

Our Vision

To be the centre of excellence in the Caribbean for the provision and application of research and development in agriculture and rural enhancement.

Our Mission

To contribute to the sustainable economic well being of Caribbean people by the generation and transfer of appropriate technology through research and development within the agricultural value chain.

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Maize

Tortillas on the roaster – climate change threatens one million maize and bean farmers in Central America by Neil Palmer, CIAT website, 24 October 2012 [http://www.ciatnews.cgiar.org/en/2012/10/24/tortillas-on-the-roaster-climate-change-threatens-one-million-maize-and-bean-farmers-in-central-america/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+CiatBlog_en+\(CIAT+Blog\)](http://www.ciatnews.cgiar.org/en/2012/10/24/tortillas-on-the-roaster-climate-change-threatens-one-million-maize-and-bean-farmers-in-central-america/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+CiatBlog_en+(CIAT+Blog))

Full Article

Tortillas on the roaster, a new climate change study from CIAT, CIMMYT and Catholic Relief Services, has found that climate change is likely to cause serious problems for two of Central America's most important staple food crops: maize and beans. According to the report, around one million smallholder farmers and their families could find themselves in the danger zone, as temperatures rise and rainfall patterns are disrupted.

It estimates that Nicaragua, Honduras, El Salvador and Guatemala could face combined maize and bean losses worth around US\$120 million per year – within the next couple of decades.

It's particularly troubling news because Central America already suffers from a kind of climatic bi-polar disorder, swinging between seasonal extremes of drought and intense rain.

In the dry season, the whole region sits in an intense, thrumming heat haze. Parched stalks of last season's maize still stand in the field; a carpet of fallen leaves crackles underfoot, and from time-to-time you hear the breeze-blown thwack of farmers clearing the debris from their land, in hopeful anticipation of the rains. On the dusty roads you pass men carrying shoulder-mounted stacks of firewood; a boy passes with his goats, some of them rearing up to strip what they can from thorny bushes.

It's a dust bowl, but occasionally you see a flash of green – a little oasis.

These farmers are the lucky ones: they have water. Down a steep trail off an undulating, rock-rutted road in the hills of Totogalpa, Nicaragua, one farmer in well-worn flip-flops runs umpteen times a day from his tiny bean plot, with a single plastic bucket to scoop up water from a stream, then back up the slope to fling it on his crops. With the plants still dripping, he disappears again, into the undergrowth, for another round. They're some of the healthiest-looking beans I've ever seen and he's looking in pretty good shape himself.

And that's part of the cruel irony for the majority of smallholders in Central America. In the dry season, conditions are almost perfect for a bumper food crop: there's ample sunlight, low humidity, and few pests and diseases.

But without water, nothing survives.

That means most farmers have no option but to plant during the oppressive, gloomy rainy season. There's plenty of water – often too much – but little sunlight. Crops return poor yields on large – and increasingly larger – tracts of land. There are pests and diseases taking a bite out of production too, and frequent flooding and hurricanes.

While The CIAT-CIMMYT-CRS report identifies several areas that could be forced to switch out of maize and bean production altogether due to the effects of climate change, it also makes a series of policy recommendations for buffering the impact on smallholders. Improved water management – including better use of rainwater – is high on the list.

Last year, here on the CIAT blog, *we got quite excited about rainwater harvesting pilot projects* in Central America, funded by the *Common Fund for Commodities (CFC)* and coordinated by the *Latin American Fund for*

Irrigated Rice (FLAR). By constructing simple reservoirs at the base of interlocking hillsides, farmers were able to capture excess rainwater during the rainy season, and store it for irrigation during the dry season. Those involved have been able to make that seemingly impossible switch from rainy- to dry season food production – and they're raking it in.

Other projects that might seem less ambitious are no less effective. In the Jamastran Valley, Honduras, a shimmering, parched plain and one of the "hotspots" identified in the *Tortillas on the Roaster* report, we met another farmer with his own little oasis. By pooling resources with his neighbours he was able to invest in a pump to draw groundwater, and then installed drip irrigation. His maize is tall, lush and bursting with cobs, and the huge pile of discarded pods is testament to his impressive bean harvest.

As well as improved water management, the *Tortillas on the Roaster* report also recommends improved soil management, crop diversification and the use of sustainable and so-called "climate-smart" approaches to help farmers do more than simply weather the storm.

What's really needed now is the support to implement them on a large scale – institutional, infrastructural and donor support – to help turn the curse of a bipolar climate and the looming threat of climate change into a potential boon for smallholders – and the region as a whole.

Livestock

Progress made in stopping the decline of livestock genetic diversity by FAO website, 24 October 2012

<http://www.fao.org/news/story/en/item/162972/icode/>

Full Article

Indigenous breeds critical to food security now getting government attention Indigenous cattle in Sudan.

While many countries are taking action to halt the erosion of livestock genetic resources, crucial for food and agriculture, a substantial gap remains that needs to be urgently addressed.

Reports from 80 countries on the progress made in implementing the Global Plan of Action for Animal Genetic Resources were presented today at an international conference.

The reports show that governments are beginning to put programmes into place to reverse the alarming decline in the numbers of indigenous livestock breeds.

Representatives from almost 100 countries are attending the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture (24-26 October) to review the implementation of the Global Plan of Action for Animal Genetic Resources. The Plan was adopted in 2007 with the objective of improving the management of the world's livestock biodiversity.

"The encouraging news is that on average the countries that submitted reports have begun to implement about half the actions agreed under the Global Plan of Action ranging from conservation schemes to surveys of livestock numbers, to the development of policies and legal frameworks addressing livestock biodiversity," said Irene Hoffmann, Chief of FAO's Animal Genetic Resources Branch.

But progress has been more marked in developed countries with many countries in Africa, the Near East and Latin America and the Caribbean still lagging behind.

The Near East is regarded as one of the cradles of livestock diversity. It was here that several species, including cattle, sheep, goats and dromedary camels, were first domesticated. Africa, with its diverse tropical and subtropical environments, is another important hotspot of diversity.

Indigenous breeds are important in agriculture because they are adapted to often harsh local conditions, contain unique genetic material important for breeding programmes and are often a livelihood bastion for poor households because they are easier to keep than exotic breeds. In a world threatened by climate change, breeds that are resistant to drought, extreme heat or tropical diseases are of major potential importance.

22 percent of breeds at risk of extinction

According to the latest available figures, about 22 percent of the world's livestock breeds are still classified as being at risk of extinction, although breed population figures are often unreported or out of date, making the true state of livestock diversity difficult to estimate.

Despite the generally limited amount of progress made in developing regions, the country reports indicate that some examples of more active implementation can be found in every region of the world.

Reporting countries from Asia are relatively well advanced in establishing conservation schemes for their threatened breeds. In Africa and Latin America, pockets of national success are reported in almost all the priority areas of the Global Plan of Action.

"There are about 45 countries that are preparing, or have already prepared, national strategies and action plans for their animal genetic resources, and about half of these are developing countries," said Hoffmann.

Projects to be launched

The Governments of Germany, Norway and Switzerland contributed more than \$1 million to an FAO Trust Account to support the Global Plan of Action's implementation. FAO announced the first eight projects involving 22 countries to improve the management of animal genetic resources.

Countries of former Yugoslavia will join with Albania and Bulgaria to conserve the threatened Busha breed of cattle; Ethiopia, Kenya and Uganda will collaborate in improving the management of their indigenous chicken genetic resources; Bolivia and Peru will work together to implement breeding projects for llamas; a regional project in the Southwest Pacific region will establish conservation centres for chickens and pigs in the Cook Islands, Fiji and Niue; Algeria and Morocco will collaborate in the conservation of the Béni Guil sheep breed; and a project in the Gambia, Guinea, Mali and Senegal will investigate the impact of mobile livestock production on the management of genetic diversity.

In addition, single-country projects will be implemented in Mozambique and Togo, focusing on cattle and chicken genetic resources respectively.

Livestock in the city: New study of 'farm animals' raised in African cities yields surprising results by Susan McMillan, International Livestock Research Institute, October 2012

<http://www.ilri.org/ilrinews/index.php/archives/9563>

Full Article

For the first time in history, more people are living in cities than rural areas. Many of them still keep livestock. At least 800 million people in cities in developing countries practice urban agriculture, from growing vegetables to keeping camels—often in close confinement in densely populated areas.

The benefits of urban livestock keeping are many: from improved food security, nutrition and health from livestock products, creation of jobs and protection from food price volatility. But the risks in urban livestock are also large: unsanitary conditions and weak infrastructure mean that livestock can be a source of pollution and disease.

‘Zoonoses’, diseases transmitted between animals and people, are a global health problem that particularly affects the poor in developing countries. A new study by the International Livestock Research Institute (ILRI) and partners finds that zoonoses and diseases recently emerged from animals make up 26% of the infectious disease burden in low-income countries, but just 0.7% of the infectious disease burden in high-income countries.

The study, published in the journal *Tropical Animal Health and Production*, which was led by University of Nairobi and ILRI, is part of a series of papers that examine the facts and fiction of urban livestock keeping. The researchers note the need for evidence in the planning and practice of urban food systems and the danger of relying on perceptions or models taken from different contexts.

Here are some of the results of the study.

Lots of Urban Livestock

Much more livestock is being raised in the urban areas of developing countries than most people (and policymakers) think.

The Disease Risk

Domestic as well as wild animals can spread many, and some very serious, diseases to people and it is a reasonable assumption that as the population of urban areas of these and other developing countries continues to increase, the risk of zoonoses also increases.

The Good News

This recent in-depth study of urban zoonoses in urban environments in Nigeria and Kenya suggests that the human disease risk posed by raising, processing, marketing and/or consuming livestock in cities, city suburbs and big towns in developing countries is less than we might think.

Support Informal Markets

Rather than bar poor people from livestock enterprises in urban areas in an attempt to protect public health, which could do the poor more harm than good, this study suggests that a more practical and equitable course is to work to enhance practices in small-scale urban livestock raising and informal livestock marketing by encouraging poor livestock producers, processors and sellers to upgrade some of their practices.

Provide incentives for good behaviour

This study included participatory work with the local communities, and an important outcome has been the success achieved by creating incentives for the poor to improve their livestock practices rather than trying to strictly regulate these informal livestock markets, or harass the people involved, or bar them from operating altogether.

Disease risks are not what we think

Another important finding is that people are not the good judges of risks that they think they are; most people, including food safety officials, think that livestock foods, being so perishable, carry the greatest risk of disease in informal urban markets, but studies have shown that, for example, city vegetables are often a greater cause of disease concern than milk and meat.

Tracking pathogens and related ILRI research

This research project was conducted jointly with the University of Nairobi, whose Professor Erastus Kang'ethe led the data collection and participatory work within Kenya, with the support of the Kenyan government and health officials. This project also expands ILRI's long-standing research on informal dairy markets in East Africa and South Asia, led by ILRI scientist Amos Omore and others, which helped to refine dairy policies to support rather than harass sellers of 'raw' (unpasteurized) milk. And a new ILRI research project led by ILRI scientist Eric Fevre will investigate zoonoses further by tracking disease pathogens as they move among farms, processors and markets

Delia Grace, an ILRI veterinary epidemiologist and leader of a component of the CGIAR Research Program on Agriculture for Nutrition and Health, was the principal investigator in the Ibadan-Nairobi zoonoses study and editor of this special edition of *Tropical Animal Health and Production*. Grace says that regulations that work for rich countries do not always work for poor countries, and that policies should follow a risk-based approach where decision-makers' focus is not the bugs present in food but the likely effects on human health. 'The risks of food-borne diseases', she says, 'need also be weighed against the economic benefits and nutrition abundantly supplied by animal products.'

In the absence of evidence, policies are based on the prejudice that urban livestock keeping is unsafe and unmodern, and it is often banned outright. Of course it continues behind hedges and in back alleys, but the imposed illegality drives a rush to the bottom in hygienic practices and investments. When farmers are harassed by authorities and operate in a legal grey area, they have little access to the support they need and little incentive to invest in business improvements.

Thanks in part to previous research on the benefits of urban agriculture, the Government of Kenya has been proactive in posting veterinary, animal production, and crop personnel in major urban centers to lead from the front in championing the development of urban agriculture. The government has also led in the development of the urban agriculture and livestock policy. Involving these civil servants has been key in enabling our research in urban agriculture. This is a good example of government changing its policy to better meet the needs of citizens.

Rapid urbanization, and along with it the urbanization of poverty and food insecurity, raises urgent challenges for the global research and development community. Among them is the need to manage the growing risks of zoonosis associated with urban farming and to improve food safety for the one billion of the world's poor living in cities, most of whom depend on informal markets instead of more formal government-organized markets or grocery stores.

Informal, or wet markets, exist in many different forms across Africa and Asia but have common characteristics: food escapes effective health and safety regulation; many retailers do not pay tax and some are not licensed; traditional processing, products and retail practices predominate; infrastructure such as water, electricity, sanitation, and refrigeration is lacking; and little support is provided from the public or non-governmental sector. Unsurprisingly, women and the poor are involved most in informal markets.

Applying an innovative research approach known as 'ecohealth', the findings of this research contradict some basic assumptions about zoonoses and urban farming and show how livestock keepers in one of Africa's biggest

cities, Nairobi, Kenya, are transforming their livestock and public health practices to combat disease and help feed a city where 60% of the population lives in slums.

But what does it mean in practice? A special edition of 11 papers sets out how ecohealth approaches can make a difference to city health. The researchers base their findings from two case studies. One is in Dagoretti, a Nairobi district of some 240,000 residents, and analyzes the emerging zoonoses cryptosporidiosis, a diarrhoeal disease that is passed from cattle to humans.

Seed and Seed production

Amid food crisis, Caribbean Agriculture going to seed by Desmond Brown, Inter Press Service News Agency, October 2012 <http://www.ipsnews.net/2012/10/amid-food-crisis-caribbean-agriculture-going-to-seed/>

Full Article

With the average age of a farmer in the Caribbean now 62 years old, there is growing concern that commercial agriculture is on a path to extinction – a dire scenario for a region already shouldering a massive food import bill.

“Our region is faced with an aging farmer population. Analysis has shown that within the next 10-15 years, the production of food within the region will be seriously compromised if we are unable to attract young persons to the agriculture sector,” Caribbean Community (CARICOM) Secretary General Ambassador Irwin Larocque said at the 11th Caribbean Week of Agriculture (CWA), which ends Friday.

“The challenge is to make agriculture more attractive to them and convince them that such a career move is worth it. To do so, we must provide improved access to training at all educational levels from primary to tertiary.

“We have to ensure that they have the access to resources, both financial and technical including access to technology. We have to ensure also that the market opportunities are available both for primary and value-added products, and finally we absolutely must change the image of agriculture and brand it as a sector filled with opportunity,” he added.

Larocque noted that soaring food prices are a continuing reminder that the region has no choice but to pay increased attention to food and nutrition security and cost-efficient sustainable production.

“The involvement of women and young people is critical if we are to influence the taste and preference of our households to consume domestically produced, nutritionally balanced foods which would also have the added benefit of safeguarding against chronic non-communicable diseases which are prevalent in the region,” Larocque said.

Michal Hailo, director of the ACP-EU Technical Centre for Agriculture and Rural Cooperation (CTA), told IPS that there are myriad challenges, but expressed optimism that they could be overcome.

“At a time when agriculture confronts great challenges such as feeding a rapidly growing human population while facing the negative impacts of climate change and natural resource degradation, it’s important to marshal the wisdom and energies of all stakeholders to chart the way forward,” he said.

“CTA, which also operates in Africa and the Pacific, is well placed to recognise and appreciate the uniqueness of the Caribbean Week of Agriculture. Indeed, in no other ACP region does the agricultural community benefit from such a high level of engagement with policymakers at the highest levels of government. This augurs well for the future of agriculture in the Caribbean.”

Recent estimates indicate that about one billion people throughout the world are suffering from chronic hunger and malnutrition.

Prime Minister of Antigua and Barbuda Baldwin Spencer told IPS that experts have said that given the current rates of population growth, world food production needs to be increased by 70 percent by the year 2050.

“This is a staggering prediction which is exacerbated by issues such as climate change, increasing prices of food and imports, loss of biodiversity, natural disasters, dwindling resources and pressure from invasive species,” he said.

“Food security and nutrition security therefore become one of the most critical concerns for not only governments but for all of us.”

The prime minister noted that in the CARICOM region, the food supply is heavily dependent on imports, with a bill quickly approaching five billion dollars.

CWA, the main agricultural event in the Caribbean, was held under the theme ‘Celebrating Youth and Gender in Caribbean Agriculture.’ Over the course of the nine days, CWA drew policymakers and representatives of all key stakeholders in regional policies from across the Caribbean.

Dr. Raul Benitez, assistant director general of the U.N. Food and Agriculture Organisation and its representative for Latin America and the Caribbean, told delegates that one out of 10 persons in the region suffers from hunger and the number in the Caribbean is almost two out of 10.

“We must support strategies to tackle the root cause of hunger and malnutrition and ensure the exercise of the right to food,” he said.

In recent times, more Caribbean governments have been coming forward with concrete programmes aimed at increasing agricultural output.

The latest is the government of Trinidad and Tobago which announced an initiative to launch a Food Security Facility, the aim being to utilise land available in Guyana under the Jagdeo Initiative to produce a range of food crops.

“This is a prime example of what can be done to collectively use the region’s resources to engage in production integration and to increase the region’s food supply. A regional approach to agriculture production is the obvious solution to addressing our high food import bill and our food and nutrition security,” Larocque said.

“While it is not feasible to produce all our food, it is crucial that we target those categories of food imports that can profitably be produced in the region. A large segment of these imports go directly into tourism and the growing fast food sector. This is one area that we should be able to target but it requires that we arm ourselves with detailed information on the products involved, the form in which they are imported and the cost factors that have to be addressed.”

Youth and Agriculture

Kari agricultural innovations big hit with young smart business farmers. ‘Those are our people’ by Susan McMillan, International Livestock Research Institute, 30 October 2012

<http://www.ilri.org/ilrinews/index.php/archives/9648>

Full Article

The 13th Biennial Scientific Conference and Exhibition at the Kenya Agricultural Research Institute (KARI) took place last week at KARI’s headquarters in Nairobi’s leafy suburb of Loresho.

This correspondent—enamoured of the sea of white tents erected across KARI’s rolling green lawns to showcase hundreds of exhibitors of ‘Agricultural Products, Technologies & Innovations’—never actually made it to the

proceedings of the conference itself. But if the conference was anything like the exhibits, it must have been a great success.

My organization, the International Livestock Research Institute (ILRI), tried to distinguish its exhibit on livestock forage research and capacity building from the hundreds of other tents just like it with decorations of African artefacts—wooden bowls, woven baskets and traditional cloths and the like—as well as safari chairs inviting passersby to come inside for a conversation. So successful were we that many people upon entering the ILRI tent promptly asked to buy some of the display items (and were promptly disappointed when we told them they weren't for sale.) The big cattle and camel bells were also a big hit, with the visitors having to explain to ILRI staff the difference between the bell sounds appropriate for cows and those for bulls!

We were at KARI to promote opportunities for young Kenyan scientists to train at ILRI, the headquarters of which are located just a 15-minute drive from KARI. And we showcased our collaborative research with KARI scientists, including Solomon Mwendia, on disease-resistant varieties of Napier grass, aka 'elephant grass', on which so many Kenyan smallholder farmers depend for feeding their milk cows.

Visitors showed great interest in ILRI printed materials about improved forages and feeds (lab lab, oats, vetch), seed samples and Napier grass cuttings and leaves, and a research-based FEAST tool for selecting appropriate feeds for different regions.

'The demand for information was huge', says Alexandra Jorge, who heads ILRI's Forage Genebank, in Addis Ababa, Ethiopia, and came down to Nairobi to answer questions and provide expertise at KARI's week-long event. 'We had questions about the best feeds for dairy goats, how to maximize forage production for feeding dairy cows, the best methods for raising pigs, the best breeds of chickens to keep, how to transition to stall-fed ('zero grazed') dairy animals, how to start hydroponic and screen-house forage production, and what climate change is likely to change in Kenyan agriculture—and what livestock farmers can do now to cope with it.'

'I really enjoyed participating in this exhibit,' Jorge says 'having real contact with our users and clients and chatting about their challenges and projects. It made me think hard about what we researchers do and the impact and benefits we can bring to farmers. It also made me realize how little I know about the work that many colleagues are doing and that we should make this information much more available.'

'It was amazing to see the amount of interesting and innovative work KARI and many Kenyan universities are doing. Many people had stories to share, or tasty food, like the amazing sorghum sausages that taste just like meat!'

ILRI research manager Sandra Rweke was most impressed with the number of young entrepreneurs at this event looking for agricultural innovations and good ideas. 'Scores of youth finding few jobs in urban areas appear to be calling city life quits and heading to rural farming villages. The numbers of these young new farmers that I met at the KARI event are much larger than I'd expected. This young generation is clearly keen on taking agriculture and livestock farming to the next level.'

Jane Gitau, a communications officer at ILRI, agrees. 'Many of the visitors to ILRI's tent inquiring about better methods of livestock keeping appeared to be in their thirties and early forties. They wanted information to take away with them; they wanted to learn more efficient methods of farming. It was refreshing to witness this drive to make agriculture a knowledge-based business.'

'Walking from booth to booth', Gitau said, 'I was amazed to see all that KARI had to offer from its 22 centres countrywide, from Kibos to Kiboko, Muguga to Thika, each with a different mandate in agricultural research. Staff from KARI's Kiboko Research Station, located about 150 km southeast of Nairobi and the institute's drylands station, exhibited various imported and hybrid rangeland grasses they are trialing. KARI's Muguga Station was

exhibiting some of Kenya's important plant and livestock genetic resources. And an improved rice variety grown under irrigation at Kibos, in western Kenya, was on display, along with rice flour, rice cakes, rice doughnuts and rice cookies!

Finally, Gitau remarked on the close connections KARI has to its constituency. 'Those of us manning the ILRI booth often directed visitors to the many KARI booths to get their specific farming and livestock keeping questions answered. These people sought practical help and region-specific recommendations we didn't have', Gitau said. 'When I asked people if they knew where to find KARI, I several times got the reply, 'Hao ni watu wetu', colloquial Swahili for, "Those are our people".

Water

Practitioners in the agriculture sector in Barbados trained in water use efficiency by Global Water Partnership Caribbean, 23 October 2012 <http://www.gwp.org/en/GWP-Caribbean/GWP-C-IN-ACTION/News-and-Activities/Practitioners-in-the-Agriculture-Sector-in-Barbados-Trained-in-Water-Use-Efficiency/>

Full Article

Twenty (20) practitioners from the Agriculture Sector in Barbados, recently had the opportunity to be trained in the area of Water Use Efficiency (WUE) at a workshop put on by the Global Water Partnership-Caribbean (GWP-C) and its partner, the Caribbean Agricultural Research and Development Institute (CARDI).

The workshop which took place in Barbados from September 5th - 7th, 2012, was developed by GWP-C to build capacity for improved water management through the application of water use efficiency techniques in agriculture in the Caribbean.

A short opening ceremony preceded the start of the workshop which included remarks by Ms. Avril Alexander, Regional Coordinator of GWP-C and representatives from the CARDI. The feature address was given by Mr. Charleston Lucas, Chief Agricultural Officer (Acting) in the Ministry of Agriculture of Barbados. Mr. Lucas in his address, stressed that there can be no food security without land and water security. Additionally, he drew on the relationship between world hunger and the inability of persons to grow their own food. He explained that optimising water use is critical to agriculture, especially given the high price of food. He cited the great significance of irrigation particularly in the dry season to ensure production levels (supply) remain stable to keep prices down.

Mr. Lucas further highlighted that a major challenge is to minimise water use while at the same time maximising crop output. He explained to workshop participants that improving water use efficiency would allow for water conservation and lower costs; noting production costs in agriculture are high in Barbados which is resulting in low competition with other countries.

Following the opening ceremony, participants were very motivated to embark on their three-day training exercise. The workshop's format allowed for discussions among participants and facilitators of the course who were Mr. Stanley Rampair, a Senior Irrigation Consultant and Dr. Leslie Simpson, Natural Resources Management Specialist at the CARDI. Additionally, the course included various group exercises to promote interaction and critical thinking.

At the workshop, participants received comprehensive training in the areas of soil/water relationships, irrigation, and water use efficiency for the agriculture sector. Also included in the workshop were field visits to an irrigation

water collection pond from which farmers pump water; a trip to the Barbados Agricultural Development and Marketing Corporation (BADMC); and a visit to a farm where participants saw on-farm irrigation practices.

An evaluation conducted at the end of the workshop indicated that all participants felt that the training received was relevant to their work and improved their understanding of the importance of water use efficiency in the agriculture sector. Also critical to the evaluation was the feedback from the agriculture practitioners on how the training course could be enhanced. GWP-C will use the valuable feedback received from the WUE training in Barbados to continue to work to improve the training course for the region.

The WUE workshop carried out by the GWP-C and the CARDI was the first in Barbados. Previous instalments of the workshop have been held in St. Kitts and Jamaica between 2009 and 2011.

Participants that successfully completed the three-day course were awarded a certificate on the last day of the workshop.

Caribbean University lecturers gain valuable insights on IWRM by Global Water Partnership-Caribbean, 26 October 2012 <http://www.gwp.org/en/GWP-Caribbean/GWP-C-IN-ACTION/News-and-Activities/Caribbean-University-Lecturers-Gain-Valuable-Insights-on-IWRM-/>

Full Article

In August, sixteen (16) lecturers and researchers from universities across the globe gathered in Stockholm, Sweden for the first Integrated Water Resources Management (IWRM) Knowledge Centres workshop.

The workshop which was put on by the Global Water Partnership (GWP) Organisation sought to build a working relationship between GWP Partner universities and to explore how the IWRM ToolBox could be used in the academic environment of universities to support the teaching of water resources management. It was felt that the IWRM ToolBox could be better positioned in university curricula by providing hands-on training on the resource to the practitioners in the field. Impetus to develop the workshop was also sparked by an IWRM ToolBox Survey carried out by the GWP earlier in the year which illustrated that more use could be made of the valuable resource.

Amongst the 16 representatives chosen to attend the global workshop were three university lectures from the Caribbean region. They included Dr. Adrian Cashman, Lecturer at the Centre for Resource Management and Environmental Studies (CERMES) based at The University of the West Indies (UWI) Cave Hill Campus in Barbados; Dr. Riad Nurmohamed, Lecturer at the Anton De Kon University of Suriname; and Dr. Arpita Mandal, Lecturer at the Centre for Environmental Management at The UWI Mona Campus in Jamaica.

According to Dr. Cashman, the workshop took stock of how IWRM was being presented in universities and at what level (graduate or post-graduate); as well as what aspects of IWRM were or were not being addressed.

Presentations by participants giving examples of university programmes and courses in water resource management were made by participants from West Africa, South East Asia, the Caribbean, China and Europe. Dr. Adrian Cashman gave the presentation for the Caribbean region providing an overview of the water courses and programmes at The UWI Cave Hill Campus in Barbados.

Dr. Cashman stated that from the sharing of experiences and programmes in various regions it was clear that a very wide variety of approaches have been adopted across the globe. According to him, it was also evident that different aspects of IWRM were incorporated into the courses. On the other hand there were also major differences in course content amongst the regions.

Global Water Partnership-Caribbean (GWP-C) was able to get feedback on the workshop experience from Dr. Cashman and Dr. Nurmohamed both of whom are members of GWP-C. Here's some of what they shared about the IWRM ToolBox workshop:

Feedback from Dr. Adrian Cashman:

Dr. Cashman felt that the workshop provided an excellent opportunity for the participants to share their experiences in teaching water resources management and to exchange information. He explained that the workshop also contributes to the fostering of a community of knowledge and practice and the building up of personal contacts between academics.

He pointed out that GWP has the opportunity now to use the outcomes from the workshop to feed into its long-term goal of establishing IWRM Knowledge Centres in national and regional universities and to support specific disciplines. Dr. Cashman believes that The University of the West Indies (UWI), as a truly regional university is well placed to play its role in supporting such a centre for the Caribbean.

Feedback from Dr. Riad Nurmohamed:

Dr. Nurmohamed stated that the workshop provided a unique opportunity to meet specialists in the field of water but moreover GWP partner universities. He suggested that the IWRM Knowledge Centres workshop could possibly be organised once every five (5) years so that partner universities can further discuss and suggest ways to move IWRM and the ToolBox forward. He explained that it would be useful for the representatives from the universities that attended the workshop to share their material and to also play a role in building capacity for other university partners that require assistance in IWRM.

Dr. Nurmohamed stated that a network of universities that use the IWRM ToolBox in the region should become more visible. He noted that his university (The Anton de Kom University of Suriname) is making gradual steps in bringing IWRM to the fore at the university and Suriname on a whole. Currently at the Anton de Kom University, the ToolBox is referenced as an information resource.

GWP-C by working through its partners which include tertiary level institutions plans to support knowledge sharing with such institutions in learning more about the IWRM ToolBox and exploring the possibilities to include the ToolBox as a source of knowledge in its programmes.

Food Security

The Caribbean has potential to produce most of the food it requires by Caycompass.com, 24 October 2012

<http://www.compasscayman.com/caycompass/2012/10/24/Caribbean-has-potential-to-produce-most-of-the-food-it-requires/>

Full Article

Although the Cayman Islands cannot hope to become “food independent”, the Caribbean region as a whole could potentially produce most of the food it needs, said Brian Crichlow, assistant director of the Cayman Islands Department of Agriculture, during a talk on food security at the STEM conference last week.

Producing enough food to feed the world's population will become increasingly problematic in the future, he said during a seminar session at the University College of the Cayman Islands. The world's population keeps growing,

meaning an ever-increasing number of bellies to fill, but with some 70 per cent of the world's population living in cities, there are fewer people to work the land and produce food for a growing population.

By 2050, food production would need to increase by 40 per cent in order to keep pace with population growth, Mr. Crichlow said. As more land is given over to cultivating crops for biofuel there is also less land available for food crops. And as certain populations become wealthier, their citizens demand more meat, which is land-intensive to produce, in their diets.

For the past century, food prices have consistently dropped, Mr. Crichlow said. But since 2000 there has been a steady increase in food prices. This is indicative of the decreasing availability of these foods, he added.

As food availability decreases, countries will restrict their exports, to ensure they can feed their own populations.

As a result, wealthier countries are looking beyond their own borders to secure access to food in the future: some governments are taking out long-term leases on land in sub-Saharan Africa, Mr. Crichlow said, which they cultivate to produce food for their own countries.

In the Caribbean region, and the CARICOM states more specifically, most nations import significantly more food than is produced domestically. However, given the varied geography, topography and climates of the region, there is the potential for the region to cultivate a wide variety of crops.

It would require certain paradigm shifts for this to happen, however. Local populations would need to be encouraged to engage in agriculture, an occupation many have resisted due to the historical associations with slavery.

It would also require an attitude shift away from consuming processed, imported foods, and a commitment to "eat what you grow, and grow what you eat".

In order for the region to be more self-sufficient in terms of food production, transport links within the region would also need to be greatly improved to facilitate trade between Caribbean nations.

Complete food independence for the region is not realistic, Mr. Crichlow said. The Caribbean has always had to import protein sources in the form of meat products, as well as grains and cereals which cannot be cultivated in this climate. This will continue to be the case.

If each nation in the Caribbean, however, were to increase agriculture of the crops that do well in their particular lands, the region could become at least less dependent on food imports from the United States, and possibly even produce a significant amount of its food regionally.

Agricultural Research

Research funding needed to feed world by Kate Dowler, Weekly Times Now, 18 October 2012

http://www.weeklytimesnow.com.au/article/2012/10/18/545845_national-news.html

Full Article

AUSTRALIA'S experiences growing food in tough environments put us in a strong position to lead others on food security.

This was according to Foreign Minister Bob Carr, speaking at the Crawford Fund annual development conference in Canberra last week.

But his comments have come as agricultural leaders and academics call for Australia to also lift its domestic research spend.

A recent OECD study showed that Australia invests the least of any developed nation on agricultural assistance and subsidies.

And CSIRO studies have shown that as a proportion of all research, agricultural science is in serious decline in Australia.

But Minister Carr told the gathering last week that while a billion people faced serious food shortages Australia had its "own history of environmental challenges, insights into irrigation, into how to get the best out of our landscapes, sometimes learned - on this challenging continent - the hard way".

"So we're in a strong position to lead on this . . . (and) ultimately make sure everyone on this planet has enough to eat," he said.

While welcoming any aid assistance Australia can give, farm leaders and academics stress Australia must not let its research capabilities slide.

They have pointed out progressive cuts to R&D threaten our future capacity for research.

Victorian Farmers Federation vice president David Jochinke said Australia's efficient agricultural was a result of the research investments of past decades.

He said Minister Carr's comments were reflective of an attitude that Australia could continue to coast on the success of the past.

"If the State Government wants to double food production and the Commonwealth wants us to help the world feed itself then they need to put their money where their mouth is and support R&D investments at current levels (or lift them)," Mr Jochinke said.

"Australian agriculture is still riding off the great research success stories of decades ago, if it wasn't for that funding we wouldn't have anywhere near the success we have today, so we need to reinvest in more R&D."

The National Farmers Federation has also called for more R&D investment.

NFF policy general manger Tony Mahar said "Australian agriculture certainly has capacity to contribute to the forecasted global demand for food".

"To ensure we can take advantage of any opportunities we need a reinvestment in R&D but also extension and application of that R&D," he said.

"It's a very competitive global market and standing still won't cut it - we need to continue to seek efficiencies in production to build and expand our export markets."

Melbourne School of Land and Environment Associate Professor Rebecca Ford said last week "one of the major threats to food security was the continued reduction of investment in research and development, particularly research to improve sustainable production systems".

A recent report by Australia's Chief Scientist, Professor Ian Chubb, warns that agricultural science is in decline, threatening Australia's ability to help feed an increasingly hungry world.

Prof Chubb's study showed expenditure on agricultural science - as a proportion of all Australian research - had fallen to 6.8 per cent in 2000-09 - down from 10.7 per cent in 1990-99.

A spokeswoman for Minister Carr said the Government was investing \$464 million over four years, from 2009, in a global food security initiative and that "agricultural research had been shown to be one of the most effective investments in improving food security and addressing poverty".

International research saved millions of lives thanks to new high yielding crop varieties which had also benefited local farmers - 98 per cent of the area sown to wheat in Australia uses varieties developed by international centres like CIMMYT, estimated to have increased the value of outputs from the local industry by at least \$750 million, she said.

Mr Jochinke said while research achievements for international work were useful, Australia still needed robust breeding programs to convert that kind of work into wheat varieties, for example, that could be adapted here.

Despite Prof Chubb's work showing that as a proportion of all research, agricultural science was in decline, a spokeswoman for Agriculture Minister Joe Ludwig claimed the "Government continued to increase R&D expenditure across the board".

"Since 2007, the Government has increased science, research and innovation funding by more than 35 per cent," she said.

"This financial year alone we will invest \$8.9 billion. The Australian Government has not slashed rural R&D expenditure.

"The original Australian Bureau of Statistics figures quoted by Professor Chubb in the Health of Australian Science report show that national spending (by Commonwealth, state and territory governments, business and the higher education sector) on research and experimental development in the agricultural, veterinary and environmental sciences increased by more than 50 per cent from 1998-99 to 2008-09.

"Far from slashing funding, Australian Government spending on rural Research and Development Corporations has increased from \$175.7 million to \$247.2 million over the five years 2008-09 to 2012-13.

"The Productivity Commission estimated that the government provides more than \$700 million a year for rural research and development activities in the wider system, including funding for the RDCs, Cooperative Research Centres, universities, CSIRO and other programs.

"Spending on other fields of research and development increased at a faster rate, leading to the reported decline in agricultural, veterinary and environmental sciences as a proportion of the national research and development total".

Upcoming Events

Title: Making the Connection: value chains for transforming smallholder agriculture

Date: 6-9 November 2012

Venue: Addis Ababa, Ethiopia

Website: <http://makingtheconnection.cta.int/>

Title: 6th World Aqua Congress 2012

Date: 28 – 30 November

Venue: New Delhi India

Description: Recognizing the need for long term planning for Water, VIth World Aqua Congress 2012, with theme of Water: Vision 2050, will discuss present issues, current status of planning, directions and roadmap for future. This will enable policy makers, planners, researchers and industry to share a common vision, resulting in effective action for this vital resource

Website: [EVENT: 6th World Aqua Congress 2012](#)