

February 2009

This email newsletter highlights the latest additions to the site Knowledge for Development.

Developments**Release agropedia agriculture knowledge repository**

<http://knowledge.cta.int/en/content/view/full/8599>

Agropedia is an agriculture knowledge repository of universal meta models and localized content for a variety of users with appropriate interfaces built in collaborative mode in multiple languages. Agropedia aims to develop a comprehensive digital content framework, platform, and tools in support of agricultural extension and outreach. Using state of the art practices and techniques of the semantic web, agropedia is a platform where both specialists in the agriculture research and education domain and students and others interested in agriculture can make lasting contributions to the vast knowledge base. (Source: Agropedia, January 2009)

Digital map of African soils planned

<http://knowledge.cta.int/en/content/view/full/8632>

Responding to sub-Saharan Africa's soil health crisis, the International Center for Tropical Agriculture (CIAT) announced on the 27th of January an ambitious new effort to produce the first-ever, detailed digital soil map for all 42 countries of the region. (Source: African Agriculture, 27 January 2009)

Rice 'Atlas' could help feed world

<http://knowledge.cta.int/en/content/view/full/8642>

Yale researchers have compiled the first comprehensive genetic map of the rice plant, which eventually may multiply the harvest of the world's staple grain. The rice atlas should also make the study of wheat, sorghum, maize and other grains easier, said Timothy Nelson, professor of molecular, cellular and developmental biology at Yale and lead researcher. Already Nelson and colleagues have found that rice is equipped with the right combination of cells to perform the most efficient form of photosynthesis — a finding no one expected. (Source: New Haven Independent, 28 January 2009)

Biofuels bottom of the heap in impact study

<http://knowledge.cta.int/en/content/view/full/8605>

An ambitious attempt to rank future energy sources according to myriad repercussions of their use has found biofuels to be the most undesirable option. Use of ethanol caused the most climate damage, air pollution, damage to land and wildlife, and chemical waste, according to the analysis. (Source: Wagdy Sawahel, SciDev.net, 7 January 2009)

Medicinal plants on verge of extinction

<http://knowledge.cta.int/en/content/view/full/8607>

The health of millions could be at risk because medicinal plants used to make traditional remedies, including drugs to combat cancer and malaria, are being overexploited. "The loss of medicinal plant diversity is a quiet disaster," says Sara Oldfield, secretary general of the NGO Botanic Gardens Conservation International. Most people worldwide, including 80 per cent of all Africans, rely on herbal medicines obtained mostly from wild plants. But some 15,000 of 50,000 medicinal species are under threat of extinction. (Source: Rob Edwards, New Scientist, 10 January 2009)

Biotechnology network set to support Ethiopia

<http://knowledge.cta.int/en/content/view/full/8609>

An East African regional network for the development of Biotechnology has announced plans aimed at promoting the application of biotechnology in agriculture, industry, and environmental management in Ethiopia. Shumu Teferra, BIO-EARN project and research coordinator says the project is working to develop a network of excellence that will significantly contribute to improve food security, sustainable environment management, industrial production and enhanced livelihood in Ethiopia. (Source: ASNS

in Ethiopia, 10 January 2009)

AGRA, Earth institute seek to improve farming in Africa

<http://knowledge.cta.int/en/content/view/full/8613>

The Alliance for a Green Revolution in Africa (AGRA) and the Earth Institute at Columbia University in New York signed a five-year collaborative agreement on the 16th of January, aimed at delivering the best science, technologies and policies to sustainably improve agriculture for Africa's small-scale farmers, most of whom are women. The two organizations will work together in four countries, with a possible initial focus on Tanzania and Rwanda in East Africa, and Mali and Burkina Faso in West Africa in a collaboration that would provide scientific, technical and policy support to these governments in the design, planning and implementation of effective national programmes to improve agricultural productivity. (Source: Henry Neondo, ASNS News, 16 January 2009)

Rwanda: banana fibre for fabrics - a refreshing innovation

<http://knowledge.cta.int/en/content/view/full/8615>

Rwanda has decided to venture into the creative world of fabrics, this time on a discovery mission of how to manufacture fabrics from banana fibre. Bananas are a staple food here in Rwanda being consumed by the greater part of the population. While we consume the fruit, cloth will be woven from tree fibres. Now imagine how the local textile industry is set for a major boom, after the announcement on the 16th of January of the seven-member technical team that is set for Japan, to start the process of transferring banana textile technology to Rwanda. This team is going to study this ancient tradition of transforming banana fibre into textiles which dates back to the 13th century, in Japan. (Source: New Vision, 16 January 2009)

Jamaica serious about addressing climate change

<http://knowledge.cta.int/en/content/view/full/8617>

Jamaica's Minister of Water and Housing, Horace Chang, has said that the government is serious about implementing measures to address climate change and to stave off the potentially harmful environmental, social, and economic effects. 'If we don't have some mitigating steps taken very early, we can lose large blocks in the coastal region, and even if we don't lose landmass, things like our underground aquifers can be significantly affected', the Minister stated. (Source: Caribbean Net News, 17 January 2009)

'Comeback' forests rich in biodiversity, say scientists

<http://knowledge.cta.int/en/content/view/full/8621>

Tropical forests that have regrown after deforestation are proving more significant havens of biodiversity than previously thought, scientists said in the week of 12 January. A meeting convened to highlight the controversy about tropical rainforest "comeback" heard that secondary regrowth of forests is widespread and is leading to areas rich in plant and animal life that can play an important role in conservation efforts in the tropics. (Source: Eva Aguilar, SciDev.net, 19 January 2009)

Science must move from ivory tower to spur progress

<http://knowledge.cta.int/en/content/view/full/8628>

African Scientists have promised a paradigm shift, which calls for drastic move from overemphasis on policy research to advocacy and implementation. The move will bolster efforts to place scientific discourse at the centre stage of policy formulation and implementation within government ranks. By so doing, African governments will acquire capacity needed to absorb scientific findings and implement them so as to attain industrial progress. (Source: Naftali Mwaura, ASNS News, 23 January 2009)

Food summit - Concern yes, concrete steps no

<http://knowledge.cta.int/en/content/view/full/8634>

A "High Level Meeting on Food Security for All" convened by the United Nations and the Spanish government ended on the 27th of January without approving concrete measures but with a commitment to redoubling efforts to bolster official development aid (ODA). Representatives of national governments, civil society, trade unions, the private sector, academia, multilateral organisations and donor agencies from around 100 countries took part in the two-day meeting. The problem of hunger suffered by one billion people around the world (nearly all of them in the developing South) was discussed in-depth throughout the meeting, and the progress achieved since the June 2008 high level conference in Rome was reviewed, in order to establish mechanisms for better coordination. (Source: Tito Drago, IPS, 27 January 2009)

Uganda: how to go into fish farming

<http://knowledge.cta.int/en/content/view/full/8636>

The market for fish is widespread and readily available due to the falling catches in water bodies countrywide. As a result, the cost of fish has tripled in five years. A kilogramme of tilapia costs shs 5,000 whereas that of Nile perch costs sh7,500. Due to the overwhelming scarcity, many Ugandans depend on fish bones from processing factories. (Source: The New Vision, Kikonyogo Ngatya, 28 January 2009)

Scientists crack sorghum's genetic code

<http://knowledge.cta.int/en/content/view/full/8640>

The genome of sorghum (*Sorghum bicolor*), a cereal grown widely for food, animal feed, fibre and fuel, has been sequenced. Scientists say it is another milestone for plant biology. Sorghum, a staple for large populations in the West African Sahel region, is tolerant to dry, hot conditions. Scientists hope they may now be able to discover the genetic secrets behind this characteristic. (Source: SciDev.net/ Nature, 28 January 2009)

Project set up to provide drought-tolerant maize varieties to African farmers

<http://knowledge.cta.int/en/content/view/full/8650>

A project that targets to give African farmers drought tolerant maize variety has been mooted. Maize is the most widely grown staple crop in Africa – more than 300 million Africans depend on it as their main food source – and it is severely affected by frequent drought. Drought leads to crop failure, hunger, and poverty in a continent that is drought-prone, making farming risky for millions of small-scale farmers who rely on rainfall to water their crops. (Source: Venter Mwongera, ASNS News, 29 January 2009)

Eight million dollar project for Dominica's indigenous people

<http://knowledge.cta.int/en/content/view/full/8652>

An \$8.7 million capacity building project, launched in the Carib Territory of Dominica on January 27, is expected to provide several benefits for the Kalinago people. The project was first submitted to the Caribbean Development Bank in 2005; however, due to the country's fiscal conditions at the time, the proposal was deferred to mid-2007. The project has been designed with a high level of flexibility in order to respond effectively to the needs of the Kalinago people. The primary objective of the project is to enhance the capability of residents and institutions in the Carib Territory. (Source: Caribbean Net News, 29 January 2009)

Ghana gets a science minister after three years

<http://knowledge.cta.int/en/content/view/full/8658>

Ghana has appointed its first science minister in nearly three years, pending parliamentary approval, as part of the new government's promise to restore the status of science and technology (S&T) in the country. An overhaul of science was among the campaign promises of Ghana's new president, John Evans Atta-Mills, whose party took power on 7 January after winning the December elections. He declared this month (January 22) that he would bring back the science ministry scrapped in 2006 by John Kufuor, leader of the previous government, the New Patriotic Party. (Source: Frederick Baffour Opoku and Christina Scott, SciDev.net, 30 January 2009)

Burkina Faso: Progress on MDG education goal creates new problems

<http://knowledge.cta.int/en/content/view/full/8662>

Years of boosting primary school enrolment in Burkina Faso to meet the Millennium Development Goals (MDGs) has increased pressure on the country's universities. Education officials must now manage the "explosive growth" at higher levels created as more students enrol and stay in school longer, according to the Ministry of Education. Joseph Pare, Minister of Higher Education, told IRIN that university enrolment in Burkina Faso has increased by 25 percent in 2007, in part because of more high school graduates. "There is now a strong trend of students making it through the secondary level, which creates infrastructural and human resource problems. (Source: IRIN 30 January 2009)

Improving Institutional Learning and Change (ILAC)

<http://knowledge.cta.int/en/content/view/full/8664>

The Institutional Learning and Change (ILAC) Initiative has just launched a new interactive website. This new CGIAR-backed resource contains important information about how researchers can monitor and evaluate projects and assess research impacts. ILAC hopes the site will help them strengthen the capacity of collaborative research especially in agriculture, to help develop innovative research that involves poor people and helps research to become more effectively managed. (Source: CIMRC, 30 January 2009)

Cuban biotechnology working on new projects to fight diseases

<http://knowledge.cta.int/en/content/view/full/8666>

The Havana-based Genetic Engineering and Biotechnology Center (CIGB) is currently working on 20 new projects that include the development of 40 products to treat several diseases. Some of the diseases to be targeted by the new projects include cardiovascular conditions, cancer, HIV/AIDS, Hepatitis B and C, said the director of Biomedical Research at the CIGB, doctor Gerardo Guillen. (Soucrec: Caribbean Net News, 2 February 2009)

Informal science activities 'enhance knowledge'

<http://knowledge.cta.int/en/content/view/full/8668>

Hopes that museums, hobbies, events and other informal settings are a good way of boosting scientific understanding are not just wishful thinking. Researchers say they have now demonstrated that such approaches play a crucial role in science learning and can sustain long-term interest in the subject. (Source: Naomi Antony, SciDev.net, 02 February 2009)

Selected publications

Global carbon markets - Are there opportunities for Sub-Saharan Africa?

<http://knowledge.cta.int/en/content/view/full/8672>

By Elizabeth Bryan, Wisdom Akpalu, Mahmud Yesuf, and Claudia Ringler, December 2008. Global climate change poses great risks to poor people whose livelihoods depend directly on the use of natural resources. Mitigation of the adverse effects of climate change is a high priority on the international agenda. Carbon trading, under the Kyoto Protocol as well as outside the protocol, is growing rapidly from a small base and is expected to increase dramatically under present trends. However, developing countries, in particular Sub-Saharan Africa, remain marginalized in global carbon markets, with Africa's market share constituting less than 1 percent (excluding South Africa and North African countries). The potential for mitigation through agriculture in the African region is estimated at 17 percent of the global total, and the economic potential (i.e. considering carbon prices) is estimated at 10 percent of the total global mitigation potential.

Climate variability and maize yield in South Africa - Results from GME and MELE methods

<http://knowledge.cta.int/en/content/view/full/8678>

By Wisdom Akpalu, Rashid M. Hassan, and Claudia Ringler, December 2008. This paper investigates the impact of climate variability on maize yield in the Limpopo Basin of South Africa using the Generalized Maximum Entropy (GME) estimator and Maximum Entropy Leuven Estimator (MELE). Precipitation and temperature were used as proxies for climate variability, which were combined with traditional inputs variables (i.e., labor, fertilizer, seed, and irrigation). We found that the MELE fits the data better than the GME. In addition, increased precipitation, increased temperature, and irrigation have a positive impact on yield. Furthermore, results of the MELE show that the impact of precipitation on maize yield is stronger than that of temperature, meaning that the impact of climate variability on maize yield could be negative if the change increases temperature but reduces precipitation at the same rate and simultaneously. Moreover, the impact of irrigation on yield is positive but with a lower elasticity coefficient than that of precipitation, which supposes that irrigation may only partially mitigate the impact of reduced precipitation on yield.

Events

Science forum 2009

<http://knowledge.cta.int/en/content/view/full/8692>

Dates: 16-17 June 2009

Location: Wageningen, The Netherlands

Organised by the Science Council of the Consultative Group on International Agricultural Research (CGIAR), in partnership with the Alliance of the CGIAR Centres and the Global Forum on Agricultural Research (GFAR), and hosted by the Wageningen University and Research Centre, the Forum will focus on innovative science and the arrangements that can help to mobilize it more effectively to address poverty alleviation and sustainable natural resource management. One of the six planned workshop themes is "Beyond the yield curve: exerting the power of genetics, genomics and synthetic biology".

Climate change and you: putting a face on global warming

<http://knowledge.cta.int/en/content/view/full/8698>

Dates: 17-30 April 2009

Location: Online conference

An international group of academics and activists, scientists and social justice

advocates, government and community leaders, professionals and concerned citizens, assembled on the EcoRes Forum virtual platform in April 2007 to discuss the ethical, political, and socio-cultural aspects of climate change and to forge a common vision and action plan.

Jobs for ACP scientists

Gender and agriculture specialist

<http://knowledge.cta.int/en/content/view/full/8704>

The International Center for Research on Women (ICRW) is an organization comprised of international development professionals – researchers, advocates and program managers committed to the creation and sharing of the needed tools, approaches and techniques that will serve as catalysts for change for women worldwide. As a result of rapid growth, ICRW currently seeks a Senior Gender and Agricultural (“G&A”) Specialist. The Senior Gender and Agriculture Specialist will undertake policy relevant research and program work related to gender and agriculture. Deadline: 31 March 2009.

Watershed management specialist

<http://knowledge.cta.int/en/content/view/full/8706>

ICIMOD promotes mountain agenda and serves as a regional learning centre for applied research and regional cooperation. ICIMOD has developed its Medium Term Action Plan, MTAP (2008-2012) in conjunction with a new five-year strategic framework organised around three programmes – Integrated Water and Hazard Management (IWHM), Environmental Change and Ecosystem Services (ECES), and Sustainable Livelihoods and Poverty Reduction (SLPR) – supported by a strong knowledge management division and specialists in gender, equity, governance, and economics, working together on programmes designed to help people adapt to climate change and improve their livelihood while protecting the environment. Location: Kathmandu, Nepal, closing Date: 31 March 2009.

Fellowships and Grants

ICGEB funding

<http://knowledge.cta.int/en/content/view/full/8714>

Funding opportunities are made available through the Collaborative Research Programme (CRP) - ICGEB Research Grants, which is a unique source of funding aimed at financing those projects addressing original scientific questions that show a potential contribution of particular relevance for the applicant's country. Support is available for research projects in many fields of basic science, human healthcare, industrial and agricultural biotechnology, and environmental bioremediation. A call for applications is launched yearly. Endorsed applications must arrive at ICGEB Trieste on or before 30 April 2009.

Postgraduate training fellowships

<http://knowledge.cta.int/en/content/view/full/8716>

Postgraduate training fellowships for Women Scientists from Sub-Saharan Africa and Least Developed Countries (LDC) at Centres of Excellence in the South. Deadline for applications: 31 May of each year. The Fellowship is offered to women scientists to pursue postgraduate research in the following fields of basic sciences: biology, chemistry, mathematics and physics.

The International Foundation for Science (IFS)

<http://knowledge.cta.int/en/content/view/full/8722>

IFS calls for research grant applications from developing countries. The International Foundation for Science (IFS) provides support to young scientists of merit in developing countries by awarding research grants and providing grantees with additional services such as travel grants and purchasing assistance. The IFS supports research related to the renewable utilisation of biological resources in areas such as crop and animal production, forestry, food science, natural products, and fisheries, as well as research on the sustainable utilisation and conservation of natural ecosystems, including themes such as water and biodiversity. Proposals for projects may address biological, chemical, or physical processes as well as social and economic relationships important in the conservation, production, and renewable utilisation of the biological resource base. Research grants are awarded up to a maximum value of USD 12,000 for a period of one to three years.

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