

Recommendations:

- Identification of specific layers of stakeholders within civil society
- Identification of areas for specific land-use activities
- Overall standards/policies/laws
- Public education and awareness

- Presentation of the research to communities
- Development of a national coastal development plan
- Enforcement, penalties and compliance
- Need to implement some type of integrated coastal zone management plan
- Need an integrated and inter-group approach – nationally and inter-regionally
- For communities to be mobilized they need access to information and they need to be engaged in both governance and decision-making around Climate change as well as enforcement and compliance
- Need to sensitize key decision makers
- Need to work through JEAN – Jamaica’s Environmental Advocacy Network
- Policy development
- Need an Environmental Development Order for the North East Coast
- Strengthening of civil societies and local groups to participate in the decision-making process
- Access to requisite data – civil society needs to know the reasons why some things happen and how they affect change
- Civil society needs a common agenda
- We need to customize international building codes (according to World Bank standards and institutionalized within UTech (University of Technology))
- A consensus on civil society position on climate change should be developed
- Quick implementation of the various conventions we have signed to at the various climate change meetings – civil society needs to pressure the government, etc., to implement the conventions and put them into law
- Use simple terminology so people can understand what is happening
- Creating a sustainable economy
- Target education at the highest level
- Use hazard maps and other requisite data to effect into laws about geotechnical surveys and proper landuse planning
- Improve governance and an accountability mechanisms through a participatory approach to governance
- Sustainable urban development
- Provision of suitable alternatives, not only housing but also livelihoods for relocation of persons from vulnerable areas
- Research and implement green gullies
- We need to strengthen the PDCs
- The Panos Mocho example – umbrella to protect people – use as a watchdog
- Civil society needs to access to data so they can know why certain things are not allowed (such as squatting in risk prone areas)
- Common agenda in civil society – a civil society consensus
- Pressure for implementation of conventions signed
- Vision of a long-term future
- Education of our politicians at the highest level to improve governance and accountability mechanisms, democracy

7.5 Energy and the Economy

Issues:

No political will over the last 20 years to really support, and invest in, alternative energy initiatives – so as a result now we are paying \$100US per barrel for oil when we are an island blessed with sunshine most of the year

Recommendations:

- Community-based development must be the basis of national tourism development planning with a focus on ‘village tourism’
- Alternative energy projects at the community level need to be supported
- Database of local expertise to assist with community development projects
- Identification of local expertise to assist community development processes/projects
- Sustained promotion of alternative farming techniques such as mini-sett yams, fuel wood orchards and organic farming
- Database of community projects that Jamaica and international ‘friends’ to help in funding/assisting along with relevant accountability
- Establishment of community development entrepreneurship fund
- The pillars of ‘energy efficiency’, ‘climatic advantages’ and ‘local expertise’ need to drive the built environment planning process

7.6 Health

- Increase awareness through public education, social marketing, media advocacy, integration of climate change in the school curriculum and building capacity at the community level to adapt to climate change
- Promulgation and enforcements of public health and watershed protection/water conservation regulations
- Proper construction of health infrastructure that can withstand hurricane damage
- Support research to assess the impact of climate change on: (1) vector borne diseases such as malaria, dengue fever; (2) the spread of avian influenza and the West Nile fever; (3) the emergence of communicable diseases such as scabies
- Management of solid waste management at the household level

7.7 Fresh Water

- Training and capacity building for communities
- Subcommittee established to develop action plans in response to the potential effects with the following responsibilities:
 - a. Identify specific risks
 - b. Identify groups/communities at risk
 - c. Development of indicators to monitor the impact of climate change on health and fresh water resources
 - d. Implementation of strategies that can facilitate adaptations
 - e. Conduct training to build capacity to adapt to the effects of climate change

- f. Encourage water conservation strategies at the workplace
- g. Development of policies governing water conservation
- h. Properly planned human settlements to prevent: contamination of fresh water supply; increase in communicable diseases; and to allow for enhanced good governance

8. Overall Conclusions and Recommendations for the NFPCC

The Forum provided excellent, highly detailed information and greatly raised the level of awareness about the real implications of climate change for Jamaica. It was particularly constructive in presenting the impact that can be expected along different sectoral lines – the economy, agriculture, biodiversity, etc. That was greatly appreciated by the participants who indicated that there was a great amount of useful information – perhaps even too much to digest within the time frame that was available.

A few people felt that the information, while extremely useful, could have been better presented to make it easier for the layperson to understand as much of it was quite technical in nature. It was suggested that the PowerPoint presentations could have been improved in some cases to make them clearer, and it was also further suggested that if participants had received the presentations in advance it would have been easier to absorb all the information presented.

A few participants felt that there was not sufficient time to ask pertinent questions after each panel presentation and that the working group sessions – which were the main avenue for civil society participation – were not long enough to really include full discussion of everything that was requested of the participants

While the forum was certainly quite successful in raising awareness of the implications surrounding that climate change will have for Jamaica, it was less successful at presenting viable adaptation and mitigation measures that can be adopted.

At several points in the presentations, questions, discussion and working group sessions – the importance of sound planning, enforcement and good governance came up over and over, but there was insufficient time and opportunity to fully address these issues – particularly with government and public service representatives. There was strong feeling among much of the civil society present, that Jamaica has gone through enough ‘sustainable development’ planning and that adequate policies and legislation exist to ensure that improper developments do not occur (both in terms of mega hotels and informal housing in risk prone areas) – but that these guidelines are ignored and not enforced – increasing the losses that will occur with climate change.

Concern that not enough senior government, local government and public service representatives participated – especially during the second day’s working group session. Once again, it was felt, civil society was left alone to make recommendations to government but without the opportunity engage government directly in the process and to ask tough questions.

Overall, however, when considering the recommendations made by both the technical panel presenters and the working groups, the following recommendations to the NFPCC are offered:

Coastal Zone Considerations

- We need to commission ‘Jamaican specific’ scientific studies that will clearly show us what the coastal zone implications will be for our country so that we do not model on external data, but plan for the future based on country specific, scientific data
- We need to acknowledge, that our coastal boundaries, realities, and resources – will change with CC. Sea level will rise. Properties will disappear, coastal communities will be uprooted and current investments (Mega hotels, airport reconstruction, parts of downtown Kingston might also disappear);
- We also need to acknowledge that our coral reefs and coastal resources – as we know them now – will be affected by sea level rise and coral bleaching

Fresh Water Resources

- We need to recognize that fresh water will become more and more of a contested resource in the future
- We need to ensure that water conservation and water conservation technologies become a priority and incorporated into all built environments
- We need to link with the ‘planning of human settlements and built environments’ to ensure that building codes change – so that water conservation and catchment strategies are legally required in every home and building
- Implementation of water quality monitoring systems that engage CS

Health

- We need to educate the public on the likelihood that diseases such as dengue and malaria will increase in the future
- We need to educate the public in the skills of eradicating and minimizing these illnesses
- Need also to improve both Port Health and Quarantine facilities
- And improve public health infrastructure

One strong recommendation that came from Ms. Huntley from the Ministry of Health and the Environment (MEH) was the need for “Inter-sectoral” Adaptation Measures including:

- The need to establish waste management and sanitation monitoring systems
- We need to put in place early warning systems as well as epidemic warning systems and reinvigorate the ‘vector control’ system – including visits by ‘Health Inspectors’ in both home and business places
- Enhance Disaster Preparedness Programmes by adding Climate Change safety considerations

Biodiversity

- We need to acknowledge, that a large part of our endemic biodiversity (and Jamaica is ranked 5th globally in this regard), is in danger. We will have to adapt to new climactic realities – and we might have to brace for entirely new ‘species.’
- Scientific strategies need to be developed now to try and preserve as many of our endemic species as possible

Energy

- We need to find the ‘political will’ which has been missing for the past 20 or so years, to embrace alternative energy technologies instead of carbon-based energy sources.
- We need to allow alternative technologies to link with the official electricity grid – an opportunity which has so far been denied on any economical basis
- Pilot initiatives such as the Wigton wind farm, need to be replicated on a viable economic basis, and further pilot experimentation done with local communities and built structures
- Hydrogen fuel cell technologies also need to be developed and piloted at the community-level
- As a sunshine island, we urgently need to promote solar energy resources
- Also as an island, we need to explore and promote technologies Ocean Thermal Energy Conversion (OTEC) technologies, particularly in light of the fact that the ocean’s temperatures will continue to rise
- As our competitiveness in the sugar industry wanes, we need to invest substantially in sugar-based ethanol – a sector in which we not only may be able to develop a competitive advantage, but which may also allow us to keep our current sugar workers employed
- We need to encourage and provide opportunities for Jamaica’s engineers, technologists and scientists – to invent new and appropriate technologies for us and our region
- We need to create comfortable, safe, viable, affordable and efficient public transportation systems
- We need to mandate energy-efficient systems in the home, corporate and public environments and levy considerable fines for non-compliance
- In the interim, Jamaica also seriously needs to consider carbon-trading arrangements
- Most importantly, Jamaica – together with other SIDS in the Caribbean and elsewhere – need to lobby for the investment of billions of dollars in this sector

Economy

- We need to diversify our economic base and become less dependent on tourism – and/or focus on community-based tourism as well as non-winter based tourism
- We need to train our young people in new CC-based careers and to encourage the development of appropriate technologies for SIDS such as our own and through which we may be able to satisfy economic demand

Agriculture

- We need to see and plan for CC in the context of national food security – first and foremost
- We must explore new “CC-resistant” agricultural technologies now
- We must explore new “CC-resistant” crops for potential production and new agricultural markets
- We must build on our indigenous agricultural technologies
- We cannot assume that irrigation will be possible in the future – and need to develop new alternative water saving technologies that can be incorporated into existing farming systems

- We must develop contingencies and safety plans for the rural poor who are most at risk – the people employed in this sector (and who are still the majority of Jamaica’s workforce) – who will be profoundly displaced. Training needs to take place immediately.

Planning, Built Environments and Human Settlements

- We demand transparency, and clarity on ‘where the buck stops’ within the development approval process so that environmental breaches can be avoided in the first instance and enforced in the second instance, and so that authorities can be held accountable
- We must PREPARE and PLAN now for the ‘worst case scenario’. In other words, we must stop SHORT TERM planning and embrace a LONG TERM PLANNING APPROACH that includes vigilant planning for CC
- We must adopt a ‘culture’ of safety and preparedness – risk preparedness, rather than crisis management
- The engagement of Civil Society in the 2030 planning process needs to be deepened substantially
- We must make use of the many ‘plans’, ‘policies’ and LEGISLATION that we already have in place and in which civil society has invested much time and effort, but for which we’ve seen little use or effect (for example, when it comes to the country’s unplanned settlements and ‘mega’ hotel sectors’)
- Although it is difficult – politically and socially – we must ensure that no citizen of Jamaica ever again builds his or her home in flood or disaster prone areas, as is the case now. This not only costs human lives and personal loss, it costs tax payers money that the country cannot afford.
- We need to create opportunities for encouraging the ‘best and brightest’ of our engineers, planners and architects to invent and design what is best for our country
- We need to reconsider current developments taking place along our shorelines, such as airport refurbishment and expansion, in the light of climate change realities
- The Parish Development Committees (PDCs) need to be strengthened and USED. So much work went into the formation of PDCs through ENACT and other development projects, but they are not fully utilized nor do they have sufficient authority to guide parish planning, let alone CC planning. For the sake of Good governance, the PDCs need to be strengthened not only as part of local government reform, but also in light of the urgency to address CC issues.

Sharing of Best Practices

The National Forum also resulted in the recognition that there was urgent need to promote new appropriate technologies across all sectors and also to garner existing best practices for each. In this respect, while promoting Jamaican best practices was certainly required, it was also recognized that the country could learn through sharing with other SIDS and especially sister SIDS in the Caribbean. Joint regional pilot initiatives, regional training sessions and regional conferences would go a long way in this regard.

Public Awareness and Communication

Throughout all the panels, discussions and working group sessions, the importance of communication and public awareness was confirmed. Evaluations indicated that civil society participants were especially appreciative of the technical ‘realities’ presented by the panelists and

took home ‘information and knowledge’ that they did not have before. Replicating this awareness, in forms culturally appropriate for the general public (and for the non-literate) is critically important. Further workshops and training will be required to do so.

One very important recommendation in this regard, was made by the Honourable Minister of Health and the Environment, Mr. Rudyard Spencer, in his presentation when he suggested that Jamaica instate an annual National Climate Change week to be held at this same time every November.

But the importance of civil society vigilance and advocacy were also reconfirmed. Civil society cannot assume that just because it has been engaged in this dialogue and process to date, that right decisions will be made in the future. Civil society needs to be fully engaged at all steps of the planning and preparatory process for the 2nd communication to the UNFCCC, for 2030 planning and for GEF considerations.

Both Dr. Collins and Prof. Chen in fact made the strong recommendation that SIDS, such as Jamaica, should take a lead role in global advocacy to pressure the governments of Developed Countries to adopt measures to cut carbon emissions drastically and to provide the billions of dollars that will be needed to prepare SIDS technologically.

It was also suggested that ‘easy to use’ glossaries of CC terms and public awareness tool lists be prepared to assist CS in their responsibility to prepare communities.

But the professional media will also need to be given special attention to ensure that they cover CC issues as the news worthy events they are. For the mass media and CS as well, specific recommendations from PANOS included:

- sensitisation seminars for editors on climate change issues
- specialised training for the media to enhance the understanding by media professional of climate change
- There should be a deliberate effort to present people centred climate change stories
- Information sources, such as websites need to be reliable with easy access
- Creation of a public general awareness on climate change issues
- An image bank should be incorporated into websites that enables journalists to download and use images in stories on climate change. This will help combat low literacy levels in some countries
- Policy makers should invest in public media initiatives that will provide space and resources for journalists who want to cover key environmental issues.
- All stakeholders need to engage the interest of journalists
- There should be constant interaction between the people who have the information, the media and those affected.
- Policy makers should make available financial resources for capacity-building programmes for journalists
- The media see a role for themselves in engaging in climate change debates and should be encouraged to do so

Emerging ‘Planning’ Junctures for Civil Society Engagement

One of the critical outputs of the National Forum was the recognition that Civil Society needs to be fully engaged in ALL of the planning and preparatory processes for which there are currently opportunities. These include:

- Most importantly, the National Focal Point on Climate Change (NFPCC) – 2nd communication to the United Nations Framework Convention on Climate Change (UNFCCC) (due September 2008) and in the socio-economic study that is to be conducted as part of this preparatory process;
- The 2030 planning process (The next draft is to be prepared for January to March 2008 with a view to tabling the plan in parliament in April 2008).
- The Global Environmental Facility (GEF) socio-economic baseline data collection process for the Vulnerability Rating Assessment (VRA) process

Roles and Responsibilities for Civil Society in Jamaica

Most importantly, the Forum also recognized that civil society has clear roles and responsibilities, and can take very clear actions at the community level, in helping to make Jamaica more aware of climate change implications, to engage civil society in decision-making, and – as the front line guards – to help prepare local communities to become prepared for the new climate change realities.

Within this context, it was also strongly recommended at several junctures during the Forum that Civil Society has a particularly vigilant role to play with respect to lobbying and advocacy and that CS within all the SIDS of the Caribbean region should liaise and join forces to demand compensation from developed countries to address CC.

Civil society also has an important role to play in spear-heading technical adaptation ‘pilot projects’ at the community level. Community-based and community-driven pilot activities need to be initiated in all sectors to be affected by CC so that best practices can be gathered and new mitigation/adaptation practices and technologies replicated and put in place before the CC crisis is full-blown. Pilot initiatives should be initiated with the GEF global initiative, but should also not rely solely on these funds. Other resources need to be urgently obtained and solid working partnerships with private sector and research entities forged as soon as possible.

In addition, the Forum also noted that Civil Society needs to play a strong role in the socio-economic study which will be conducted in the new year (2008) by the NFPCC to inform its second communication to the UNFCCC. Input into the design, types of questions to be raised and addressed should be informed by civil society representatives from the current Forum.

9. Follow-up Actions

To continue civil society engagement in the planning process, the organizers committed to ensuring that the recommendations would:

1. Provide feedback and input into the Global Environment Facility (GEF) Action Planning Document

2. Provide feedback and input into the 2030 PIOJ National Development Strategy
3. And especially, and most importantly, provide feedback and input into Jamaica's second communication by the National Focal Point on Climate Change to the United Nations Conference on Climate Change scheduled for Bali, December, 2007.
4. Follow-up with direct meetings and correspondence to Minister Spencer and other relevant Ministers of Government
5. To respond directly to questions submitted (but not answered during the sessions) by Christmas
6. To produce a CD/DVD that will include all presentations and outcomes from the Forum
7. Will disseminate report to all participants
8. Post all the presentations on the NEEC website as soon as possible
9. Will start to see how these recommendations and initiatives can be 'concretized actions for GEF community development projects

Appendix A Agenda

National Forum on Climate Change 'Climate Change Forum for Civil Society: Getting the Facts so We can Act!'

**November 8 & 9, 2007
Hilton Kingston, Jamaica**

November 8	WORLD TOWN PLANNING DAY
8:30 am	Registration
9:00 am	<p>Welcome: Mrs. Gina Sanguinetti Phillips, Chairperson, National Environmental Education Committee</p> <p>Opening Remarks: Mr. Christopher Corbin, AMEP Programme Officer, UNEP CAR/RCU</p> <p>Remarks:</p> <ul style="list-style-type: none"> ▪ Hon. Rudyard Spencer, OD MP, Minister of Health and Environment ▪ Mr. James Rawle, Chairperson, Environmental Foundation of Jamaica ▪ Dr. Mark Collins, Director, Commonwealth Foundation <p>“I Don’t Want to Wash Away”: Ms. Temeisha Allen, Youth Journalist, PANOS and Mr. Nicholas Shelton, Artistic Coordinator, Youth Heart Initiative</p> <p>Introduction of Keynote Speaker: Mrs. Gina Sanguinetti Phillips</p> <p>Keynote Speaker: Professor Anthony Chen, Professor for Applied Atmospheric and Former Head, Climate Studies Group, Mona</p> <p>“Climate Change and the Caribbean”</p>
10:15 am	Break
10:30 am	<p>“Climate Change and Us”</p> <p>Multimedia Presentation and Discussion</p> <p>Dr. Parris Lyew-Ayee Jr, Director, Mona GeoInformatics Institute</p>
11:00 am	<p>Panel I – Adaptation to Climate Change in Jamaica</p> <p>Facilitator: Ms Leonie Barnaby, Senior Director, Environmental Management Division, Ministry of Health and Environment</p> <p>Speakers:</p> <ul style="list-style-type: none"> ▪ Mr. Jeffrey Spooner, Head, Climate Change Branch, Meteorological Service of Jamaica ▪ Ms. Elizabeth Emanuel, SD Specialist, Plan Development Unit, Planning Institute of Jamaica <p>Respondent: Ms. Sisporansa Stanford, Trade and Environment Officer, Private Sector Organisation of Jamaica</p>
12:00 pm	<p>Lunch</p> <p>Special Luncheon Speaker: Ms. Indi McLymont-Lafayette, Programme Officer, PANOS Caribbean</p> <p>“Communication and Climate Change”</p>
1:00 pm	<p>Panel II – Climate Change and Natural Resources: What’s Really at Stake?</p> <p>Facilitator: Ms. Denise Forrest, President, Jamaica Institute of Environmental Professionals</p>

	<p>Speakers:</p> <ul style="list-style-type: none"> Coastal Zone: Prof. Edward Robinson, Senior Lecturer, Department of Geography and Geology, UWI Health: Ms. Sherine Huntley, Medical Entomologist, Ministry of Health and Environment Biodiversity: Dr. Dale Webber, Senior Lecturer, Department of Life Sciences, UWI <p>Respondent: Ms Paula Hurlock, Executive Director, Dolphin Head Trust</p>
2:30 pm	Break
2:45 pm	<p>Panel III – Climate Change and the Socio-Economic Environment: What is the bottom line?</p> <p>Facilitator: Mrs. Janet Bedasse</p> <p>Speakers:</p> <ul style="list-style-type: none"> Energy: Dr. Ruth Potopsingh, Group Managing Director, Petroleum Corporation of Jamaica Economy: Mrs. Karen Ford-Warner, Executive Director, Tourism Product Development Company Agriculture: Prof. Elizabeth Thomas-Hope, The James Seivright Moss-Solomon (Snr.) Professor of Environmental Management, Head of the Environmental Management Unit (EMU), Department of Geography and Geology, UWI <p>Respondent: Mr. Richard Troupe, Executive Director, Hope for Children Development Co.</p>
4:30 pm	Closing Remarks - Mr. Christopher Corbin
5:30 pm	<p>EFJ ANNUAL PUBLIC LECTURE</p> <p>“Climate Change and Jamaica: Sustainable Development as Strategic Adaptation”</p> <p>Dr. Michael Witter</p>
November 9	
8:30 am	<p>Setting the Context: Lead Facilitator, Dr. Maria Protz</p> <p>GEF Small Grants Programme: Mr. Dale Rankine, GEF/SGP National Coordinator, United Nations Development Programme</p>
9:00 am	<p>Panel IV – Climate Change and the Built Environment: Raising the Stakes</p> <p>Facilitator: Ms. Janet Hyde, Manager, Planning and Development Branch, National Environment and Planning Agency</p> <p>Speakers:</p> <ul style="list-style-type: none"> Planning: Dr. Carol Archer, Programme Director, Urban and Regional Planning, University of Technology, Jamaica Disaster Risk Mitigation: Mrs. Eleanor Jones, Managing Director, Environmental Solutions Ltd. <p>Respondent: Mrs. Alison Kenning Massa, Massa Associates Planning</p>
10:00 am	Context setting for Working Groups: Dr. Maria Protz
10:15 am	<p>Work session in Working Groups</p> <p>Working Groups Report Back</p> <p>Evaluation and Wrap-up</p> <p>Next Steps and the Way Forward</p> <p>Vote of Thanks: Ms Marolyn Lucy Gentles, Vice-chairperson, National Environmental Education Committee</p>
1:00 pm	Lunch

Appendix B Participant List

National Forum on Climate Change

Name	Organization
Allasandra Chung	TPDCo
Allison Drummond	UTech (Student Researcher)
Anastasia Calnick	Ministry of Health and Environment
Andrea Fender-Longman	Jamaica Environment Trust
Andrew Smith	The Gleaner
Anthonelde Hudson	Fletcher's Grove Baptist/JBU
Asha Bobb-Semple	EFJ
Barry Bonitto	Countrystyle Community Tourism Network
Beverline Brown-Smith	EPN Consultants Ltd.
Ché Stewart	The Queen's School
Claudette Thrope	Shortwood Teachers' College
Cleveland Robinson	Church Teachers' College
Constance Tyson-Young	PCJ
Courtland Grant	JCDT
Daliah Wedderburn	Church Teachers' College
Danielle DaCosta	Youth Heart Initiative
David Parkes	Portmore Municipal Council
Dawn Marie Roper	PANOS Caribbean
Denise Tait	TPDCo
Denise Walters	TPDCo
Dexter Smith	Edwin Allen High
Diana McCauaulay	Jamaica Environment Trust
Diana McIntyre-Pike	Countrystyle Community Tourism Network
Donat Robinson	National Workers' Union
Dorothy Campbell	Consumer Affairs Commission
Dorothy Williams	Ministry of Finance
Dorrett Barhon	SSDo St. Thomas
E. Grace Allen Young	Ministry of Health and Environment
Earl Bailey	UTech
Edson Johnson	TPDCo
Edward Robinson	Marine Geology Unit - UWI
Elecia Myers	EFJ
Eric Morrison	Breds The Treasure Beach Foundation
Everol Anderson	NEPA
Francis Felling	UWI
Glaston Whyte	Half-moon Bay Fisherman's Co-operative
Hopeton Peterson	PIOJ
Ian McCluney	St. Thomas Emancipation and Cultural Foundation
James Rawle	EFJ

Jan Voordoulo	PANOS Caribbean
Janice Holung	Joint Board of Teacher Education
Joan Grant Cummings	EFJ
Jouan Johnson	Edwin Allen High
Kameka Lewis	S.T.E.C.
Karen McDonald Gayle	EFJ
Kerrelle McCormack	Jamaica 4H Clubs
Kerry-Ann Curtis	Jamaica Environment Trust
Kirk Brown	EDRP
Kirk Pennant	Pesticide Control Authority
Lolita Phillips	OPM/PCMU
Lorna Down	UWI
Lorrel Smith	Dallas Castle CDC
Lotoya Martin	HUDO
Lotoya Timoll	Manchester Health Department
Lovena Simmonds	St. Thomas Sustainable Development Organisation
Malonia Harper	Manchester 4H Clubs
Marcia Sepaul	Corporate Services Ltd.
Marcia Smith	Edwin Allen High
Mark Pike	UWI Tourism Society
Marlet Wellington	Trelawny Parish Council
Maxine Hinds	Forestry Department
Michael Myles	ENACT
Michael Taylor	Department of Physics, UWI
Michelle Bennett	Hannah Town Women's Group
Natalie Fearon	NEPA
Natasha Evans	S.T.E.C.
Neil Henry	Ministry of Education and Youth
Nicole Condappa	St. Mary Parish Council
Oddette Eccles	PANOS Caribbean
Patrick Pendergast	CARIMAC, UWI
Paul Miller	Citrus Growers Association
Pauline McHardy	Jamaica Institute of Planners
Peta Vonne Golding	EFJ
Petre Williams	Jamaica Observer
Petula Manboard	Youth Opportunities Unlimited
Quinton Walters	Edwin Allen High
Raymond Martin	UTECH
Richard Thompson	TPDCo
Robert Daley	Fletcher's Grove Baptist/JBU
Shakira Khan	Marine Geology Unit - UWI
Shandra Harriot	BITU
Sharee McDonald-Russell	ASHE
Shelly Ann Gilchrist	S.T.E.C.
Sherene James-Williamson	Natural History Division, Institute of Jamaica
Shirly Brown	Fletcher's Grove Baptist
Sisporansa Stanford	PSOJ
Sonja Allen	Ministry of Health and Environment

Sophia Kerr-Reid	St. James Parish Council
St. Aubyn Bartlett	Houses of Parliament
Stacey Moses	NEPA
Susan Walker	University of the West Indies
Temeisha Allen	PANOS Caribbean
Terrence Cover	STEPA
Traci-Ann Wood	EPN Consultants Ltd.
Trevion Manning	Hanover Parish Council
Veniesha Bailey	Friends of the Sea
Vivian Sawyers	I.S.C.F.
Wendy Lee	Northern Jamaica Conservation Assoc.
Winston Forrest	Ministry of Education and Youth
Yvonne Pitter	Jamaica Baptist Women's Federation

Appendix C

List of Presenters, Facilitators and Respondents

Allison Kenning Massa	Massa Associates Planning	
Anthony Chen	UWI	
Carol Archer	UTech	Presented by Mr. Earl Bailey
Christopher Corbin	UNEP/CAR RCU	
Dale Rankine	GEF	
Dale Webber	Department of Life Science, UWI	
Denise Forrest	Jamaica Institute of Environmental Professionals	
Edward Robinson	Marine Geology Unit, UWI	
Eleanor Jones	Environmental Solutions Ltd.	
Elizabeth Emmanuel	PIOJ	
Elizabeth Thomas-Hope	UWI	
Gina Sanguinetti Phillips	NEEC	
Ruth Potopsingh	PCJ	Presented by Hopeton Heron
Indi Mclymont Lafayette	PANOS Caribbean	
James Rawle	EFJ	
Janet Bedasse		
Janet Hyde	NEPA	
Jeffery Spooner	MET Service	
Karen Ford-Warner	TPDCo	
Karen McIntyre	Mona Geo-Informatics Institute, UWI	
Leonie Barnaby	Ministry of Health and Environment	
Maria Protz	FOTS/CARIMAC, UWI	
Mark Collins	Commonwealth Foundation	
Marolyn Gentles	NEEC	
Parris Lyew-Ayee	Mona Geo-Informatics Institute, UWI	
Paula Hurlock	Dolphin Head Trust	

Appendix D

Panel Questions and Comments

PANEL I – Adaptation to Climate Change in Jamaica

1. Jovan Johnson

Main objective of Kyoto Protocol – Adaptation to climate change. This is of course necessary, but the adaptation to climate change process requires a concerted effort from all countries of the world. How will those countries who do not see these assumptions as necessary at the moment and continue in their contribution to the greenhouse effect as seen in President Bush's growing silence on the issue of climate change. What mechanism are in place to stem this problem?

2. This point relates to Mr. Spooner's presentation: While it is necessary to develop adaptation processes, climate change is here and here and it is therefore urgent. We need to disseminate information about our vulnerabilities among urban and infrastructure agencies so that short-term mitigation/coping measures can be put in place. Can this be done? Education is also important among this group as most are in denial.

3. Marcia Smith (marie-esmith@exite.com)

The various committees in place to address climate change adaptation in Jamaica may be inaccessible to many who will likely have opinions and ideas. Is there a likelihood that organizations that are making strides to reach rural peasant communities could be brought on stream to spread the message about climate change and adaptation? The riverbank communities, for example, are at risk in the hinterlands. River courses are being altered. Serious land slippages are taking farmlands and some small dwellings. Persons farm close to the river's edge and remove plants that would help hold soil in place. How can these persons be sensitized to the dangers to themselves and the harm to the river banks, etc? How can the persons who rely on wood burning for charcoal be made to understand that their economic activity is detrimental to the environment? These persons are unlikely to interact with the agencies in place to address the issues of climate change and adaptation. Can a HEART/TRUST/NTA be incorporated to take the urgent message to the communities? Ordinary Jamaicans understand and trust HEART TRUST/NTA as a vehicle for bringing education to the Jamaican under-classes.

4. Lorena Samuels

How will storm surge in Palisados affect the people in the Eastern areas, eg. St. Thomas? I refer to people as we do not have major industries and infrastructure?

We need more public education regarding the intense erosion taking place along the coast, e.g., from White Horses to Rosette to Belvedere in St. Thomas.

5. Dawn Marie Roper (Panos – dmarier70@yahoo.com)

What is the 2nd communication to the UNFCCC likely to say about Jamaica?
How will people communicate their ideas for the 2030 plan?

6. Lorna Down (lornadown@yahoo.com)

What are the indicators for developed country status?

How may I get a copy of the Task Force Reports on poverty, for example?

What are the major climate changes in Jamaica?

What specific strategies are being developed to address climate change by the Planning Development Unit?

7. Natasha Evans (St. Thomas Emancipation and Cultural Foundation – komeka_lewis@yahoo.com)

Pertaining to the Global Change and the fact that we in Jamaica experience so many different types of climate, is it possible that at some point in time we are going to experience a scenario? How soon?

Are there any plans or study currently in place for us Jamaicans as it relates to the types of housing and especially for some of us that are very poor and cannot afford a proper house much more to have it insured?

8. Youth Opportunities Unlimited

Why does the government allow continued development in vulnerable areas such as Portmore?

9. C. Robinson

The priorities identified are interrelated/interdependent, but which would you say are lead priorities – and how are the timelines broken down as work progresses towards 2030?

10. Ché Stewart

Regarding clean development mechanisms what are the pros and cons as it relates to the immediate benefits to be obtained from implementing these CDMs versus the traditional methods of energy production in developing economies such as Jamaica?

11. Kerry Ann Curtis

What stage has the draft national plan for climate change reached? Does the PIOJ use GIS in determining where residential areas are set up?

12. Trevion Manning

What is it we should do to adapt to climate change to make us safer, since we are not major contributors to climate change?

What role do you see the local authorities playing?

13. Diana McIntrye-Pike (Countryside Community Tourism Network 488-7207)

It appears to me that there is an URGENT need for an environmental summit with private and public sector persons, organizations, & the P.M.'s office. When we speak about communicating Climate Change and environmental issues, it is imperative that all stakeholders attend and are actively involved. It is time for the existing 'hypocrisy' in relation to national and private sector development to STOP! We need to acknowledge our failures in relation to preparing our country

for CC. We are interested in including an Environmental Forum on CC at the upcoming 1st International Institute for Peace Through Tourism (IIPT-www.iipt.org) International Community Tourism Conference community trade show June 20-27, 2008 where we are preparing communities as entrepreneurs in their villages. Therefore, here is an opportunity to communicate all recommendations re: CC if you are interested, please call me. We need public forums directly in the communities.

14. No name provided.

This relates to Mr. Spencer's presentation: While it is necessary to develop adaptation processes, climate change is here and there is therefore urgent need to disseminate information about our vulnerabilities among urban and infrastructure agencies so that short-term mitigation/coping measures can be put in place. Can this be done? Education is also important among this group as most are in denial.

15. Wendy Lee

The focus was generally on coastal impacts. What plans are there for dealing with the required relocation to interior/higher locations?

If there is going to be EXTRA pressure on land for human settlements, there also needs to be a determined effort to preserve forests and manage critical watersheds to prevent even worse disasters from flooding, soil erosion, etc.

How are the 'adaptation funds' being used to support NGO and CBO-based education and adaptation projects or programmes?

Under current economic models, greenhouse gas emissions increase with GDP. What policies can be put in place to encourage 'green business' so that this relationship between GDP and global warming changes? What can Civil Society suggest?

Can adaptation funds be used to support reproductive health programmes as a way of reducing the rate of population growth?

PANEL II – Climate Change and Natural Resources – What's Really at Stake?

1. Dexter Smith

With the change of climate, means a change in the outside environment, there will be an increase in competition and a decrease in reproduction.

2. Jovan Johnson

What plans are in place or mechanisms are prepared to take the human habitation of flood prone/coastal areas?

How can these organisms be saved since we have identified that certain species will become extinct/reduced? Are mechanisms in place to protect the current species and the biodiversity hot spots?

3. Mar-esmith@excite.com

With the ‘clear and present danger’ to the coastal areas, are plans in the pipeline to relocate businesses and housing to the safe areas inland? How cost-efficient can any such policy be?

I am inclined to think that reduced dependency on the coastal areas will allow the endangered reefs to recover.

4. [Lavena Simmers](#)

Could some of the ‘old fashioned’ policies not be re-introduced, e.g., more inspections in rural areas by Public Health Inspectors (sanitary inspectors) to make us less vulnerable especially in rural areas – to leptospirosis, dengue fever and malaria – that are likely to increase with climate change?

Now that there has been a change in administration – will the new Minister of Health continue to develop the policy to monitor cruise ship passengers that stop over for short periods?

Dr. Webber - can a study be done on sand mining in the Yallahs river in St. Thomas to see if it is the cause of much of the erosion taking place in the area and along the coast from Harbour View towards Eastern St. Thomas?

5. [Dawn-Marie Roper \(Panos Caribbean – 778-1336 dmarie70@yahoo.com\)](#)

Are our policy-makers so lacking in vision, never mind concern for the health of our own people, that they stop border surveillance measures because ‘tourists were affected’?

We talk too much. What should we DO now? What else are doing?

6. [Kameka-Lewis \(kameka lewis@yahoo.com\)](#)

Are those persons who are living on the coastline and near seas able to get a new home without buying land – noting that most of these persons are poor and needy?

Is there enough done to educate the youth about Climate change on the biodiversity and what Jamaicans do?

7. [Lorna Down \(lornadown@yahoo.com\)](#)

What’s the connection between climate change and leptospirosis? Why is Cayman free of dengue? Or having fewer cases of dengue?

ACTION POINT – let’s hear stories of success from NGOs working in communities adapting to climate change (i.e., publish stories/narratives that can be used in educational institutions, for example).

8. Kerry-Ann Curtis

How much information is available to the general public about our coastal zone ecosystems?

Has a study been done on visitors coming to Jamaica and the fact that they maybe responsible for the transmission of communicable diseases?

Are any plans in place to re-install the vector eradication teams?

9. Natasha Evans (St. Thomas Emancipation and Cultural Foundation – c/o kameka_lewis@yahoo.com)

For Professor Elizabeth Thomas Hope: She mentioned that we have storms. The small farmers are the persons that are mostly affected and they are the ones that complain the most but after they've been affected they still build in the same areas.

In St. Thomas, our sugar is declining; our Banana Estate is now closed. These persons are poor and have been made redundant and are trying to be independent, but they don't have anywhere else to do their business or as we would normally say 'no have no whey fi go' – tell me what advice can you give these persons?

10. Ché Stewart (Teacher, The Queen's School)

Since it is a known fact that sea-level rise is occurring, the rapid development of macro-tourism facilities on Jamaica's north coast can be therefore placed in the category of 'unsustainable development'. What is being done by the government to halt these establishments as sea-level rise over the next 20-30 years will render these establishments obsolete?

11. Comment for panels 1-3:

We need information sharing and effective transfer of information.

12. Raymond Martin

Comment for Professor Thomas-Hope: she indicated that there is much uncertainty about the impact of CC on agriculture. What is being done to collect the required data to reduce this uncertainty?

Are we installing met equipment to address this?

It is often staid that we don't have the funds, but can we afford not to invest in this since planning is so dependent on accurate data?

Jamaica is extremely variable and we need data.

13. Diana McIntyre-Pike (488-7207) (Chairman and CEO of Countryside Community Tourism Network – Present IIPT Caribbean).

Good presentation by Dr. Robinson – we need to change the way we develop tourism on the North Coast and focus on community-based tourism. We can accommodate and host visitors

which is intended in the Community-Tourism programme. Insurance companies need to pay attention!

Dynamic presentation from Sherine Huntley – VERY INFORMATIVE. All training in communities - CIDA, USAID, IDB, schools, colleges need this information. Is this possible?

I have seen an increase in bees in the Mandeville area. Is this a result of Climate Change?

Dr. Dale Webber's presentation needs to be shared with the tourism industry!

What is going to happen to the existing hotels and villas on the coastal areas?

Crocodiles, turtles have already been disturbed by wrong development. What will now happen with Climate Change?

We need on-going Public Information on our plans, etc. in schools with the government, etc. THIS IS URGENT!

14. Paula Hurlock

Water scarcity – a direct consequence: Saline intrusion in Jamaica's coastal zone has been exacerbated in the past by pumping of underground water. From Dr. Robinson's presentation it is clear that saline intrusion will also be exacerbated by sea level rise. Has there been an effort to communicate this information to JTI – the body which promotes Foreign Direct Investment into our island of both a tourism and mining (bauxite) nature. It seems to me that development + climate change = decreased water supplies.

15. Wendy Lee

What's stake? For one, coastal settlements and infrastructure – heavy emphasis (excellent images provided by Prof. Robinson) BUT what impacts are worse – climate change or coastal construction? Need a holistic approach – Don't put all blame on Climate Change – start dealing with conservation and mitigation as a result of overdevelopment, while looking to the future to prevent worse – example: Pear Tree Bottom – 'best reefs in Jamaica' now destroyed.

Policy incoherence – must be eliminated across all ministries – e.g., Minister of Tourism wants 5 million stopover visitors by 2012. This should NOT be a policy goal! How did it get to be goal?

16. Latoya Timoll

Comment: Public health education while not intensive is being done by the Public Health Department where teams go into the schools to conduct health education sessions. This could be adopted in that two used teams and focus groups to empower individuals to take action.

Media Advocacy also plays a vital role in disseminating information.

Social marketing: the idea of selling the fact of the need to adapt and mitigate as a way of minimizing the effect of climate change.

PANEL III – Climate Change and the Built Environment: Raising the Stake?

1. Dexter Smith

Climate change will definitely affect symbiosis, but how can this be mitigated?

2. Jovean Johnson

So, we can establish that the ecology will be severely disrupted, along with the livelihoods of humans, therefore what mechanisms are most necessary for this transition? For life as is will (not clear word) and a life, with the consciousness of climate changing by every Jamaican.

Based on the restructuring of biodiversity resources and bio-diversification that will have to be done to facilitate climate change, could it be said that the earth may reach its carrying capacity?

3. Paula Hurlock

A suggestion - Should we not be looking at “social marketing” as an approach to getting the issue of Climate Change to the masses? Rather than utilizing the “intellectual approach” of getting a “communications consultant” only to develop the conventional – flyers, posters, PowerPoint presentations, etc., get the same team that develops the Courts, Red Label Wine, Digicel, Guinness and other successful advertising campaigns. Get some of the dancehall artists to put out music on the latest dance-hall rhythms. Nothing gets through to the masses better than skimpily-clad ‘dance hall queens’ and Dance Hall artists – singing conscious lyrics.

4. Diana McIntyre Pike (488-7207)

How are we going to change the way we develop tourism bearing in mind the issues of climate change?

How we build our hotels etc., needs to be changed also – will guidelines be developed and recommended?

Is there an educational programme planned for farmers in their countries on the affects of climate change?

There should be more information shared with the media – is this possible? Professor Hopes’ presentation should be shared with the public!

Loss of food supplies affects everyone – especially in relation to the increase in the cost of living – this has to be taken into consideration as one of the impacts.

5. Sherene James-Williamson

I agree with the use of compact fluorescent light bulbs, however, it has been very difficult to convince some persons about their use because of two main reasons: (2) the bulbs contain mercury; and (2) where can they be disposed of safely because of the mercury?

I know that the mercury is a problem only if the bulb is broken, but the bulb can get broken after being thrown in the garbage. The mercury can then seep into ground water and can eventually get into the sea, fish can eat it, etc. The ingestion of mercury causes Minnimata Disease. I suggest that as we advocate for their use, we also provide recycling and/or disposal mechanism for the waste bulbs. There is no point in solving or mitigating one environmental problem by creating another.

We should lobby the Ministry of Education to introduce aspects of Climate Change effects into the school curriculum at each stage. We should also engage the Ministry of Information to produce media clips and general information on climate change and effects for the general public, much like the Pesticide Control Authority did years ago to stem the effects of pesticide use as well as increase awareness of the ill-effects of the use of pesticides.

6. Tourism comments

Has there been a review of existing policies to see how/if they are synergistic with adaptation?

Has there been explicit incorporation of adaptation in programs and projects?

7. Dawn Marie Roper (Panos Caribbean – dmariier70@yahoo.com)

Sugar cane is fuel not food in Brazil. Why not here in Jamaica?

If it weren't for the light bulb scandal, I wouldn't know that Jamaica had any programme to distribute energy saving devices. What exactly was that programme about?

8. Kameka

Is it cheaper in the long run for us to use human waste to make electricity and if yes, why not try that method?

Why can't the sugarcane waste be used to make electricity?

If we stop the farmers from cutting down the trees to make a living, how are giving a way out for them?

9. Natasha Evans (STEC)

Mrs. Karen Ford-Warner – You mention that by the year 2020-2030 there will be approximately 6 million tourists arriving through the Norman Manley International Airport. Does that say that tourism here in Jamaica will still be benefiting greatly despite the fact that at some point in time we may experience a great Climate Change?

10. C. Robinson

Is ethanol production sustainable in Jamaica considering our dwindling land resources for the production of cane?

What about seasonality of cane production?

11. Resource Energy Alternative uses - what are the uses and costs!!

It seems inevitable that forums like these will bring focus to the “problem of communication” as raised by Dr. Collins. Indi’s capturing of the Panos London Policy Brief and the government department communication specialist – a couple of points need to be highlighted:

- (1) the problem may not be with communication but funding communication activities – especially in the context of completely private ownership of mass media systems whose news is business!!
- (2) Mobilization of communities makes no sense if those who hold power see empowerment as a threat to their own status.
- (3) We must always bare cognizance of the relationship between awareness and preparedness and people’s economic status (disposable income..)
- (4) Traditional journalism and information dissemination approaches do not and cannot advance developmental issues such as Climate Change....it has to be treated as support to more dynamic and diverse community media that place emphasis on the indigenous culture and knowledge over endogenous experts
- (5) KAP studies that do not take into account the source of the media content with which people interface will not sufficiently address people’s communication habits
- (6) The relationship between quality and quantity of communication product has less influence on impact than an understanding of what is the best choice for communication product: movies versus television; music versus drama; entertainers versus educators, etc.
- (7) Public education done properly or improperly is EXPENSIVE and even more so in a communication environment where “those who have access to wealth have greater access to media and by extension are able o set not just the public discussion agenda but the governmental policy agenda.

***An integrated communication analysis planning approach involving all stakeholders (unlikely but at least attempt) and capitalizing on the local skills, knowledge and action away from awareness building to social and behaviour change.

12. Wendy Lee

If natural resources were valued economically, a more realistic economic picture would emerge: (1) the cost of waste management (plastic bottles) versus cost of a deposit-refund system would be clear; (2) the cost of providing trucked water versus the cost of protecting forests would also be clear. These are just two examples of many.

The potential for local sustainable development is being eroded and destroyed by large-scale, mega-developments especially along the coast. To stop this, we must improve accountability. Governance systems must be improved to facilitate meaningful public participation in decision-making (informed by Expert – not Political – perspectives).

PANEL IV – Climate Change and the Socio-Economic Environment: What's the Bottom Line?

1. Wendy Lee

Apply existing knowledge to develop decision-making: ensure awareness of communities, local and national decision-makers, and ensure participatory decision-making.

Policies must be implemented and laws must be obeyed, i.e., NO MEGA-STRUCTURES ON COASTLINES; no housing approved/allowed in high risk areas.

“Green” building must be encouraged, supported and insisted upon. Standards/laws must reflect Climate Change and environmental conservation priorities.

2 Trevion Manning

Why isn't the information on climate change and environmentally sensitive areas not sent to the local authorities and other regulatory agencies?

Is there a need for greater enforcement and stiffer penalties for breaching of the regulation?

Do we need to sensitize our court officials or set up special courts to deal with planning and environmental issues?

Do we need swifter action for demolition of illegal structures where necessary?

How can we get a National Plan indicating major and minor waterways, environmentally sensitive areas and disseminate said information?

3. Kerry-Ann Curtis

Does ESL (Environmental Solutions Limited) work in collaboration with NEPA to determine the safety of earmarked pieces of land for development?

Does the planning department of UTech work with other agencies to bring findings to the fore, both before, during and after development?

Is it the Government who is responsible for the removal/relocation of citizens and communities that were established in an illegal manner?

Is the development of housing schemes advertised in other words – what input does the general public have in determining where and the size of a housing scheme?

How often and through what process does the review of urban development occur? The growth of towns and small communities need to be mapped so that ecological and geographical/geological features are taken into account.

4. Diana McCaulay

My question was: How to deal with the gap between the knowledge that we have and the practices that play out every day – inadequate set backs from the coast, building in flood prone areas, allowing mangrove clearance, etc, etc.?

Question not asked:

Is anyone listening? Are the problems even accepted as ‘problems’? For example, the lack of enforcement? We require EIAs that are virtually never looked at again.

Janet Hyde refused to address the many questions about the failures of the Government regulatory framework – very poor. Displayed no understanding of the issues.

5. Diana McIntyre-Pike

There needs to be a system organized where parish councils are not the only ones authorized to give approvals – it should be done in conjunction with the PDCs – or a private sector led organization.

When are we going to see professional planning without political interference?

6. No name

The church, religious groups, politicians and other power brokers must be engaged – not only civil society.

What are we doing about ‘greed’ the main cause of poverty?

APPENDIX E		
SUMMARY SHEET - CURRENT ACTIVITIES, OPPORTUNITIES & GAPS EMERGING FROM THE PANEL DISCUSSIONS DAY-1		
<i>Current Realities/Activities</i>	<i>Opportunities for Civil Society Involvement</i>	<i>Gaps</i>
<p>Dr. Mark Collins Cautioned on seeing CC as a 'technological fix'</p> <p>Has supported Panos for communication, media education, journalism training</p>	<p>Recognized that Commonwealth countries need to lead the CC agenda at Bal</p> <p>Out of 53 commonwealth countries, 32 are small countries – and most of these are SIDS like Jamaica</p> <p>Stressed the importance of Science and Technology (appropriate S&T – not complicated – such as hurricane straps for roofs)</p> <p>Communication deficit needs to be addressed</p> <p>SIDS need to support each other – and that means CS within SIDS supporting each other</p>	<p>Communication deficit needs to be addressed and CS can play a role</p> <p>CS advocacy and lobbying need to be supported, but must be merged with private sector partnerships – not only donor sector</p>
<p>Keynote Address: Dr. Anthony Chen Global warming is a reality – not fiction Different 'models' assess different possible scenarios But current scenarios suggest that June, July & August (JJA) will definitely become drier Not enough specific info re: hurricanes, but they will be more frequent Sea level rise is a given – areas such as Portmore, Harbour View, parts of Kingston, south coast will be under water Dengue fever – vector borne diseases will increase – temperature rise will facilitate parasite development Coral bleaching will happen Impacts will also be felt on fresh water resources, biodiversity, human settlements, etc. Jamaica's current footprint is very faint, but the CC impact for us is great Jamaica needs to be aware of the 'delicate thresholds and tipping points' that can cause irreversible damage</p>	<p>UWI Climate Studies group can engage CS</p> <p>Caribbean Community Climate Change Centre (CCCCC)</p> <ul style="list-style-type: none"> – Community-based Climate Change Adaptation Projects – Assessments of Impacts and Adaptations to Climate Change (AIACC) in Human Health at UWI <p>While we don't contribute much to CC, through the Jamaican Diaspora in the U.S., U.K, Canada and E.U, we may have a base for advocacy...</p> <p>Ethanol from corn is not CC friendly, (sorry Bush) but cane-based ethanol holds potential for the Caribbean</p> <p>Wigton wind farm has promise for alternative energy, so does OTEC, solar farms, hydrogen fuel cells, - the potential opportunities for new Caribbean 'S&T' could be exciting</p>	<p>SIDS are causing very little of the global CC problem – but we stand to be most affected – what can we realistically do to advocate for change in the most developed countries</p> <p>While we don't contribute much to CC, through the Jamaican Diaspora in the U.S., U.K, Canada and E.U, we need to advocate more – how do we do that? We must be more aggressive in lobbying and advocacy.</p>

<i>Current Realities/Activities</i>	<i>Opportunities for Civil Society Involvement</i>	<i>Gaps</i>
Panel I – Adaptation to Climate Change In Jamaica		
Jeffrey Spooner, (NCCFP – Met office)		
<p>Jamaica became a signatory to KP in 1999 NCCFP has been established and reports to the UNFCCC Wigton wind farm is operational Potential for more CDM initiatives NCCFP collaborating nationally, regionally and inter-regionally Jamaica has held many different positions – well respected 1st communication to the UNFCCC completed – 2nd one in preparation Pilot activities completed on Coral Reef monitoring, capacity building and others</p>	<p>NCCFP has responsibility to engage civil society, along with government, public service agencies, etc. NCCFP also responsible for awareness raising and coordinating CC planning among all agencies and NGOs KAP was conducted and holds promise for communications strategies 2nd communication not yet completed – scope for greater CS involvement – (especially in coastal resources; water resources, agriculture, health, socio-economic sector, human settlements) 2nd NCCFP communication wants to specifically address ‘vulnerabilities’ – an opportunity for CS input – opportunity exists to be more involved in the 2nd communication process Opportunities for CS to participate directly at events and through side events</p>	<p>How is civil society actually represented on the NCCFP? Who decides who gets to represent CS? Current mechanisms only allow for ‘consultation’ - not ‘mainstreamed’ participation....</p> <p>Greater need for awareness & communication at all levels</p>
<p>Ms. Elizabeth Emanuel (PIOJ) Jamaica is no longer a least developed country, but a ‘lower middle income’ country</p> <p>CC is a cross-cutting planning issue – across all planning sectors - need to start at the ‘worst case’ scenario – and plan for that – then work backwards</p> <p>recognizes the need for ‘balanced’ developed across rural-urban areas several strategic areas identified for planning 31 task forces established</p>	<p>Recognizes that genuine transformation must have PEOPLE at the centre – equity is also emphasized</p> <p>Recognizes importance of good governance and the need to support indigenous technology (when sound)</p> <ul style="list-style-type: none"> • suggestions creation of mechanisms to enable all government policies and plans fully to consider the potential impacts of climate change and recommend appropriate adaptation strategies • Identifies strategic priorities for climate 	<p>Little articulation (because of time) of planning implications for vulnerable groups – youth, disabled, women, children, etc.</p> <p>Platforms for community engagement and mechanisms for community input still weak Link community involvement to disaster risk mitigation</p> <p>Comments from the floor (end of day)– there are plenty of ‘policies’ drafted with full consultation and community involvement – what is missing is the political will to implement – short-term view always overrides long-term planning implementation – hard choices have to be made – but they never are because of vested short-term interests</p>

	<p>change</p> <ul style="list-style-type: none"> Promote climate change through local and community media Promote adoption best practices for climate change adaptation Suggest integration of climate concerns into companies' and government's core business strategies <p>Draft National 2030 plan will not be ready till March 2008 – therefore scope for greater CS involvement in CC</p>	that never rally bear the costs of CC or other environmental costs – need to look back at all of our existing 'beautiful' policies and finally 'enact' them
<p>Mrs. Indi McLymont-Lafayette – Panos – Communication and Climate Change</p> <p>The National Focal point has contributed a KAP survey</p> <p>Panos doing innovative work in Mocho and regionally with respect to communication for CC</p>	<p>Need to make use of alternative media – oral histories, etc. (a la Mocho-Panos) to get the CC message to hit home –make use of participatory media especially and the 'listening nature' of our culture</p> <p>Media opportunities for reaching CS identified in the KAP</p> <p>73% of CS believe they had a role to play in CC adaptation</p> <p>Schools can play a role in CC education</p>	<p>Highlights of the KAP need to get into the minds of the people</p> <p>Little awareness of CC terms</p> <p>Lack of preparedness for CC-related disasters</p> <p>CC not on CS personal agenda – not on the 'radar screens'</p> <p>Lack of awareness among CS re: insurance and just how vulnerable we are to coastal zone disasters</p> <p>CC adaptation measures perceived to be 'costly'.</p> <p>Media professionals face challenges to make CC 'sexy' and 'newsworthy'</p>
Panel II Climate Change and Natural Resources – What's Really At Stake?		
Current Realities/Activities	Opportunities for Civil Society Involvement	Gaps
<p>Coastal Zone - Prof. Edward Robinson</p> <p>Coastal zones are especially pivotal for ports, tourism and industry</p> <p>Sea level rise is a fact</p> <p>Hurricane occurrence will be more frequent, and more devastating, even if not as intense</p> <p>Property insurance will rise!</p>	<p>Most of our people live along coasts – so they should be interested</p>	<p>Few people probably really have 'home insurance' as few people actually own their own homes or property – issues of poverty and security always overshadow crises with coastal resources</p>
<p>Health - Ms. Sherine Huntley</p> <p>Informal housing areas are most vulnerable and most at risk</p>	<p>Vector control programs want to work with schools but are told that the curriculum is too full already – CS needs to be engaged in telling the government what 'ISSUES' are going to be on the national agenda</p>	<p>Jamaica used to have health surveillance at home –health inspectors used to come and do vector control – that has stopped and needs to be revived</p> <p>Informal settlements are especially uninformed and</p>

	Hard decisions need to be made –CS advocacy can help push the hard decisions	vulnerable – but have wide implications for environment and health
Biodiversity - Dr. Dale Webber Jamaica is #5 on the world's country list of countries with the most endemic species – therefore we have some of the most important biodiversity to protect We also have some of the most diverse eco-systems Our biodiversity is already under stress even without climate change We will face extinction of some species, pests, migration, adaptation... We'll lose some of our most important environmental biodiversity locales	Port Royale biodiversity documentation has been produced on DVD and is available for distribution/educational purposes NGOs can play a role in documenting and protecting biodiversity	An aggressive (vigilant?) CS approach is needed – not only for awareness but for enforcement
Panel III – Climate Change and Socio-Economic Environment: What's the Bottom Line?		
Energy – Mr. Hopeton Heron Only 7% of our energy is produced from indigenous sources 93% from petroleum based sources	Opportunities for 'reassessing the transportation sector' – car pooling, better public transportation systems, promotion of 'telecommuting culture' Opportunities for 'R&E, S&T' to generate local technologies – need to be tied to private sector investment – smaller and more appropriate R&E projects Trading in Carbon Credits – how will CS be involved? Home level CS participation – conservation, enforcement, use of solar water heaters, small wind turbines	CS has not been given any 'good reason' why concerted political will and effort has not gone into alternative energy production... even after so many efforts and especially now that oil is almost \$US100+ per barrel What Science & Technology is being developed that is appropriate for us here in Jamaica? What economic opportunities exist for us to develop appropriate technology for ourselves.
Economy (Tourism) – Mrs. Karen Ford-Warner Tourism is a double-edged sword – with both backward & forward linkages We depend on tourism, but air travel is the fastest growing CC vector CC fallout for tourism can be due to increased hurricane activity; warmer northern climates; higher cost of air travel; increased vector borne	Need to seek 'warm season' markets – not only winter season Blue Flag and Green Flag hold potential Need to have CS involvement in ensuring that there is coherence among Climate Change goals, MDGs and poverty reduction strategies – now there is a disconnect – CS needs to play a role in harmonizing these priorities	Gaps between 'plans and policy' and implementation Planning is not implemented – human settlements and 'tourism developments' continue to be built in flood prone and/or ecologically vulnerable areas – no one stops this despite all the pretty policies

disease, etc.	Tourism Master Plan is completed! CS needs to play a role in localized strategies	
Agriculture – Prof. Elizabeth Thomas-Hope Severe consequences for agriculture – impact on farming systems; choices of food crops, food security; GDP and national economies, Agric threatened by global events, increased crop diseases, increased pests, loss of agricultural biodiversity, livestock diseases, sea level rise, loss of water resources	FAO has a regional project on Disaster preparedness and mitigation for forestry, fisheries and agriculture – explores farmer –to –farmer based strategies	Need to learn from other small farmers in other SIDS regionally Need to explore new possible crop production opportunities

Appendix F

Working Group Questions

NATIONAL FORUM ON CLIMATE CHANGE - NOVEMBER 8 & 9, 2007

Hilton Kingston, Jamaica

DAY 2 – WORKING GROUP RECOMMENDATIONS

Working Group on _____

Each group is asked to identify: (1) a moderator to ensure participation; (2) a rapporteur; and (3) a presenter to report back to plenary. As a group, your task is to identify **2 or 3 EARLY PRIORITY ACTIONS** that Civil Society can undertake NOW, as well as **1 or 2 *RECOMMENDED ACTIONS for the Climate Change Focal Point as pertains to this sector only***. To aide your discussion, please consider the opportunities, gaps and current activities that have already been presented so far, as well as the following questions:

1. What are the main issues, challenges and weaknesses facing civil society in this sector?
2. What role and responsibilities does civil society have in this sector, especially at the community level?
3. What can Civil Society do NOW to prepare? What strengths currently exist?
4. What are the main mechanisms to engage civil society in the planning & preparatory process?
5. Are these mechanisms adequate? What else is needed?
6. What needs to take place to ensure that youth, vulnerable groups and gender considerations are taken into account in this sector?
7. What does civil society require in order to fulfill its responsibilities in terms of:
 - Information and communication
 - Skills training
 - Good governance
 - Sustainable livelihoods
 - Science and technology
 - Risk management

8. PRIORITY ACTIONS for Civil Society

- a)
- b)
- c)

9. Recommended ACTIONS for Climate Change Focal Point

- a)
- b)

Appendix G

Working Group Participants

Health and Fresh Water Group:

Ms. Yvonne Putev (Manchester Health Department)
 Ms. Latoya Timoll (Manchester Health Department)
 Sherine Huntley (Ministry of Health)
 Shell Ann Gilchrist (StECF)
 Kameka Lewis (StECF)
 Ian McCulley (StECF)

Coastal Zone:

Veniesha Bailey (Friends of the Sea)
 Eric Morrison (REACT)
 Mark Pike (UWI Tourism Society)
 Terrence Clover (STEPS)
 Nicole Condeppa (St. Mary Parish Council - Physical Planner)

Human Settlements/Built Environment and Planning Group:

Tameisha Allen (PANOS Caribbean)
 Sherene James-Williamson (Natural History Division, Institute of Jamaica)
 Trevion Manning (Hanover Parish Council)
 Latoya Martin (HUDO)
 Richard Thompson (TPDCo)
 Hopeton Peterson (PIOJ)
 Alison Kenning Massa (Massa Associates Planning)

Biodiversity and Agriculture:

Kerry-Ann Curtis (JET)
 Dorothy Campbell (Consumer Affairs Commission)
 Odette Eccles (PANOS Caribbean)
 Elecia Myers (EFJ)
 Laurel Smith (Dallas Castle 4H Clubs)
 Dawn Marie Roper (PANOS Caribbean)
 Pauline McHardy (Jamaica Institute of Planners)

Economy and Energy:

Malonia Harper (Manchester 4H Clubs)
 Connie Tyson (PCJ)
 Robert Daley (Fletcher's Grove Baptist, Jamaica Baptist Union)
 Ché Stewart (The Queen's High)
 Diana McIntyre-Pike (Countrystyle Community Tourism Network)
 Winston Forrest (Ministry of Education)