June 2013

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EARTH CONSCIOUS

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Research tells that declines in biodiversity and shrinkage in geographic ranges of common plants and animals will occur globally, due to climate change.

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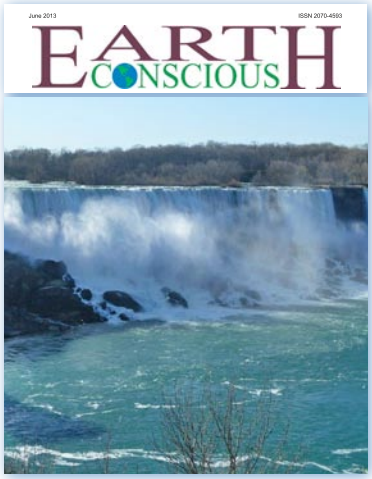

On our Cover

A view of Niagara Falls, Canada.
Photo by: Lauren Persad of Toronto, Canada

EARTH CONSCIOUS
June 2013

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From the Editor

EARTH CONSCIOUS

Well, let's start with some good news emerging at the end of the two weeks of the mid-year negotiations on climate change in Bonn, Germany.

Based on feedback from delegates attending the Nations Framework Convention on Climate Change (UNFCCC), the talks ended on a satisfactory note despite an unexpected hindrance in the Subsidiary Body for Implementation (SBI) session.

According to the UNFCCC, there was concrete progress towards a new universal agreement on climate change during its latest round of talks.

Among issues on the table were transforming the world's energy systems towards low-carbon, including renewable energy, energy efficiency and the consideration of carbon capture and storage.

Negotiators also looked in greater detail at how the rules of a universal UN agreement, which is to be decided by 2015 and enter into force by 2020, have to be designed to encourage countries to do their best to act on climate change in the longer term.

These included views on how transparency and accountability should be reflected in the 2015 agreement, including a possible process to assess and adjust national efforts to reduce emissions and adapt to climate change.

You can read more of what transpired at the Bonn meeting in our magazine.

On the downside was the abrupt ending of the session of the SBI, a key UNFCCC working body with many delegates expressing disappointment over the inability to adopt an agenda for the SBI session despite efforts made by the co-chair.

This was a major blow particularly for developed countries since the SBI deals with important issues such as climate funding and adaptation.

While talks were taking place, we've seen the International Energy Agency declaring that global carbon dioxide emissions in 2012 were the highest ever.

Also, the World Bank in a new report said that millions of people around the world are likely to be pushed back into poverty because climate change is undermining economic development in poor countries.

Droughts, floods, heat-waves, sea-level rises and fiercer storms are likely to accompany increasing global warming and will cause severe hardship in areas that are already poor or were emerging from poverty.

Food shortages will be among the first consequences within just two decades, along with damage to cities from fiercer storms and migration as people try to escape the effects.

All these point to the need that progress on the climate change negotiations must continue to take place as lives are at stake on a daily basis around the world.

Linda Hutchinson-Jafar
Editor

CARICOM GETS HELP FROM JAPAN TO DEVELOP ENVIRONMENT POLICY

A Caribbean Community (CARICOM) Environmental Policy and Action Programme is being developed with the assistance of the Government of Japan.

With financing from the Japan-CARICOM Friendship and Cooperation Fund (JCFCF), a regional, integrated policy to ensure protection of the environment and the natural resources will be developed to address selected environmental themes and economic sectors, which have been prioritised by the Community.

The goal of the US$465,920 programme is to enhance environmental sustainability as a driver of investment, economic growth and a better quality of life in the Caribbean Community. Japan is providing US$275,920 of the funds with the Community providing the remainder as counterpart contribution.

The strengthening of inter-linkage between the environment and development is one of the principal challenges facing the Community, as the development of a common economic space under the CARICOM Single Market and Economy (CSME) matures. The proposed policy will foster a new approach to the environment, social and economic activities and the region's development challenges, one that is effectively coordinated and strategic, resulting in transformed patterns of growth.

It is envisioned that at the end of the two-year programme, there will be agreement on the policy priorities and key themes to be addressed in the Draft Policy obtained through an open, transparent and inclusive consultative process. Further a Draft CARICOM Policy and Action Programme in relation to the environment and natural resources management would have been developed and the capacity and state of readiness of selected Member States for implementation of the Environmental Policy would be enhanced.

It is anticipated that the project will begin in the 2nd Quarter of 2013 and will be completed during the 4th quarter of 2014.

June UN Climate Change Conference in Bonn sees concrete progress toward new agreement and speeding up climate action

Photos courtesy IISD Reporting Services

ADP Co-Chair Jayant Moreshver Mauskar (India)

The UN Climate Change Conference in Bonn, Germany, ended on June 15 after making concrete progress towards a new universal climate change agreement and on creating solutions to increase existing global action to deal with climate change.

The "Ad Hoc Working Group on the Durban Platform for Enhanced Action" (ADP), tasked to design the new agreement and to raise near-term global ambition to deal with climate change, was meeting for the second time this year.

"Over the past 12 months, solid foundations have been laid under the process both toward the 2015 agreement and in raising pre-2020 ambition. As a result of the constructive and flexible engagement amongst governments, nations now have a clearer idea of how to move to achieve demonstrable progress at the upcoming UN Climate Change Conference in Poland and beyond, "the Co-Chairs of the group, Jayant Moreshver Mauskar and Harald Dovland said in a joint statement.

A key focus of the ADP negotiation in Bonn was on how to transform the world's energy systems quickly enough towards low-carbon, including renewable energy, energy efficiency and the consideration of carbon capture and storage.

"This has been an important meeting because governments are moving faster now from the stage of exploring options to designing and implementing solutions. Governments are demonstrating increasingly broad support for this energy transformation. It is achievable with existing financial and technology resources, encourages best efforts by all countries without shifting the leadership responsibility of developed countries to respond to climate change, and mobilizes and speeds action at all levels – international, domestic and private sector," said UNFCCC Executive Secretary Christiana Figueres.

An immediate need recognized by all governments is how climate finance can shift investment patterns faster toward low carbon. In Bonn, governments examined key elements for such a shift, including reducing investment risk for investors, public-private partnerships, a long-term legally binding agreement and strong domestic institutions to deal effectively with finance in countries which receive support.

Christiana Figueres

"The record greenhouse gas concentrations we now see in the atmosphere are due to past investment patterns and the policies and profit motives behind them. To prevent our atmosphere turning permanently against us requires a continued, faster shift in those investment patterns and the policies and price signals that drive them," said Ms Figueres.

In Bonn, governments also looked in greater detail at how the rules of the new agreement, which is to be decided by 2015 and come into effect in 2020, have to be designed to encourage countries to do their best to act on climate change in the longer term. These include views on how transparency and accountability should be reflected in the 2015 agreement, including a possible process to asses and adjust national efforts to reduce emissions and adapt to climate change. There was a strong sense that internationally agreed rules to ensure transparency of increased actions and commitments are needed up front.

They also examined specific means to increase finance, technology and capacity-building for developing countries, and how this can link to the 2015 agreement. In this context, they heard a series of reports from new institutions, including the Green Climate Fund, on how the infrastructure is starting to take shape and deliver results.

Detailed and productive technical discussions took place under the Subsidiary Body for Scientific and Technological Advice (SBSTA). Progress was made on ways to protect the world's forests, the role of agriculture in responding to climate change and reporting guidelines.

The work of the SBI body, tasked to give advice to the Conference of the Parties (COP), the UNFCCC's decision-making body on all matters concerning the implementation of the Convention, had been earlier suspended without governments formally adopting an agenda for the body's work at this two-week session. The SBI is scheduled to have a final plenary on Friday.

"The delay in the SBI has not stopped progress in the rest of the meeting," said UNFCCC's Christiana Figueres. "I now strongly encourage all sides to reach a mutually agreeable solution to this issue as soon as possible," she said

In Bonn, governments agreed on an additional ADP session in the first half of 2014, and on the type of technical information governments need to provide to make further progress under the ADP.

Sai Navoti from Fiji, speaking for the G 77 and China

Two new ADP Co-Chairs were elected: Artur Runge-Metzger (European Union) and Kishan Kumarsingh (Trinidad and Tobago).

The outgoing ADP Co-Chairs Jayant Moreshver Mauskar (India) and Harald Dovland (Norway) said: "we are honoured to be the first set of Co-chairs of the ADP and are leaving the work of the group in the safe hands of our able successors".

The next UN Climate Change Conference will be COP 19 in Poland (12-22 November, 2013).

Peru has offered to host COP 20 in 2014, and Venezuela the pre-COP next year. The Latin American and Caribbean Group (GRULAC) endorsed the offer of the two countries.

Action Now Critical to 2015 Climate Deal

Pressure on after lack of leadership at Bonn talks

As UN climate negotiations closed among terrible floods in Southern Germany and Eastern Europe, civil society observers warned that the European Union had a lot of work ahead to make November's annual UN climate summit in Warsaw, Poland a success.

Friends of the Earth

Lidy Nacpil

"This week one of the most conservative bodies in the world, the International Energy Agency, warned we are on track to risk 5.5C of warming by the end of the century. That's the end of organised human communities. We are facing a planetary emergency being ignored and fuelled by polluters - people everywhere must mobilize to transform our societies." ***Lidy Nacpil of Jubilee South - APMDD***.

iisd.ca

Meena Raman

"Cut through the clutter and one single truth stands out - there will be no 'deal' in 2015 if developed countries don't raise their pre-2020 climate pollution targets. In Bonn developed countries tried to avoid this question, but they can't avoid it much longer and say with a straight face that they want a comprehensive and equitable agreement that works for the planet and for people." ***Meena Raman, negotiation expert at Third World Network***.

Oxfam International

Mohamed Adow

"We are pleased that equity was identified as common ground, and governments are talking about effectively facing the equity challenge, the first step to do that would be for developed countries to raise their pre-2020 targets, the second is to lock-in a formal process to determine how equity will be applied going forward." ***Mohamed Adow, Global Advisor on Climate Change at Christian Aid***.

www.un-ngls.org

Azeb Girmai

"Due to procedural blocking in Bonn we lost time to build the international loss and damage mechanism that communities only need because there has no been no real action to cut climate pollution and no support for poor communities to adapt to a changed climate." ***Azeb Girmai, Ethiopian focal point of LDC-Watch***.

"As the incoming host of the UN climate summit, Poland needs to find a way to ensure the outcome in Warsaw is an international mechanism on loss and damage that enhances our ability to prevent further loss, provides finance, and ensures global coordination." ***Azeb Girmai, Ethiopian focal point of LDC-Watch***.

ActionAid USA

Brandon Wu

"International climate finance will be the beating heart at the centre of any international agreement - it will help poor and vulnerable communities deal with climate impacts, and it will drive the global clean energy transformation as well as any effective loss and damage mechanism."

"After these talks in Bonn, it's clear that climate finance needs an urgent adrenalin shot. COP 19 in Warsaw must hold a ministerial meeting on finance, that can deliver the public finance that developed countries are obligated to provide." ***Brandon Wu, Senior Policy Analyst at ActionAid***.

Friends of the Earth

Asad Rehman

"The people of Poland, in common with the people in Europe and people everywhere are resisting dirty fossil fuels and demanding energy solutions that don't pollute the climate and poison communities. The Climate summit in Poland will be a crossroads on energy - we have to choose a path that includes decentralized, and people-controlled power both here in Europe and in the global South." ***Asad Rehman, Head of International Climate at Friends of the Earth EWNI***.

Four energy policies can keep the 2 °C climate goal alive

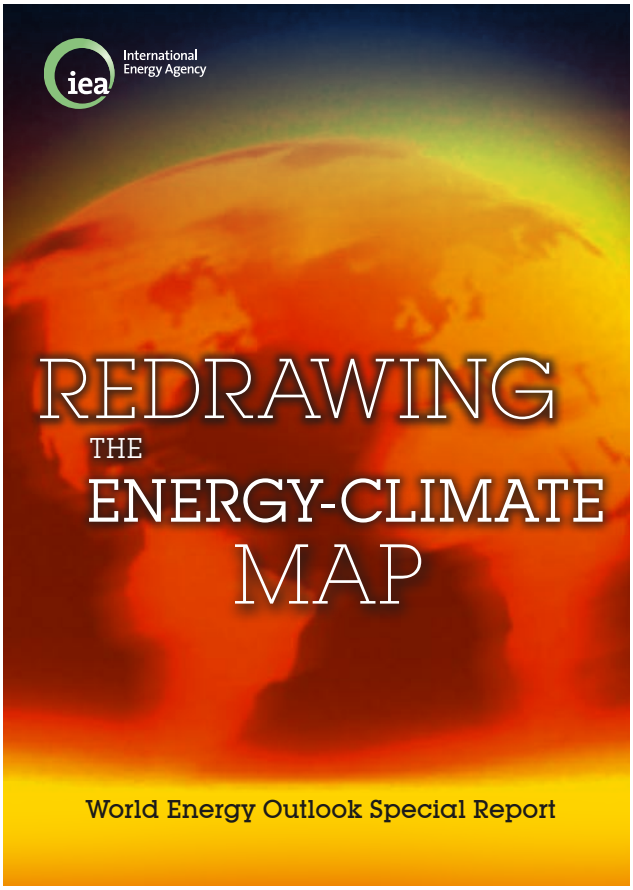
Warning that the world is not on track to limit the global temperature increase to 2 degrees Celsius, the International Energy Agency (IEA) has urged governments to swiftly enact four energy policies that would keep climate goals alive without harming economic growth.

"Climate change has quite frankly slipped to the back burner of policy priorities. But the problem is not going away – quite the opposite," IEA Executive Director Maria van der Hoeven said in London in June at the launch of a ***World Energy Outlook Special Report***, Redrawing the Energy-Climate Map, which highlights the need for intensive action before 2020.

Noting that the energy sector accounts for around two-thirds of global greenhouse-gas emissions, she added: "This report shows that the path we are currently on is more likely to result in a temperature increase of between 3.6 °C and 5.3 °C but also finds that much more can be done to tackle energy sector emissions without jeopardising economic growth, an important concern for many governments."

New estimates for global energy-related carbon dioxide (CO2) emissions in 2012 reveal a 1.4% increase, reaching a record high of 31.6 gigatonnes (Gt), but also mask significant regional differences. In the United States, a switch from coal to gas in power generation helped reduce emissions by 200 million tonnes (Mt), bringing them back to the level of the mid-1990s. China experienced the largest growth in CO2 emissions (300 Mt), but the increase was one of the lowest it has seen in a decade, driven by the deployment of renewables and improvements in energy intensity.

Despite increased coal use in some countries, emissions in Europe declined by 50 Mt. Emissions in Japan increased by 70 Mt.



Click image to access the full report

The new IEA report presents the results of a 4-for-2 °C Scenario, in which four energy policies are selected that can deliver significant emissions reductions by 2020, rely only on existing technologies and have already been adopted successfully in several countries.

"We identify a set of proven measures that could stop the growth in global energy-related emissions by the end of this decade at no net economic cost," said IEA Chief Economist Fatih Birol, the report's lead author. "Rapid and widespread adoption could act as a bridge to further action, buying precious time while international climate negotiations continue."

In the 4-for-2°C Scenario, global energy-related greenhouse-gas emissions are 8% (3.1 Gt CO2-equivalent) lower in 2020 than the level otherwise expected.

- Targeted energy efficiency measures in buildings, industry and transport account for nearly half the emissions reduction in 2020, with the additional investment required being more than offset by reduced spending on fuel bills.
- Limiting the construction and use of the least-efficient coal-fired power plants delivers more than 20% of the emissions reduction and helps curb local air pollution. The share of power generation from renewables increases (from around 20% today to 27% in 2020), as does that from natural gas.
- Actions to halve expected methane (a potent greenhouse gas) releases into the atmosphere from the upstream oil and gas industry in 2020 provide 18% of the savings.
- Implementing a partial phase-out of fossil fuel consumption subsidies accounts for 12% of the reduction in emissions and supports efficiency efforts.

The report also finds that the energy sector is not immune from the physical impacts of climate change and must adapt. In mapping energy-system vulnerabilities, it identifies several sudden and destructive impacts, caused by extreme weather events, and other more gradual impacts, caused by changes to average temperature, sea level rise and shifting weather patterns.

To improve the climate resilience of the energy system, it highlights governments' role in encouraging prudent adaptation (alongside mitigation) and the need for industry to assess the risks and impacts as part of its investment decisions.

The financial implications of climate policies that would put the world on a 2 °C trajectory are not uniform across the energy sector. Net revenues for existing renewables-based and nuclear power plants increase by $1.8 trillion (in year-2011 dollars) collectively through to 2035, offsetting a similar decline from coal plants. No oil or gas field currently in production would need to shut down prematurely.

Some fields yet to start production are not developed before 2035, meaning that around 5% to 6% of proven oil and gas reserves do not start to recover their exploration costs. Delaying the move to a 2 °C trajectory until 2020 would result in substantial additional costs to the energy sector and increase the risk of assets needing to be retired early, idled or retrofitted. Carbon capture and storage (CCS) can act as an asset protection strategy, reducing the risk of stranded assets and enabling more fossil fuel to be commercialised.

Statement by UNFCCC Executive Secretary Christiana Figueres on the occasion of the release of the International Energy Agency's World Energy Outlook Special Report "Redrawing the energy-climatemap":

"The IEA report comes at a crucial moment for the UN Climate Change negotiations and for global efforts to address climate change at all levels. Once again we are reminded that there is a gap between current efforts and the engagement necessary to keep the world below a two degrees Celsius temperature rise. Once again we are reminded that the gap can be closed this decade, using proven technologies and known policies, and without harming economic growth in any region of the world. By seizing the opportunities described in the report, businesses and governments at all levels can catalyze climate action and open the political space for a universal climate agreement."

WEO Climate Change Excerpt Launch

Opening Remarks
by IEA Executive Director,
Maria van der Hoeven

Ladies and Gentlemen, it is a great pleasure to have you here today for the launch of this Special Report in the World Energy Outlook, or WEO, series.

Such Special Reports have become an increasingly important part of the WEO schedule. They have helped to put a spotlight on particular issues, from energy access to the golden age of gas, to the Iraq energy outlook last year.

Today we launch a report that focuses on one of the defining challenges of our time, climate change. It is timely because, despite efforts to mitigate climate change, we recently passed a grim milestone with the concentration of carbon dioxide in the atmosphere topping 400 parts per million at the Mauna Loa Observatory in Hawaii. This is uncharted territory in the history of humans.

While it does not represent a tipping point per se, that milestone is symbolic of our failure to respond adequately, and to fulfil our own national and international pledges to limit average global temperature increase to 2 degrees Celsius over the long term.

If we continue with business as usual, that rise could be 5.3 degrees Celsius, with potentially disastrous implications in terms of extreme weather events, rising sea levels, and the huge economic and social costs that these can bring.

In short, we are drifting off-track, and global negotiations are not expected to yield agreement before 2015, and to be enforced after 2020. Amid concerns over global economic pressures, climate change has quite frankly slipped to the back burner of policy priorities.

But the problem is not going away. Quite the opposite.

This WEO Special Report is a timely reminder that climate change must remain a permanent and prominent item on the policy agenda. It seeks to outline the intensive action which we need to start implementing today, without waiting to 2020 or later for a global agreement to take effect. And those actions are in the energy sector, which accounts for about two-thirds of greenhouse gas emissions.

Why do I talk about implementation that starts today? Because by 2020, global energy-related greenhouse-gas emissions are projected to be nearly 4 gigatonnes higher than a level consistent with attaining the 2 degrees Celsius target. This level of excess emissions in 2020, just seven years from now, is more than the emissions of Europe today.

And while developed countries contributed the most to energy-related emissions historically, developing countries account for 60% of these emissions today. China, the world largest emitter, contributed most to the growth in global emissions in 2012, but the increase was one of the lowest it has seen in a decade as a result of efforts in renewables deployment and efficiency gains.

Europe has seen falling emissions due to economic contraction and increasing renewables use, while emissions in the US fell thanks to coal-to-gas switching. But Japan‘s emissions have risen due to a reduction in nuclear power.

So this is a problem that we must tackle together. And this report lays out four energy policies that can do that – that can keep the door open to the 2 degree target without harming economic growth, and implemented nationally with existing technologies. They are proven, and feasible. Not only will acting on these policies save long-term costs to society as a whole, but the energy sector itself will see benefits in terms of reduced risks to infrastructure and projects.

Delaying stronger climate action to 2020 would come at a cost to the energy sector: 1.5 trillion US dollars in low-carbon investments would be avoided before 2020, but 5 trillion US dollars in additional investments would be required thereafter to get the world back on track.

The question is not whether we can afford the necessary investments given the current economic climate. The fact is we simply cannot afford to delay.

Young Voices

A Note from Jordan

By Jordan Brandon Jafar

In mid-June, UN Secretary-General Mr. Ban Ki-moon made a very important observation when he described young people as "agents of change" who can bring fresh and innovative ideas to address pressing issues in the world such as climate change.

Speaking via videoconference, Mr. Ban told youth delegates attending the UN climate change negotiations in Bonn, Germany that climate change is an issue that will feature in their lives and in the coming generations.

Climate Change will affect everything. It is a threat to development, the stability of countries and economies; the health of the planet while extreme weather being experienced all over the world was costing trillions of dollars.

Mr. Ban also said that youth would play a key role in his Climate Change Leaders' Summit in New York this coming September to catalyze ambitious action on the ground, to reduce emissions and to strengthen climate resilience.

"Use your power as voters and consumers," Mr. Ban said, encouraging youth to get involved by reminding their political leaders of their moral responsibility to them and future generations and by adopting measures that reduce greenhouse gas emissions and strengthen resilience to climate shocks.

After reading Mr. Ban's words, I feel even more empowered to continue my own little lobbying through this column for young people from my country, Trinidad and Tobago, from the Caribbean and worldwide to get involved in the climate change movement.

Two years ago, Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), Christiana Figueres challenged young people in Trinidad and Tobago to use communications technology and social media to form a youth movement across the world to address climate change issues.

Speaking via a taped video message from her office in Bonn, Germany, at the opening of Trinidad and Tobago's First Youth Forum on Climate Change hosted by Earth Conscious magazine, Ms. Figueres said that climate change is the defining issue of the generation of young people.

"You are Generation C, or Generation Climate. It is a tremendous responsibility. But your generation also has a powerful tool that no other generation had before. Thanks to the Internet, to communications technology and to social media, you are the most interconnected generation that ever lived. **Use that knowledge, that voice, that power**. You are more capable of getting your message heard and more capable of linking up with like-minded people than any generation before you."

So, my own question to you, is what are you going to do? Write me at jordanjafar@gmail.com

Jordan is wondering: is there any place on Planet Earth not affected by climate change?

unfccc.int

Click to view UN Secretary-General Ban Ki-moon's virtual dialogue with young people. Video courtesy: UN Web TV

WORD SEARCH

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Find these words:

- HOT
- HEAT
- WIND
- HUMID
- OXYGEN
- BREEZE
- CLOUDS
- CLIMATE
- WEATHER
- DENSITY
- WIND VANE
- POLLUTION
- JET STREAM
- WIND ENERGY
- TEMPERATURE

START OVER

You can print this puzzle and complete it OR click the image to do the puzzle and other games ONLINE, courtesy NASA's Climate Kids games

Science Fiction Films and Nature

By Jo-Anne Nina Sewlal

When you are stuck at home writing a PhD thesis the television becomes your best friend. I always have taken a liking to science fiction films, but thesis writing has made me look at these more critically. Most may think that this genre of films is for the geeks but many films do ask the important question of "what if" when it comes to our environment.

Science fiction films can be categorised into three groups: disasters, aliens and genetic manipulation. There are many science fiction films showing extreme natural disasters such as earthquakes, or tornadoes or storms. They show you the damage that is done and how people will be affected, without power or access to food or medical attention. This became a reality in October of 2012 when Superstorm Sandy hit the Eastern coast of the United States of America. New York City which seems to never sleep was a ghost town. For weeks afterwards there was no power and fuel had to be rationed. In Trinidad and Tobago almost everyone you talked to knew someone or had a relative in that part of the country. So these storms do affect a lot of people all over the world.

Then what would science fiction be without aliens. The most common plot is that extraterrestrials visit our planet to obtain a resource that is no longer available on their home planet. Usually the way that they obtain it is not friendly and they do not care if our planet dies; they will move on and find another one. This is basically giving up a taste of our own medicine. We do this on our planet when we quarry or mine for minerals. When it runs out in one area, we just pick up and move to another.

So what if we were to attain the technological level that allowed us to travel in space and try to colonise another planet where we are not the dominant species. This is a scenario where the shoe is on the other foot so to speak. We are looking for a home or resources to ensure the survival of our species totally disregarding the biodiversity that is already there.

But these films also make us seriously take note of what humans need to survive and start over on a new planet. Can we use technology to better help us to survive? Or have we become too dependent on technology? Over the past few years scientists have found hundreds of planets that have the requirements that make it suitable for habitation by humans. If this is not a wake-up call about our environment and biodiversity I don't know what is.

To me the most classic science fiction film on genetic manipulation is Jurassic park where scientists used the DNA of dinosaurs obtained from mosquitoes trapped in amber (sap of trees) to bring them back from the dead. They were in restricted areas but when the power got turned off by workers trying to steal dinosaur embryos they escaped.

In a nutshell, even if it were done with the best intentions, things can go wrong. But we should also think of them as a reality check. The dinosaurs are extinct for a reason. They are incredibly large animals. Do you really think that by bringing them back, the planet will have enough resources to sustain them and the animals and plants of this period and the increasing population of humans?

Now more than ever we should take heed as these situations are not only found in science fiction films any more. In 2012, a team of Russian scientists were able to germinate a 30,000 year old plant from fruits found in squirrel burrows buried in the permafrost layer of soil from Siberia.

But many of the giant monsters of science fiction are a result of mutation caused by pollution where it has been carelessly dumped or incorrectly disposed of. Another cause of these villains in science fiction is a result of genetic manipulation done on purpose, for example for biological warfare.

They show you that humans may want to tame or control nature but nature knows best. In many other cases these mutations act as invasive species in that they are genetically modified to be the best at adapting to their surrounding hence they will be able to out-compete the native species for the available resources.

Science fiction films on genetic manipulation also show us how complex and integrated the biodiversity and our environment are to our accustomed way of life. For example, a school of genetically mutated fish along a shipping route will affect supplies coming to an area as well as tourism which will influence its income and employment of amount of people in the area and their overall standard of living.

Science fiction also makes us take notice that our planet is changing. Probably the best example is in the movie "The Blob" from 1958 starring Steven McQueen where the "blob" is an alien life form that has fallen to earth from a meteor and starts to consume human beings. During the course of the movie it is discovered that extreme cold can contain it but not kill it so that it is dropped off in the Arctic. However the filmmakers were quite clever in that they ended the movie with "The End ???" - maybe this was a prediction of the future as we are seeing the day that those questions marks are validly placed as the Arctic ice is melting.

Sometimes science fiction acts as the momentum giving scientists something to work towards. The best examples of this are films on space exploration dating back from the era of silent movies with the earliest being Georges Melies' "A Trip to the Moon" from 1902. Countless science fiction films and television shows have promoted this type of exploration and I am sure has started quite a few scientists into this growing area of research.

As we make technological advances it becomes easy to get caught up in the special effects but the next time we look at a science fiction film or television show let's look at the environmental message they may carry.

Jo-Anne works at the Department of Life Sciences, University of the West Indies, St. Augustine, Trinidad.

Jo-Anne "wants to visit the moon and confirm once and for all it is not made out of cheese"

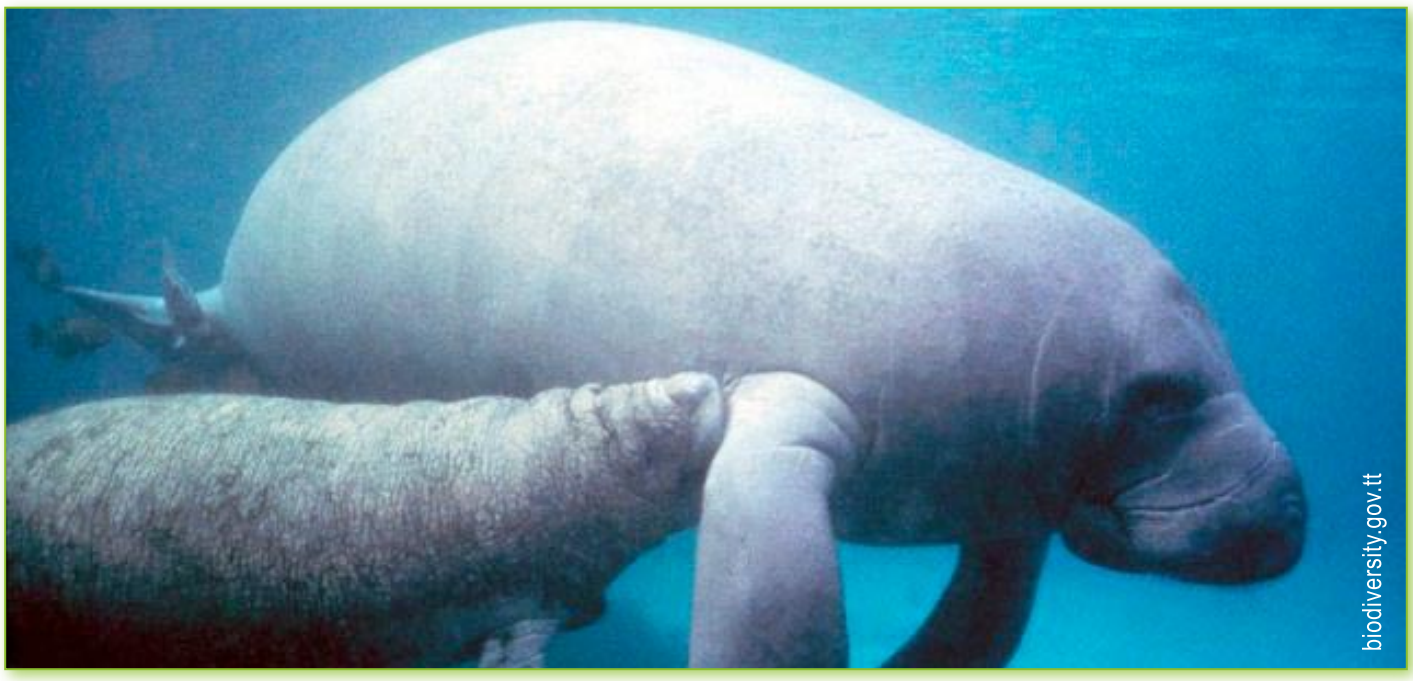
A Look at T&T's Draft National Wildlife Policy

By Shahad Ali

It must be applauded that Trinidad and Tobago took the initiative to draft a National Wildlife Policy. The diversity of our species is quite high and it must be protected. The Draft Wildlife Policy revealed administrative mishaps, gave an affirmative action plan but also sparked many questions on the jurisdiction and proper management of many species.

One organisation that was mentioned several times in the policy includes the Forestry Division. According to the policy, over 10,000 hunting permits are granted each year by the Forestry Division. These permits were granted without a clue as to the population numbers of different species that live in our forests. Hunter data forms were returned to the forestry division by several hunters over the years. These sheets of paper indicated the number and type of species that were hunted by a permit holder over a hunting season. The policy states that these sheets of data were never processed due to a lack of human resources. Despite this lack of information, the Forestry Division continued to distribute hunting permits to many individuals over the years.

One of the major concerns about the management of wildlife species is population numbers. There is no possible way to manage any species without having a clear understanding of how many numbers exist in the wild. The request for a moratorium was not supported by several hunters during the public consultations on this policy. How can we move forward?



There were several drivers that caused this policy to be drafted, but after the comments that came from the hunters, it seems as if they were unclear of the several reasons why this policy was being drafted. Some of these included forest fires, invasive species as well as agriculture and residential squatting.

Admittedly what was presented proved to be very possible with a very affirmative action plan. One of the proposed suggestions was the establishment of a Forest and Protected Areas Management Authority (FPAMA). This essentially is a rebranding or revamping of the current Forestry Division with the primary objective of overseeing three national environmental policies. This authority would only be established three (3) years after the Draft Wildlife Policy comes into effect. What is quite strange though is that the primary function of this authority is quite similar to the Wildlife Section of the Forestry Division. If this is the case, what has the Wildlife Section of the Forestry Division been doing all these years?

The Draft Policy had its fair share of management flaws. This policy does not seek to clarify management, but further complicates it. The jurisdiction of Wildlife is now shared between many bodies. For example the policy states that in terms of fishes, it only has jurisdiction over freshwater fishes. Marine fishes are presided over by the Institute of Marine Affairs. This ambiguity raised the question about the jurisdiction of fishes in estuarine conditions. Who has responsibility over this wildlife? Our country is famous for playing the 'blame game', and in the event of an environmental catastrophe, the wildlife policy gives room for government entities to point fingers.

How can bats be listed as vermin? These are creatures that are responsible for seed dispersal. How can the cocrico be listed as vermin? It is a national bird of Trinidad and Tobago. This essentially allows these two species to be hunted or killed on private lands at anytime. These are just some of the many issues of both the Draft Wildlife Policy and current legislation in Trinidad and Tobago.

The move is definitely one in the right direction. At this point the policy has left the consultation phase and is probably being re drafted to its final state. This policy would help shape future laws for the benefit of the diverse flora and fauna that our beautiful country has to offer. We are a blessed nation, and with or without laws, we have a responsibility to protect the wildlife in it.

Bura na mano, Holi hai! Don't worry this is Holi!

By Bogusia Sipiora

There is an unimaginable colorful madness; there is wildness; there is craziness; it becomes passionate and nutty. People regardless of sex, beliefs, casts, age etc. get totally drugged into it. For one morning in India, it seems as if the entire world is covered with colorful rain. It is called Holi festival, which celebrates the spring season coming to earth.

It is said as always, when it comes to festivals in India, that Holi was started by the gods. The most flirtatious and naughty one – Krishna used to play with girls, who in turn loved him a lot. Among them, his beloved Radha had very fair skin, unlike Krishna whose skin had a color of dark blue monsoon cloud. Being jealous, he once repainted Radha's face with flowers and colors made out of them. People liked playing these pranks and ever since they have celebrating Holi, which has evolved into a entertaining festival throughout India.

Initially the powder - *gulal* was made out of flowers and plants. Unfortunately later, the synthetic powders got extremely popular, mainly due to cheaper price and bright, long lasting colors although the use of herbal powders are being encouraged.

Orange color is the most popular and auspicious. It is obtained from *keshu*- tree flowers, also called the *flame of forest*. Flowers are either soaked overnight in water, which is used the next day as orange ammunition or dried and powdered later. Krishna is said to use the flowers of *flame of forest* to paint Radha's face, considered an erotic colour.

On the day of Holi, *pichkaris* (big plastic syringes filled with water) and powder *gulal* become a weapon. People wear mostly white clothes as it shows the colorful powders nicely and what's more it symbolizes equality and tolerance. Lucky are the ones who know that applying coconut oil will help remove the colorful stains from the skin.

More and more foreigners are attracted to Holi in India and therefore some cities organize special events for tourists to enjoy and learn Indian culture. To avoid the rush and uncontrolled showers of colors especially in the old historical parts of the cities, governments dedicate one venue for playing Holi. In Jaipur, I saw a huge encircled space where volunteers were distributing herbal powders and white t-shirts for all people who wanted to join the fun. Foreigners who admire the traditional dances by local artists telling the story of Holi are encouraged to join the play. I loved the dance by Krishna and beautiful Radha accompanied by a song explaining why and how Holi originated. And as the legend says, the first gods started throwing petals and colorful powders and then people joined them merging in an exciting enjoyment.

I need to mention Shiva as well who is believed to discover transcendental features of *cannabis.* He must have encouraged mankind to drink *bhang* (preparation of milk and marijuana) which became a Holi cocktail widely accepted and partaken as well as marijuana pakoras. This must be the reason too, why so many tourists as well as residents join the Holi festival in such gay abandonment!

Bogusia, a native Polish now makes her home in Delhi, India.

Controlled Environment Agriculture in the Caribbean

By Garfield King

Farming in the Caribbean is a risky business. Much of that risk is connected to the uncertainty of the weather - from too much or too little rain, to the devastation of a hurricane – there are also other challenges from nature such as pests. The risk can be reduced by planting indoors in a controlled environment, the greater the control the less the risk. The pay-off can be significant increases in production.

The husband and wife team of Chris and Laurina Muglia is currently in Europe putting the logistics in place for a pilot project on Controlled Environment Agriculture (CEA) in the Caribbean. Chris is a global entrepreneur and business consultant who has worked with a number of multi-national companies. Laurina is a highly qualified human resource professional and social media entrepreneur.

"Controlled Environment Agriculture allows you to bring the planting indoors and control all the variables in terms of weather, light and pests. This allows you to grow organic produce without the unwanted effects of irrigation run-off and pollution. This can be done at price parity with imported produce and in some cases at even better prices," says Chris.

But wouldn't the capital expense of building greenhouses and other structures take this concept beyond the reach of the average farmer?

"If you build a business model you'll see it's a straightforward equation to check whether or not CEA would be feasible for you." He explains there are many ways to set up this Controlled Environment Agriculture. "It could be a greenhouse, an old building or even underground. It all depends on what crops you're looking for and your budget." The cost comes down considerably if you adapt an existing building such as an old warehouse or even a garage if working on a small scale.

While it sounds like an idea many farmers would embrace, traditional farmers tend not to be the early adopters of this technology. The couple met with Dr. Gene Giacomelli, head of the Controlled Environment Agriculture project in Arizona, who has been promoting the concept for years and is involved in the NASA experiment for the eventual manned voyage to Mars. He also works on the Growth Chamber in the Antarctica that grows produce for the research station there.

Laurina notes that Dr. Giacomelli has been trying to get this collection of concepts across to traditional farmers for a long time. "His most successful graduate is a young lady from Brooklyn. She was not a farmer and did not come from a family with agriculture interests, but now has one of the biggest and most productive urban greenhouses on rooftops in Brooklyn."

The early adopters of CEA are coming from the world of Information Technology. This could be because key aspects involve scientific monitoring and measurement of the plants. For example, sensors are used to record humidity and pH, then algorithms are created to reduce even more risk, not just by monitoring the greenhouse, but each plant in the greenhouse. Dr. Giacomelli has found that most traditional farmers are not adopting this technology in large measure, preferring instead to be out in the fields.

Chris and Laurina plan to prove the efficacy of these concepts by making one Caribbean island self-sustainable in terms of its own produce. To explain how it might work Chris uses Sint Eustatius (also known as Statia or Statius) as an example. "Thirty-five hundred people inhabit the island. If you use the equation that one square metre will feed one person for one year, then using this technology thirty-five hundred square metres can make the island food sustainable. It also eliminates all the logistic costs, carbon footprint and spoilage associated with importing food." The Muglias believe the project's success would kick-start Indoor Agriculture in the Caribbean.

Another positive impact could be the creation of a knowledge hub in the Caribbean. "The region has been affected by a brain drain for decades as people left looking for opportunities," says Chris. "At the same time, there are many young people in the Caribbean who are very familiar with technology in an informal way and are IT literate." Introducing these concepts to the youth could steer a new generation to agriculture. "Young people can be shown that farming does not have to mean toiling in the fields in the hot sun and the rain, but can be a career that explores science, utilises the latest technology and generates a very good income. That would be a culture shift." Laurina adds that "The youths could export their knowledge to the rest of the Caribbean and even to other Small Island Developing States (SIDS)."

Energy and resource savings are a major feature of Controlled Environment Agriculture. If the farm is big enough it can be energy positive. "If you do everything hydroponically (using mineral nutrient solutions in water, without soil) and recycle your water, depending on your crop, you could use about 10 percent of the water of a normal farm." The energy and resource savings multiply significantly if you take the next step with your recycled water and use aeroponics. "With aeroponics" says Chris "plants are grown suspended with their roots dangling and you mist the roots and lower stems with the necessary nutrients. These methods combined could see you using as little as 1 or 2 percent of a normal farm's water."

Caribbean Agriculture is increasingly utilising science and technology along with Climate Smart Agriculture to improve production and reduce the impacts of climate change. Adding Controlled Environment Agriculture to the mix may accelerate the pace to regional food sovereignty.

You can contact Chris Muglia - crmuglia@mac.com

Germination room with produce growing racks with LED lighting in the optimal blue and far red spectra for most plants. (Texas, USA)

State of the art greenhouses in Holland

Garfield King is an independent radio producer, presenter and writer with almost 30 years broadcast experience.As a trainer, he conducts workshops on public speaking, presentation skills and communication dynamics. inkings@tstt.net.tt

Preschoolers Need to MOVE

By Barbara King
Parent Educator
ParentingTT

The preschool years are an adventure for children. See it from their perspective: They are exploring and discovering the wonders of the world. From the magic qualities of water to the mastering of that amazing machine called The Human Body. They are finding out what the body can do, how to use it to access information about the world – the textures, odors, sounds, colours and images. How they can make it move fast or slowly and how they can keep it still as a statue.

Our self-concept in closely connected to our relationship to the body. We equate how good or successful we are in the world with how our body looks and what we can do with it. Like us adults, a child builds a concept of self largely based on his or her body: How it looks in comparison to other bodies, what it feels like, its ability to move, perform and recover from illness or damage.

Between the ages of 3 and 6, a child's body is still forming and the physical experiences the child has at this stage will determine the kind of adult body he will have. This is the period where children learn to master the coordination and use of their large and small muscle groups, to coordinate their eyes and their movements, for example, looking at you and throwing the ball to reach you.

Most children at this stage are very energetic and active. They are supposed to be. Put them in an open space and watch them use it. The job of the preschooler is to work that body and practice over and over again the skills they will require to thrive and survive in the world:

- **Walking and running** at different speeds: mummy's pace, daddy's pace, on grass, sand, rocks, pavements, in water, mud, up hill and down hill. All require different adjustments to the use of the brain, lungs, limbs and muscles. We have come to take these things for granted.
- **Jumping** is wonderful fun. It is exhilarating. It works the tendons in the foot and the leg muscles. Hopping or Jumping from one object or place to land accurately on another requires the use of the whole body and the brain. Skipping also adds an aerobic workout.
- **Climbing**: stairs, rocks, rope, ladders, mango trees, hills include factors such as the ability to maintain balance, conquering anxiety or fear of heights, endurance and the very important skill of learning how to fall and land safely.
- **Tumbling**: Doing flips, handstands, cartwheels, somersaults and generally "monkeying around". These activities require intricate brain and body coordination to execute them correctly.
- **Swimming** is an essential survival skill, particularly for island dwellers and those families who regularly use rivers, lakes or the beach for recreation.

Research in child development over the past decade have shown that children's natural tendency to move and be active is an important part of healthy living and growth. Eric Small, M.D., FAAP, clinical assistant professor of pediatrics, orthopedics, and rehabilitation medicine at Mount Sinai School of Medicine identifies physical activity as important for:

- Stronger muscle and bone density.
- Heart and lung fitness
- Regulating obesity
- Preventing diabetes and cholesterol in children with a genetic disposition
- Boosting in brain function - Studies show that IQ will suffer if a person is not active during his or her first five years.[1]

Children who have opportunities to experiment in developing their bodies in these ways master the elements of coordinated movement which carry over into everyday tasks such as brushing teeth, dressing themselves, getting in and out of chairs, cars and buses, becoming independent individuals. They build their "Yes I can" sense, their self-confidence. Others discover their athletic talents which parents can nurture thoughtout childhood, particularly for those children who may not be academically oriented.

Parents can support and encourage their children to be active by:

- Making daily opportunities for free, unstructured play
- Allowing children time and safe space to use up their exuberant energy
- Not being overly protective (mums let dad or an uncle handle the boy's activities)
- Limiting television viewing and computer use to one or two hours a day.
- Model an active lifestyle – get up or out and move!
- Encouraging the active child by finding people who can nurture their natural tendencies e.g. beginners classes for gymnastics, dance, karate, swimming. These should be fun classes not strict, pressured instruction.

Mothers often cringe at the thought of their little ones being exposed to the danger of falls and the resulting scrapes, bruises, cuts and tears. Some teachers complain about boys in particular getting sweaty and excitable. But depriving our children of these experiences also deprives them of some very big life lessons necessary for adulthood, like:

- Learning to deal with physical pain
- How to attend to their own injuries and differentiate between minor and major injuries
- Practice in dusting oneself off and getting back in the game
- Persistence and perseverance
- Taking calculated risks and dealing with the consequences
- Enjoying life – laughing, letting go and enjoying moments of freedom
- Relating to others
- How to handle winning and losing.

There are many, many, other benefits that cannot be gained from even the best children's television, educational games or cartoons.

Resources

- http://www.livestrong.com/article/177239-physical-development-between-4-9-years/#ixzz1yF5am3DI
- http://www.parentree.in/Parentree-editors/journal-808/Teaching-children-through-bodily-kinesthetic--intelligence--multiple-intelligence----Activities--Toys--Materials--Examples.html
- American Academy of Pediatrics
- *Children and Brain Development: What We Know About How Children Learn*. http://umaine.edu/publications/4356e/

1 http://www.healthychildren.org/English/healthy-living/fitness/Pages/Physical-Activity-Make-the-Right-Choice-for-Your-Child.aspx

CARICOM-Germany Cooperation places focus on

CLIMATE CHANGE, RENEWABLE ENERGY

Climate Change, Renewable Energy and Energy Efficiency and Natural Resources Management and Biodiversity will be the focus of Germany's assistance to the Caribbean Community (CARICOM) for the programming period to 2018, according to a CARICOM statement.

This was reiterated recently when a German delegation met in Georgetown, Guyana to review the CARICOM-Germany technical cooperation programme. The German delegation was led by Mr. Ullrich Kinne, Deputy Head of Mission for the German Embassy in Trinidad and Tobago, while the CARICOM team was led by Mr. Percival Marie, Executive Director, Resource Mobilisation and Technical Assistance (RMTA).

While outlining the areas of focus for the current programming period, the German delegation also pointed out that the CARICOM Secretariat was regarded as Germany's major development partner in the Caribbean for the planning and coordination of regional projects.

Projects which have been approved over the last three years under the CARICOM-Germany cooperation programme have involved the provision of German resources in excess of sixty million Euros, according to a statement from CARICOM.

The current portfolio of German-funded regional projects includes three projects in the area of HIV/AIDS prevention, two in Renewable Energy, two in Climate Change and one in Natural Resources Management.

The meeting was notified of the priorities of the Community and in particular of recently approved policies for Agriculture, Nutrition and Food Security, Crime and Security, Aid for Trade, and ICT4D.

With regard to the Post-2015 Development Agenda, the German delegation pointed out its awareness of the special developmental constraints of the region and indicated an interest in holding discussions on an appropriate definition of development which took into consideration those constraints.

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Frog. Plants, reptiles and particularly amphibians are expected to be at highest risk. (Credit: © Anna Omelchenko / Fotolia)

CLIMATE CHANGE will cause widespread global-scale loss of common plants and animals

More than half of common plants and one third of animals could see a dramatic decline this century due to climate change, according to research from the University of East Anglia.

Research published in the journal *Nature Climate Change* looked at 50,000 globally widespread and common species and found that more than one half of the plants and one third of the animals will lose more than half of their climatic range by 2080 if nothing is done to reduce the amount of global warming and slow it down.

This means that geographic ranges of common plants and animals will shrink globally and biodiversity will decline almost everywhere. Plants, reptiles and particularly amphibians are expected to be at highest risk. Sub-Saharan Africa, Central America, Amazonia and Australia would lose the most species of plants and animals. And a major loss of plant species is projected for North Africa, Central Asia and South-eastern Europe.

But acting quickly to mitigate climate change could reduce losses by 60 per cent and buy an additional 40 years for species to adapt. This is because this mitigation would slow and then stop global temperatures from rising by more than two degrees Celsius relative to pre-industrial times (1765). Without this mitigation, global temperatures could rise by 4 degrees Celsius by 2100.

The study was led by Dr. Rachel Warren from the Tyndall Centre for Climate Change Research at UEA. Collaborators include Dr. Jeremy VanDerWal at James Cook University in Australia and Dr Jeff Price, from UEA's school of Environmental Sciences and the Tyndall Centre. The research was funded by the Natural Environment Research Council (NERC).

Dr. Warren said: "While there has been much research on the effect of climate change on rare and endangered species, little has been known about how an increase in global temperature will affect more common species.

"This broader issue of potential range loss in widespread species is a serious concern as even small declines in these species can significantly disrupt ecosystems.

"Our research predicts that climate change will greatly reduce the diversity of even very common species found in most parts of the world. This loss of global-scale biodiversity would significantly impoverish the biosphere and the ecosystem services it provides.

"We looked at the effect of rising global temperatures, but other symptoms of climate change such as extreme weather events, pests, and diseases mean that our estimates are probably conservative. Animals in particular may decline more as our predictions will be compounded by a loss of food from plants.

"There will also be a knock-on effect for humans because these species are important for things like water and air purification, flood control, nutrient cycling, and eco-tourism. "The good news is that our research provides crucial new evidence of how swift action to reduce CO2 and other greenhouse gases can prevent the biodiversity loss by reducing the amount of global warming to 2 degrees Celsius rather than 4 degrees. This would also buy time – up to four decades - for plants and animals to adapt to the remaining 2 degrees of climate change."

The research team quantified the benefits of acting now to mitigate climate change and found that up to 60 per cent of the projected climatic range loss for biodiversity can be avoided.

Dr. Warren said: "Prompt and stringent action to reduce greenhouse gas emissions globally would reduce these biodiversity losses by 60 per cent if global emissions peak in 2016, or by 40 per cent if emissions peak in 2030, showing that early action is very beneficial. This will both reduce the amount of climate change and also slow climate change down, making it easier for species and humans to adapt."

Information on the current distributions of the species used in this research came from the datasets shared online by hundreds of volunteers, scientists and natural history collections through the Global Biodiversity Information Facility (GBIF).

"Our research predicts that climate change will greatly reduce the diversity of even very common species found in most parts of the world."

Contribution of forests to food security and nutrition needs more attention

Opening Session, Forests for food security and nutrition, Plenary hall, FAO headquarters. Photo: FAO

Governments, civil society and the private sector should ensure and strengthen the contributions of forests, trees and agroforestry systems to food security and nutrition, said participants in the first-ever International Conference on Forests for Food Security in May organized by FAO.

Globally, millions of people depend on forests for their livelihoods - directly through the consumption and sale of foods harvested in forests, and indirectly through forest-related employment and income generation, forest ecosystem services, and forest biodiversity.

Forest foods, such as leaves, seeds, nuts, honey, fruits, mushrooms, insects and other forest animals, have been important components of rural diets for millennia. An estimated 2.6 billion people rely on fuelwood, including charcoal, for cooking their food.

Incentives for small-scale forest producers

The conference participants agreed that small-scale forest producers should be encouraged to strengthen their involvement in agroforestry, tree-growing, small-scale wood processing and the provision of ecosystem services.

Microfinance loans to small and medium-sized forest enterprises in many cases have resulted in gains in family incomes and better health, nutrition and quality of life in rural areas, especially when microloans are given to women.

Improved access to trees and land The potential economic and environmental gains from secure land tenure are substantial, and tree tenure can also lead to fundamental improvements in land management.

The conference stressed the need for improving access rights to trees and land to create significant incentives for farmers to engage in agroforestry, for example, by applying the *Voluntary Guidelines for the Responsible Governance of Tenure of Land, Fisheries and Forests,* which were recently adopted by the Committee on World Food Security.

Forest ecosystem services foster food production

The conference highlighted the essential role of ecosystem services provided by forests and trees to agricultural production, which include protecting water and soil resources, contributing to soil development processes, including increasing soil fertility, regulating climate and providing habitat for wild pollinators and predators of agricultural pests.

Forested wetlands and mangrove forests help protect coastal areas from flooding, thereby increasing the stability of food production in coastal lands. Forests also play vital roles in riverine and coastal fisheries, which are often particularly important to poor communities. Mountain forests provide vital ecosystem services, particularly "blue" fresh water for downstream forests and dependent communities.

Intersectoral cooperation

According to the recommendations of the conference, it is essential to ensure that relevant sector policies, including those on agriculture, forests and trees, as well as food security and nutrition, are coordinated across sectors, and that all stakeholders, from forest-dependent communities to ministries, are actively involved in their development and implementation.

Tony Simons, Director-General, World Agroforestry Centre (ICRAF) delivers on the benefits of forests, trees on farms and agroforestry systems for food security and nutrition, Plenary hall, FAO headquarters. Photo: FAO

More than 400 participants attended the conference, including governments, civil-society organizations, local communities, donors and international agencies from more than 100 countries.

Conference participants further encouraged FAO to promote the conference recommendations to the next sessions of the Committee on World Food Security and the Committee on Forestry, as well as to the Second International Conference on Nutrition (ICN2) to be held at FAO headquarters in Rome on 19-21 November 2014.

Heathrow: UK aviation can grow and meet climate change targets

Growing the UK's airport hub capacity is consistent with meeting UK climate change targets, according to Heathrow's response to the 'Aviation and Climate Change' discussion paper published by the Airports Commission.

The response cites projections by Sustainable Aviation, the UK aviation cross-industry association, that new aircraft and engine technology, operational efficiencies and sustainable biofuels will allow the UK to more than double air traffic by 2050 without a substantial increase in gross emissions - consistent with the UK's long term legally set climate change targets. Together these developments have already improved fuel efficiency by over 70 per cent in the last 40 years.

If international carbon trading is added to these factors, Sustainable Aviation forecasts that emissions over time would actually be reduced, achieving the global industry's commitment to halve 2005 carbon emissions by 2050.

Heathrow's submission adds that constraining growth at a hub airport is an inefficient and ineffective way of reducing carbon emissions for three reasons:

- Without additional UK hub capacity, passengers will still travel, but in less carbon efficient ways, so carbon will not be cut. UK long-haul passengers will have to transfer through EU hubs, adding an additional landing and take-off to each journey – the most carbon-intensive part of a flight. International passengers travelling to the UK may need to detour via a European hub, adding extra miles to long-haul routes. The Airports Commission concludes that by 2030, the carbon emissions from increased transfer trips would exceed any carbon savings made by those that would choose not to travel. In addition, the UK would lose the economic benefits of direct connections.
- All sectors need to play a role in reducing carbon emissions. Aviation delivers more than twice the economic value per tonne of carbon compared to other sectors so there is greater value-for-money in reducing carbon emissions in other non-transport areas.
- The unique long-haul routes from the UK's only hub airport, Heathrow, deliver over twice the economic value per carbon tonne from trade and tourism compared to those from other UK airports.

The existing transport infrastructure around Heathrow also provides additional carbon emissions benefits compared to other UK hub options.

The submission shows that, even if development of Stansted or a new Thames Estuary airport included significant investment in new transport infrastructure, Heathrow would still have 4.5million more people within a 60minute public transport catchment area than either airport. This means passengers and staff would create a significantly smaller carbon footprint when travelling to and from Heathrow.

Countries in West Africa Must Add Climate Change Adaptation to Food Security Investments

West African policy makers should prepare for future challenges from climate change as they address the pressing needs of broad-based economic growth. Maize, millet, rice, and sorghum are the major cereal crops in the region, yet yields from these crops are very low compared to the world average and even other regions in Africa. Impacts from a changing climate will challenge production systems already under pressure to produce more to feed a growing population. Existing farming systems, including crops and livestock, are adapted to today's agro-ecosystems in the region, but climate change will alter those systems in uncertain ways, affecting livelihoods, especially those of poor farmers.

The new International Food Policy Research Institute (IFPRI) book "West African Agriculture and Climate Change" uses sophisticated modeling and available data to develop future scenarios exploring the range of climate change consequences for agriculture, food security, and resource management and offers recommendations to national governments and regional agencies. It offers, for the first time, country-by-country climate data and analysis for 11 of the countries that make up West Africa: Benin, Burkina Faso, Cote d'Ivoire, Ghana, Guinea, Liberia, Niger, Nigeria, Senegal, Sierra Leon, and Togo.

"This book is greatly needed in the West Africa region. It fills a major gap in the availability of up-to-date scientific information on the vulnerability of the agriculture sector to climate change in countries and in the region," said Robert Zougmoré, regional program leader, West Africa, CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). "This monograph will help regional and national decision makers and other stakeholders make better-informed decisions."

The book is collaboration between IFPRI, CCAFS, the West and Central African Council for Agricultural Research and Development (CORAF/WECARD), a regional agricultural research and development organization, and scientists from each of the countries.

In addition to country-level analysis and recommendations, the book offers region-wide policy suggestions:

- Current data collection efforts on weather, land use, and water resources in the region are inadequate to make policy decisions. In particular, improved data on weather are crucial to help farmers make decisions now, and to inform long-term policies.
- Policymakers should incorporate climate change considerations into food security policies—such as those related to crop research, infrastructure, and social services— to prepare for a changing climate while meeting the need for increased quantity and quality of food available to consumers.
- Agricultural research and extension agencies should combine efforts at improving yields with those to develop climate-resilient crop varieties. Training farmers about new techniques and technologies to both adapt to and mitigate the effects of climate change is needed.
- Governments should enable farmers to access vital inputs required for improved productivity and production.

First World Conference on Climate Impacts: Painting the Big Picture

Droughts, floods, crop failures, invading species and diseases – climate change impacts of today and tomorrow come with a raft of buzz words. But the science behind our understanding of the potential consequences of global warming is both much broader and much more fragmented.

For the first time ever, scientists and stakeholders from all over the world come together in May to have a look at the big impacts picture. They assembled at the "Impacts World 2013" conference in Potsdam, Germany, aiming at developing a new scientific agenda to systematically address knowledge gaps and to start bridging them. Participants included top decision-makers like EU climate commissioner Connie Hedegaard and Rachel Kyte of the World Bank, as well as eminent scientists like Cynthia Rosenzweig of the US NASA Climate Research Unit and Joseph Alcamo of the UN Environment Program.

"For the sake of evidence-based decision-making in this world confronted with unprecedented climate change, the moment has come for impacts research to enter a new era – and we're very proud to host the event that marks this important step forward," said Hans Joachim Schellnhuber, director of the Potsdam Institute for Climate Impact Research (PIK), which helped organizing this community-driven effort together with the International Institute for Applied Systems Analysis (IIASA).

International Conference on Climate Change Effects

Starting the painstaking integration

"However, this also means to go where it hurts," Schellnhuber emphasizes. "Poignant case studies and pioneering computer simulations of single sectors, like agriculture or water management, laid the foundation for starting the painstaking integration of results, across sectors and scales. So this is about connecting the dots – and about leaving terra incognita for good."

Climate impacts research is a rather young branch of global-change science. It is now virtually certain, from fundamental physics, careful observations, and advanced simulation modeling, that the emissions of greenhouse gases lead to climate change.

But while it is also clear that under significant global warming negative effects like decreased rainfall in already arid regions outweigh positive ones like the CO2-fertilization of plants in the long run, modeling of climate impacts has to deal with vast complexities, heterogeneities, and thus uncertainties. Analyzing the effects of climate change for societies is especially complicated by sectoral interactions such as the impacts of ecosystems change on malaria distribution or the consequences of ocean acidification and coastal erosion for global food supply.

Preparing stakeholders for tough choices

"Decision-makers are confronted with significant uncertainties when it comes to assess the seriousness of climate-change impacts and their exact distribution in space and time," says Schellnhuber. "Science can support them in taking a risk-management perspective – some impacts might have a low probability of occurring, yet would result in inacceptable damages, so from a precautionary perspective they should rather be avoided." For those effects might profoundly hurt the livelihoods of many million people. "We cannot predict the future," Schellnhuber says. "Yet we shape it, every single day."

International Conference on Climate Change Effects - press conference.

Loss and Damage: Comprehensive Climate Risk Management from an Insurance Perspective

Presented by the Munich Climate Insurance Initiative (MCII)

The session at the sidelines of the Climate Change Conference in Bonn, Germany in June explored climate risk landscapes in the context of current emission pathways, and elaborated on key factors to enable the integration of insurance approaches into climate risk management.

Koko Warner, MCII and United Nations University (UNU) Institute for Environment and Human Security (EHS), moderated the side event.

Isaac Anthony, Caribbean Catastrophe Risk Insurance Facility (CCRIF), noted the vulnerability of Caribbean Small Island Developing States (SIDS) to natural hazards, saying they inordinately impact their national economies. He described the Livelihood Protection Policy (LPP), which is a parametric weather index-based insurance product that provides a safety net for a significant section of the population that would otherwise be unable to get insurance.

Focusing on lessons learned from past projects, regarding the role of insurance in climate risk management, Janina Voss, GIZ, stressed the need for: strong and long-term commitments from governments; an appropriate regulatory environment; joint efforts and clarity on roles of the key stakeholders; data availability, accuracy and reliability; appropriate back-up mechanisms; and nation-wide awareness creation and education on the impact of climate change and the protection insurance may provide.

Annelie Janz, BMU, addressed the International Climate Initiative (ICI), which has been financing climate projects in developing and transition countries, since its launch by the BMU five years ago. Funding investment projects in the fields of technology transfer, policy advice, research cooperation, capacity development and training, as well as for carrying out studies and developing concepts, he said the ICI aims to support the development of insurance solutions as part of integrated adaptation strategies.

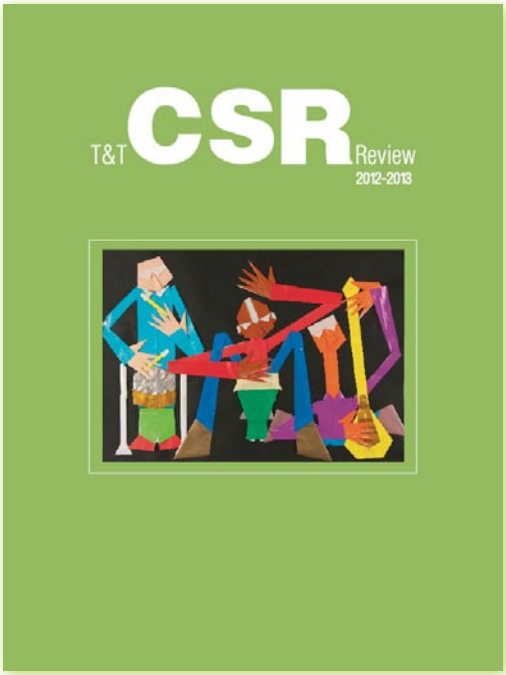
Panel (l. - r.) - Peter Hoeppe, Munich RE; Koko Warner, MCII; Annelie Janz, BMU; Janina Voss, GIZ; and Isaac Anthony, CCRIF. Photo: IISD

Peter Hoeppe, Munich RE, stressed that the distribution of wealth coincides globally with the distribution of insurance, and therefore, when a natural disaster hits a poor and virtually uninsured country, lack of funds may lead to a poverty trap, maximizing losses. He noted the kind of risks that are insurable and pointed to Munich RE's database on extreme events, which provides a complete picture since 1980 and is available for institutions and policymakers.

During the discussion, participants addressed possible institutional arrangements and whether regional approaches should focus on compensation or adaptation.

Peter Hoeppe, Munich RE, said insurance is not "a silver bullet," but it can contribute to climate adaptation, especially in the case of extreme weather events. Photo: IISD

The Trinidad and Tobago CSR Review 2012-13



"rich context on how responsible companies in Trinidad and Tobago are partnering with government and civil society to create sustainable development."

Donna Ramsammy

The T&T CSR Review 2012-2013 was produced by Virtually Yours T&T and edited by Mrs. Donna Ramsammy.

The first annual publication of the T&T CSR Review highlights the current trends and practices in how Corporate Social Responsibility and Investment is being delivered in Trinidad and Tobago today.

This year's publication focuses on companies from the Energy, Manufacturing, Financial and Communications sectors. It also shares some perspectives from both local and international contributors and up close and personal stories from beneficiaries and non-profit partners in social responsibility.

The publication was launched on June 6, 2013 at a forum which included CSR practitioners from companies that participated in the first issue of the annual publication.

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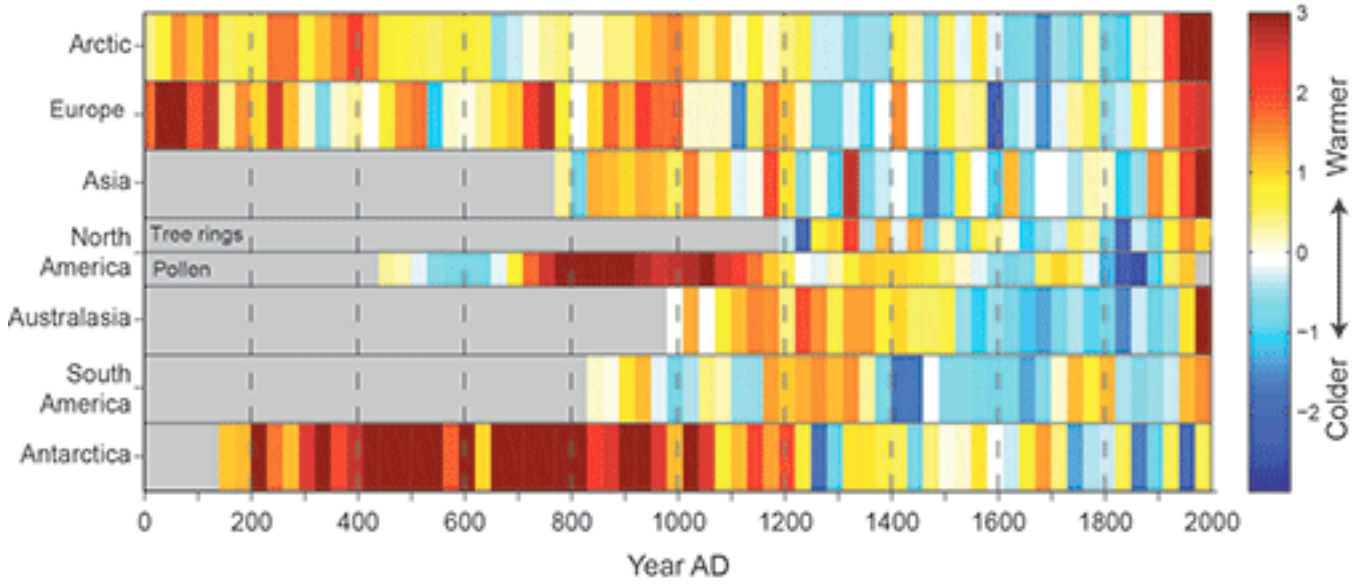
Regional climate changes over the last 2,000 years mapped for the first time

An international team of 78 researchers from 24 countries have joined forces to learn how temperature has changed in the past 1- 2,000 years at the continental scale. The results were recently published in the scientific journal Nature Geoscience and reveal both large regional similarities and differences in the evolution of Earth's climate. In particular, temperature developments in pre-industrial times seem to have differed between the northern and southern hemispheres.



Temperature evolution in different parts of the world emerging through reconstructed thirty-year averages. Colours indicate relative temperature. For North America, there is both a shorter reconstruction based on tree rings and a longer reconstruction based on pollen. In Africa, there is not yet enough data to make any temperature reconstructions. Source: www.su.se

The researchers, coordinated by the Past Global Changes (PAGES) project, reached their conclusions by integrating 511 series of historic climate data from tree rings, ice cores, pollen, corals, lake sediments, and other data. Similar to what previous studies have shown, the new research confirms an overall cooling trend across nearly all continents over the last 2,000 years.

Fredrik Charpentier Ljungqvist
Photo: www.su.se

The cooling was likely caused by changes in Earth's orbit, but the global warming during the last century seems to have reversed this long-term cooling. Two researchers from Stockholm University, Fredrik Charpentier Ljungqvist and Paul J. Krusic, were involved in the project.

"This is the first time that it has been possible to compare temperature trends between

different continents in this way. It is interesting to note that the Medieval Warm Period starts around 200 years later in the southern hemisphere as compared to the northern hemisphere, and the Little Ice Age also starts later in the south," says Fredrik Charpentier Ljungqvist.

The differences between continents during the Medieval Warm Period (c. 800-1300) are larger than during the Little Ice Age (c.1300-1900). Direct comparisons between past and present climates are difficult, but the study indicates that the temperature of the last 30 years has possibly been higher than during any other period in the last 1-2,000 years on several continents.

"We can see that it was warm in the northern hemisphere in the period between 830 and 1100, whereas the warm period lasted between 1160 and 1370 in the southern hemisphere. Between 1580 and 1880, however, there was a cold climate nearly everywhere in the world," says Fredrik Charpentier Ljungqvist.

Researchers have found that the coldest periods, especially when they coincide in different continents, occured when there was a decrease in solar activity and an increase in volcanic activity at the same time. Five periods between 1250 and 1820, i.e. during the Little Ice Age, were particularly cold, but not always on all continents simultaneously.

"The only continent that has bucked the modern warming is Antarctica. In northern Europe, it was probably at least as warm in the year 1000 as it is now, but in southern Europe, the past decade has probably been the warmest since Roman times. That shows how important it is to study regional variations in order to understand climate change," says Fredrik Charpentier Ljungqvist.

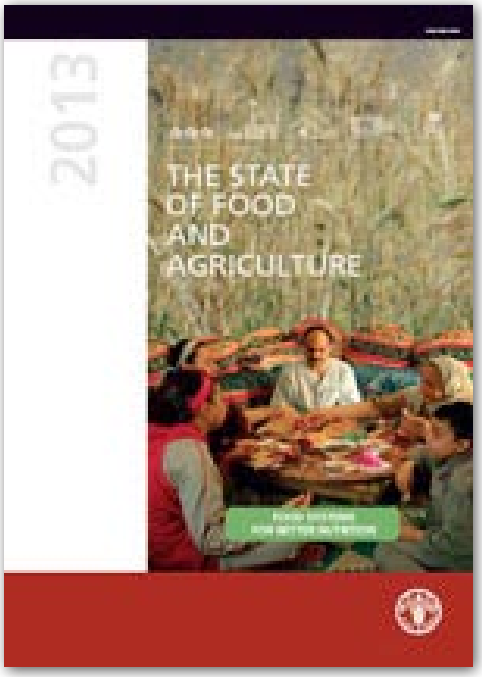
Where in the World.....

Farmlands in Ecuador

Photograph: William L. Milligan M.D.,
Director of SoloCaribe Inc. www.solocaribe.com

FAO urges end of malnutrition as priority

Social and economic costs of global malnutrition unacceptable



Click image to access the full report

Denouncing the huge social and economic costs of malnutrition, FAO Director-General José Graziano da Silva has called for resolute efforts to eradicate malnutrition as well as hunger from around the world.

In a statement marking the launch of FAO's flagship annual publication The State of Food and Agriculture (SOFA), Graziano da Silva said that although the world has registered some progress on hunger, one form of malnutrition, there was still "a long way ahead."

"FAO's message is that we must strive for nothing less than the eradication of hunger and malnutrition," he declared.

The report Food systems for better nutrition notes that although some 870 million people were still hungry in the world in 2010-2012, this is just a fraction of the billions of people whose health, wellbeing and lives are blighted by malnutrition.

Two billion people suffer from one or more micronutrient deficiencies, while 1.4 billion are overweight, of whom 500 million are obese, according to SOFA. Twenty six percent of all children under five are stunted and 31 percent suffer from Vitamin A deficiency.

Twenty six percent of all children under five are stunted

Unacceptable

The cost of malnutrition to the global economy in lost productivity and health care costs are "unacceptably high" and could account for as much as 5 percent of the global gross domestic product -- $3.5 trillion dollars, or $500 per person. That is almost the entire annual GDP of Germany, Europe's largest economy.

In social terms, child and maternal malnutrition continue to reduce the quality of life and life expectancy of millions of people, while obesity-related health problems, such as heart disease and diabetes, affect millions more.

To combat malnutrition, SOFA makes the case that healthy diets and good nutrition must start with food and agriculture. The way we grow, raise, process, transport and distribute food influences what we eat, the report says, noting that improved food systems can make food more affordable, diverse and nutritious.

Specific recommendations for action include:

- Use appropriate agricultural policies, investment and research to increase productivity, not only of staple grains like maize, rice and wheat, but also of legumes, meat, milk, vegetables and fruit, which are all rich in nutrients.
- Cut food losses and waste, which currently amount to one third of the food produced for human consumption every year. That could help make food more available and affordable as well as reduce pressure on land and other resources.
- Improve the nutritional performance of supply chains, enhancing the availability and accessibility of a wide diversity of foods. Properly organized food systems are key to more diversified and healthy diets.
- Help consumers make good dietary choices for better nutrition through education, information and other actions.
- Improve the nutritional quality of foods through fortification and reformulation.
- Make food systems more responsive to the needs of mothers and young children. Malnutrition during the critical 'first 1000 days' from conception can cause lasting damage to women's health and life-long physical and cognitive impairment in children.

Women's role

Giving women greater control over resources and incomes benefits their and their children's health, the report says. Policies, interventions and investment in labour-saving farming technologies and rural infrastructure, as well as social protection and services can also make important contributions to the health and nutrition of women, infants and young children.

FAO. Giulio Napolitano

Projects that have proved successful in raising nutrition levels include enhanced production, marketing and consumption of local vegetables and pulses in East Africa; promotion of home gardens in West Africa; encouragement of mixed vegetable and animal farming systems together with income-generating activities in some Asian countries; breeding staple crops such as sweet potatoes to raise their micronutrient content; and public-private partnerships to enrich products like yoghurt or cooking oil with nutrients.

Making food systems enhance nutrition is a complex task requiring strong political commitment and leadership at the highest levels, broad-based partnerships and coordinated approaches with other important sectors such as health and education, according to SOFA.

"A great many actors and institutions must work together across sectors to more effectively reduce undernutrition, micronutrient deficiencies and overweight and obesity," the report says.

always on top of issues

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A cat contentedly sits on a post in a corn field in Namarin, Ecuador.
Photo: William L. Milligan M.D