

November 2010 newsletter

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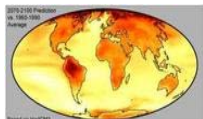
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Featured dossier

Climate change research and the future agricultural policy agenda

Dr Jan Verhagen, Plant Research International, Wageningen University & Research Centre, The Netherlands



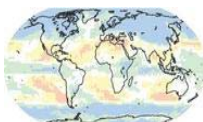
The required increase in agricultural production, in response to increasing populations and ever-changing diets, is predominantly to be achieved in non-industrialised countries with currently relatively low agricultural production levels. It will most likely be achieved by the intensification of agricultural production systems, which will in turn lead to a higher consumption of fossil fuels, partly related to increased mechanisation and increased use of inorganic fertiliser (Smil, 1997; FAO, 2000; Pingali, 2006).

Storage, transport and processing of agricultural products also require energy and any increased use of fossil fuel will exacerbate climate change. Defining a low-emission pathway is a key challenge that has so far been neglected. Innovations, technology and knowledge exchange on managing emissions in the agricultural sector, on farms and in value chains have not received the attention needed for the sustainable development of agriculture (Oenema et al., 2001).

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Rethinking agriculture to anticipate the local impacts of climate change

Thierry Giordano (Cirad, Development Bank of South Africa (DBSA)), Saphira Patel (DBSA), Olivier Hamel (Cirad, in charge of Cirad's Climate Change workgroup), Frederic Bourq (Cirad)



An effective response to the challenges posed by climate change requires an evaluation of current and anticipated impacts. It is possible to simulate broad continental, regional and national impacts with different levels of probability. Several simulation models exist; however, the estimation of local impacts is much more problematic. At

the global level, two different tools can be combined to evaluate climate change impacts on agriculture.

A first step is to determine what the characteristics of regional climate patterns might be in the future, using the following three main parameters: changes in temperature; changes in precipitation patterns; and frequency and intensity of extreme events. A second step is to use these results and apply them to an agricultural production model, using the mechanisms through which climate shapes agricultural production patterns. For instance, water stress (drought or water excess) and thermal stress (heat or cold) might have large impacts on plant production by disrupting the phenology (foliation, flowering, life cycle, etc.), growth and yield (size, number and quality of fruits/grains) of plants and their spatial distribution. Animal production would also be disrupted through the disruption to feedstock production; the distribution and spread/propagation of emerging diseases could also impact both plant and animal production (Arzt et al., 2010).

Recently, by coupling these two approaches, the International Food Policy Research Institute estimated the impact of climate change on sub-Saharan African agriculture and stated the following: "Crop yields will decline, production will be affected, crop and meat prices will increase, and consumption of cereals will fall, leading to reduced calorie intake and increased child malnutrition." (Nelson et al., 2009). This dismal future calls for immediate and co-ordinated actions that combine mitigation and adaptation.

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9th Meeting of the Advisory Committee on Science and Technology for ACP Agricultural & Rural Development

<http://knowledge.cta.int/en/content/view/full/12460>



The 9th AC meeting in South Africa took place on 22-26 November 2010. This was held in collaboration with the NEPAD Planning and Coordinating Agency. The theme for the meeting was 'Science, Indigenous Knowledge and Innovation: Implications for ACP Agriculture' and it was preceded by the annual e-consultation. This focus is appropriate as AC members continue their efforts to advocate for policy and institutional change and adequate financial resources, for undertaking innovative research and teaching and adapting existing knowledge in support of socio-economic development.

Related documents:

- 9th AC Meeting, "Key messages", by Judith Ann Francis

- 9th AC Meeting, "Promoting Indigenous Knowledge in the Biosciences for the Development of the Bio-economy", by Dr. Yonah Seleti

CHEA Communiqué - Ministerial Conference on Higher Education in Agriculture in Africa, Kampala, November 2010

<http://knowledge.cta.int/en/content/view/full/12644>

Communiqué issued by the Ministers Meeting in Kampala, Uganda on Thursday 18th November 2010.

The Government of Uganda and the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), with support of national, regional and international partners (including CTA) hosted a regional meeting of African Ministers, Members of Parliament, senior officials responsible for education, agriculture, science and technology, finance and planning, private sector, civil society, and farmer representatives, to discuss strengthening higher education in agriculture, so that African universities and other education institutions can contribute more effectively to the African Union's Comprehensive Africa Agricultural Development Programme (CAADP) processes. Ministers committed to a renewed and vigorous emphasis by African governments to restoring the quality of higher education in agriculture and to increased investments which should be guided by structured foresighting.

[Download the communiqué \(PDF\)](#)

2nd ACP Forum on Research for Sustainable Development in ACP States - 'Brussels conclusions & recommendations'

<http://knowledge.cta.int/en/content/view/full/12396>

The delegates at the 2nd ACP Forum for Research for Sustainable Development in ACP States, held from 12 to 13 October 2010 at ACP house in Brussels, Belgium made a series of recommendations. These included that ACP states should consider significantly increasing their current funding levels towards research technology development and innovation (RTDI) to at least 1% of national GDP and that specific actions be taken within the context of RTDI policy frameworks to harness the expertise and skills of ACP scientists and other stakeholders in the wider Diaspora to contribute to development and implementation of the stated policies.

[Download the recommendations \(PDF\)](#)

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Developments | Follow the latest RSS feeds for this section

Chocolate farmers could benefit from newly sequenced cacao genome

<http://knowledge.cta.int/en/content/view/full/12272>



KA2-101, a specially bred cacao cultivar developed by the Cacao and Coconut Research Institute in Papua New Guinea is one of the parent breeds used to map the cacao genome. On 15 September 2010, a first draft of the cacao genome was completed by a consortium of academic, governmental, and industry scientists. Indiana University Bloomington scientists performed much of the sequencing work, which is described and detailed on the official website of the Cacao Genome Database project. (Source: Physorg, 15 September 2010).

New coffee variety offers bright future to Kenya growers

<http://knowledge.cta.int/en/content/view/full/12281>



Production of Kenya's smallholder Arabica coffee is set to receive a boost with the launch of a new coffee variety that is resistant to the coffee berry disease (CBD) and coffee rust. Known as 'Batian', the new variety has been developed by the Coffee Research Foundation (CRF) and is reported to reduce production costs by 30 per cent. The new variety yields up to five tonnes per hectare by the fourth year, when production is at its peak. (Source: New Agriculturist, September 2010).

New wheat variety to deal with wheat-killer diseases

<http://knowledge.cta.int/en/content/view/full/12288>



Solomon Gelalcha, Director of Kulumsa Agricultural Research Center (KARC, Kulumsa, Ethiopia) one of the organizations under the Ethiopian Institute of Agricultural Research said two new wheat varieties were developed by researchers at Kulumsa through a new approach called 'Durable Rust Resistance in Wheat' (DRRW). These new varieties are resistant to multiple current and possible future wheat killer pathogens of yellow stem and leave wheat rusts. The DRRW approach focuses on giving the new wheat varieties durability against any wheat disease. The previous model gave varieties 'vertical resistance' to a single disease, and is easily defeated by new diseases or when the disease they are resistant to evolves. Kulumsa is attempting to release the new varieties of wheat before having them officially approved. (Source: IPS, 17 September 2010).

Open access boosts citations, study confirms

<http://knowledge.cta.int/en/content/view/full/12307>



The power of open access (OA) publishing to enhance the impact of research is highlighted by a new study carried out by scientists in Canada and the UK and published in the journal PLoS ONE. The researchers hope their findings will encourage more universities, research institutions and research funders to adopt OA self-archiving mandates, in which all research published under their auspices is made freely available to other researchers. Articles that are made freely available in OA repositories tend to be cited more often than similar articles that can only be viewed by paying subscribers. The reasons for this have been the subject of much debate. The European Commission is also running an OA pilot project, under which projects funded under 7 areas of the Seventh Framework Programme (FP7) must be deposited in an online depository and made OA 6 or 12 months after publication. The pilot is set to run until the end of FP7 and if successful, it could serve as a model for future framework programmes. (Source: Cordis, 19 October 2010).

CARICOM Education Ministers meet for COHSOD 20

<http://knowledge.cta.int/en/content/view/full/12309>



The 20th Meeting of the CARICOM Council for Human and Social Development (COHSOD), that took place 18-20 October 2010, in Georgetown, Guyana, saw Education ministers meet to discuss Regional Accreditation for Education and Training, Regional Standards for Teacher Education, Technical and Vocational Education and Training (TVET) and Secondary Education Reform and the Caribbean Examination Council (CXC). The Vice Chancellor of the University of the West Indies, Prof. Nigel Harris, presented the paper titled 'Towards a Regional Education System', and examined issues related to the development of a Regional Tertiary Education System but also made specific proposals for the establishment of a Tertiary Education Council. The discussion addressed issues in research and development and innovation and focused on the systemic and structural requirements necessary for developing countries such as those in the Caribbean Community to benefit from investments in science and technology. The Panel explored the place of Technical and Vocational Education and Training at the tertiary level. (Source : CARICOM Secretariat, 13 October 2010).

Project to learn about local food plants here (Solomon Islands)

<http://knowledge.cta.int/en/content/view/full/12316>



Learn-Grow (LG) Solomon Islands project will be jointly carried out by the Rotary club of Devonport North, Australia, the Rotary club of Honiara and Food Plants International. The project was launched by permanent secretary of the Ministry of Agriculture and Livestock Edward Kingmele in Honiara. The objective of the project is to increase understanding and value of local food plants in enhanced nutrition and food security. Chairman of LG committee Buz Green said the principle aim is to increase knowledge and understanding of the food plants occurring in the Solomon

Islands whether they are native plants or introduced. The LG project is based on a life time of work by a Tasmanian Agriculturist Reg French who has collated a database of edible plants for all countries of the world. By far the project, with the assistance of the two Rotary clubs, has helped to create publications on the local food plants. The publications include the reference book titled 'Food Plants of Solomon Islands'. He appealed to Solomon Islanders to come up with local pijin names for food plants, advocate for local food plants, and provide as many photos of food plants for the project. (Source: Solomon Star, 18 August 2010).

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Local feed helps broiler farmers in rural Papua New Guinea

<http://knowledge.cta.int/en/content/view/full/12333>



The PNG National Agricultural Research Institute (NARI) has developed a new feeding technology for broiler chicken using locally available feed resources, known as the NARI Broiler Concentrate. This technology is currently going through on-farm trials with many already proving successful in terms of increased profitability from reduced input costs.

Comparative broiler production from a recent trial at the Komperi Valley near Kainantu, Eastern Highlands Province, was one of the testimonies of the use of this technology. To combat high feed prices faced by broiler farmers, NARI has taken an approach in using a concentrate diet with local energy sources such as sweet potato and cassava as feed or rations for finishing off broiler chickens to reduce input costs. These NARI concentrates come in two forms; the high energy concentrate which is used with boiled mash cassava and low energy concentrate which is used with boiled mash sweet potatoes. Farmers were also introduced to the sweet potato ensiling technology for the development and storage of pig feeds. (Source: PNG National Agricultural Research Institute, 5 Nov. 2010).

Transgenic harvest: African nations are laying foundations to extend the use of GM technology on the continent

<http://knowledge.cta.int/en/content/view/full/12351>



Talks between member states of the Common Market for Eastern and Southern Africa (COMESA) have produced a draft policy on GM technology, which was sent for national consultation early September 2010. It is a breakthrough to see a group of 19 African nations working to develop policies that should make it clear to all sides in the debate that Africa can make up its own mind. COMESA is a trade bloc, and its proposals aim to develop research and trade in GM crops, stating that decisions regarding GMOs should be based on sound science and evidence. The use of GM crops for food divides opinion, especially when it comes to Africa. Sharp views on the technology in the developed world, honed by more than a decade of arguments in Europe and elsewhere, are too easily projected onto Africa, with the continent portrayed as a passive participant in the global melodrama over GM food. (Source: Nature, 06 October 2010).

'Linking African Researchers with Adaptation Policy Spaces'

<http://knowledge.cta.int/en/content/view/full/12380>



The International Development Research Centre (IDRC), based in Ottawa, Canada, will assist its Climate Change Adaptation in Africa (CCAA) program partners in three countries in East Africa to build the capacity of researchers to influence policy. The poor

understanding of policy processes tends to reduce the value of research results and the ability of researchers to influence policy. The researchers in this project investigate the complexity of adaptation policy processes in different countries and identify policy spaces; use this knowledge to build policy engagement tools and strategy; develop an analytical framework for investigating climate change adaptation policy processes in Africa; and mentor relationships between participatory action researchers and academic partners. (Source: IDRC; End date of project: 18 January 2011).

November headlines from the Caribbean Research Innovation & Entrepreneurship Network

<http://knowledge.cta.int/en/content/view/full/12554>



Climate change explained by Dr Michael Taylor of the Climate Studies Group, Department of Physics, UWI at Mona, Jamaica at the Caribbean Week of Agriculture organised jointly by CARDI and the CTA (which ran from 16 to 23 October 2010 in St.-Georges, Granada).

In St.-Lucia, a success story about commodity cacao commercialization at the global scale that actively uses traditional knowledge and ways of production. (Source: Rienet.net, November 2010)

Crop Advances Depend On Deciphering Data

<http://knowledge.cta.int/en/content/view/full/12568>



James Carrington, incoming president of the Danforth Plant Science Center in St. Louis, USA, said in an interview that technology has greatly accelerated the available knowledge of plant genetics, and that researchers now face the challenge of sifting through and applying it to improve yields. Computer technology has created a mountain of data on plants, but researchers still understand 'relatively little' about how crops work, noted Carrington. 'We don't yet have the knowledge to understand what these genome sequences mean,' he added. Now that the capacity to generate massive sets of data is readily available through modern computers, these datasets have to be mined so as to acquire information and knowledge on how crops can be made more productive. (Source: Danforth Plant Science Centre, 12 November 2010)

Africa: Lessons from US foundation collaboration

<http://knowledge.cta.int/en/content/view/full/12574>



Lessons from a Ten-Year Funder Collaborative: A case study of the Partnership for Higher Education in Africa (PHEA) is a newly-published case study which tracks the successes and shortcomings of the Partnership, which began in 2000 and whose members invested US\$440 million in 65 universities across nine African countries. PHEA represented some of the largest United States foundations, such as the Carnegie Corporation, the Rockefeller Foundation and the Ford Foundation. Participating countries included Egypt, Ghana, Madagascar, Mozambique, Kenya, Nigeria, South Africa, Tanzania and Uganda. The study reveals successes and hard lessons from an initiative to strengthen higher education on the continent. It is based on discussions with 30 participants, including four founding presidents, and a review of key documents, reports and evaluations. The case study is the second in a series of three publications documenting the PHEA. It is aimed at assisting all grant-making foundations, especially those that have been involved in or may consider collaborative funding in the future. Among outcomes listed as successes are an increased investment in and awareness of higher education in Africa - the partnership helped spur multi-million dollar pledges by international donors such as the World Bank - and increased investment by participant foundations. Among the partnership's weaknesses, the study notes the following: a lack of clarity about PHEA's mission; an initial absence of a strong coordinating body and cumbersome decision-making; fluctuations in interest from presidents and changes in foundation leadership; and the absence of an exit plan to prepare for the demise of the partnership. (Source: University World News, 14 November 2010).

OER Africa - Open Educational Resources for Agriculture

<http://knowledge.cta.int/en/content/view/full/12580>



OER Africa is a platform promoting the benefits of Open Educational Resources (OER). OER describes educational resources that are freely available for use by educators and learners, without an accompanying need to pay royalties or license fees. OER are teaching, learning and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials or techniques used to support access to knowledge. The OER platform offers an Agriculture OER Space, offering a comprehensive set of resources on agriculture, specific to African higher education. The 'Agriculture OER Space' is funded by the Commonwealth of Learning, and serves as the portal to the AgShare project, funded by the Bill and Melinda Gates Foundation. The AgShare project will create a scalable and sustainable collaboration of existing organizations for African publishing, localizing, and sharing of teaching and learning materials that fill critical resource gaps in African MSc agriculture curriculum. Agriculture OER Space

CGIAR Donors Adopt Bold Approach to Spur Agricultural Research

<http://knowledge.cta.int/en/content/view/full/12595>



Key CGIAR donors' and stakeholders' meeting in Washington, D.C. early November 2010, took a decisive step toward harmonizing funding for agricultural research for development. They agreed to channel their collective support into major strategic research initiatives that will decisively confront hunger and poverty in developing countries, while cushioning climate change impacts and curbing natural resource destruction. The new agreement establishes a multi-donor trust fund (the CGIAR Fund), connecting donors with the Consortium of International Agricultural Research Centers. Approval came after deliberations by the CGIAR Fund's decision making body, the Fund Council, on 1-2 November 2010. Fund donors also confirmed new leadership and members of the CGIAR's Independent Science and Partnership Council. CGIAR Fund donors further agreed to support two new strategic research programs - one dealing with rice-based farming systems and the other with climate change, agriculture and food security. (Source: CGIAR News, 8 November 2010)

2010).

IFPRI to release major climate change and food security report

<http://knowledge.cta.int/en/content/view/full/12598>



On December 1, 2010 IFPRI will release a report of its latest research on food security and climate change. Meant to be a follow-up to its 2009 food policy report 'Food Security, Farming, and Climate Change to 2050: Scenarios, Results, Policy Options', this latest report expands further on IFPRI's climate modelling expertise to address the climate change threat in the context of larger food security challenges. The research monograph considers three combinations of income and population growth: a baseline scenario (with moderate income and population growth), a pessimistic scenario (with low income growth and high population growth), and an optimistic scenario (with high income growth and low population growth). The study combines each of these three income/population scenarios with four plausible climate scenarios that range from slightly to substantially wetter and hotter on average, as well as with an implausible scenario of perfect mitigation (a continuation of today's climate into the future). Based on 15 possible scenarios to 2050, the results constitute the most comprehensive analysis to date on the scope of climate change as it relates to food security, including who will be most affected and what policymakers can do to facilitate adaptation. The report will be released in Mexico and Washington, DC, early December 2010. (Source: IFPRI, 16 November 2010).

Seeds for Needs Project in Ethiopia and Papua New Guinea

<http://knowledge.cta.int/en/content/view/full/12601>



Biodiversity International 'Seeds for Needs' project aims to work with farmers to identify varieties of their most important crops that are adapted to cope with variation in climate. The project in Ethiopia, in partnership with the Institute of Biodiversity Conservation in Addis Ababa, will work with around 200 vulnerable women farmers at two target sites where durum wheat and barley are the basis of the farming systems. The project will develop a unique framework that combines three vital streams: available knowledge of the diversity of durum wheat and barley from a range of sources; an improved understanding of climate-change scenarios in Ethiopia; and the farmers' own experiences, indigenous knowledge and adaptation strategies. 'Seeds for Needs' is also being rolled out in Papua New Guinea. The project is working with genebanks and local partners, including communities and women's groups, to identify sweet potato and taro varieties that can withstand extremes of temperature and rainfall as well as differences in the salt content of the soil and predicted shifts in pests and diseases. Local farming communities will be mobilized to apply their traditional knowledge, and they will be active participants in the research to identify suitable varieties and then test them. After testing, the best-performing and most adaptable varieties will be distributed to farming communities for multiplication with the help of local agribusinesses. (Source: Biodiversity International. The project started in May 2010).

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The official opening of BecA's state-of-the-art facilities at ILRI, Nairobi campus

<http://knowledge.cta.int/en/content/view/full/12606>



Biosciences East and Central Africa (BecA) is an initiative developed within the framework of Centres of Excellence for Science and Technology in Africa and is supported by the Government of Canada, International Livestock Research Institute (ILRI), NEPAD Planning and Coordinating Agency and other partners. Hosted and managed by the ILRI in Nairobi, Kenya, the BecA Hub provides a common biosciences research platform, research-related services and capacity building opportunities to the region and beyond. Applauding the establishment of the ultra-modern complex of laboratories, the Head of State of Kenya, President Kibaki, noted that "the facility would assist scientists in the region and the entire continent to undertake cutting edge research that would boost agricultural output and food security. This will go a long way in enhancing the ability of young Africans to undertake research with a view to address the chronic challenges that constrain the agricultural sector in sub-Saharan Africa." The Hub aims to increase access to affordable, world-class research facilities and to create and strengthen human resources in biosciences and related disciplines in Africa. (Source: BioInnovate Africa, 8 November 2010).

Imperatives of Global Climate Change for Agricultural Research in Asia-Pacific

<http://knowledge.cta.int/en/content/view/full/12609>



Raj Paroda, Executive Secretary for the 'Asia Pacific Association for Agricultural Research Institutions' (APAARI) and Chairman of the 'Trust for Advancement of Agricultural Sciences' (TAAS) wrote a strategy paper on what should be the research priorities in agricultural science for



coping with global climate change. Paroda outlines the potential strategies and actions for adaptation to climate change effects and the basic strategies for mitigating these effects. Strategies around both adaptation and mitigation are called for, which would require research reorientation and major policy interventions. Some suggested research priorities for adaptation include identification of new genotypes and new land use systems, value added weather management services and documentation of Indigenous traditional knowledge. Research priorities for mitigation included carbon sequestration of different land use systems and cost effective opportunities for reducing methane emissions. Regional and global collaboration would help in addressing these concerns and for building both institutional and human resource capabilities being the two cradles for sustainable agriculture. (Source: TAAS Publications, November 2010).

New partnership launched to keep climate change from crippling food production in Africa and Asia

<http://knowledge.cta.int/en/content/view/full/12612>



A new research program on 'Climate Change, Agriculture and Food Security' (CCAFS) will link much of the best climate-related agricultural research for development work going on at the International Livestock Research Institute (ILRI) and 14 other CGIAR centres with the best global environmental change research being undertaken within the global Earth System Science Partnership. The CCAFS program will be formally launched on 4 December at Agriculture and Rural Development Day at a United Nations climate change meeting. It is the most comprehensive effort undertaken thus far to address the interactions between climate change and food security, livelihoods and environmental management. Emerging from new collaboration between the CGIAR and the Earth System Science Partnership (ESSP), the program brings together strategic research carried out by the CGIAR, ESSP and their respective partners in a collective effort to be coordinated by the Colombia-based International Centre for Tropical Agriculture (CIAT). The launch of CCAFS marks the beginning of a long-term endeavour with an initial 3-year budget totalling US\$206 million. (Source: ILRI, 19 November 2010).

Patent Grab Threatens Biodiversity and Food Sovereignty

<http://knowledge.cta.int/en/content/view/full/12615>



A new report by ETC Group (Action Group on Erosion, Technology and Concentration, based in Ottawa, Canada) reveals a dramatic upsurge in the number of patent claims on 'climate-ready' genes, plants and technologies that will supposedly allow biotech crops to tolerate drought and other environmental stresses (i.e. abiotic stresses) associated with climate change. The patent grab threatens to put a monopoly choke-hold on the world's biomass and future food supply, warns ETC Group. In many cases, a single patent or patent application claims ownership of engineered gene sequences that could be deployed in virtually all major crops - as well as the processed food and feed products derived from them. (Source: Pambazuka News, 11 November 2010).

Satellite imagery to aid in veld production

<http://knowledge.cta.int/en/content/view/full/12619>



South Africa's Farmers Weekly reports that satellite images could soon be used in the country to quantify veld production, estimate livestock carrying capacity and help farmers plan fodder flow. The technology used for satellite imagery is widely available and accurate and farmers can benefit from it, said Tony Palmer and Alan Short of the Agricultural Research Council's Animal Production Institute (ARC-API). Once the technique of converting satellite data into an accurate picture of plant growth (and so of grazing capacity) is refined, researchers can give farmers real-time plant-production estimates for their veld. This will be invaluable for fodder-flow planning in livestock areas. Regional maps will be available from the agriculture department's Agricultural Geo-referenced Information System (AGIS) at www.agis.agric.za. These maps will help government support farmers during exceptional circumstances, such as droughts. (Source: GIS Development; 11 November 2010).

US-Africa: Universities for development partnerships

<http://knowledge.cta.int/en/content/view/full/12571>



The US Agency for International Development (USAID) and Higher Education for Development (HED, Washington DC, USA) are building strategic capacity-building partnerships between 22 universities in Africa and the US. With the backing of up to \$US 1.1 million each, detailed five-year strategic plans and comprehensive 10-year visions, the goal is to assist the realisation of Sub-Saharan initiatives for national and regional development through higher educational investment. The

institutions will tackle issues ranging from food security and health to natural resource and climate management, energy and education in Africa. Lead African institutions of the partnerships include: Addis Ababa University (Ethiopia), Catholic University of Sudan, International Institute for Water and Environmental Engineering (Burkina Faso), Kenyatta University (Kenya), Makerere University (Uganda), University of Cape Town (South Africa), Université Gaston-Berger (Senegal), University of Ghana, University of Liberia, University of Malawi, and the University of Nairobi (Kenya). (Source: University World News; 17 October 2010)

AGORA - Access to Global Online Research in Agriculture

<http://knowledge.cta.int/en/content/view/full/12577>



The AGORA program, set up in 2003 by the FAO together with major publishers, enables developing countries to gain access to an outstanding digital library collection in the fields of food, agriculture, environmental science and related social sciences. AGORA provides a collection of 1278 journals to institutions in 107 countries. AGORA is

designed to enhance the scholarship of the many thousands of students, faculty and researchers in agriculture and life sciences in the developing world. The publishers are committed to working with AGORA in its current format until the end of 2015.

Institutions in countries with GNP per capita below \$1250 are eligible for free access and institutions in countries with GNP per capita between \$1250-\$3500 pay a fee of \$1000 per year / institution. (Visit this web page for 2010 eligible Band 1 and Band 2 countries)

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Selected publications | Follow the latest RSS feeds for this section

Nutrition and the naming of plants

<http://knowledge.cta.int/en/content/view/full/12565>

Nesbitt, M., McBurney, R., Broin, M., & Beentje, H. . Linking biodiversity, food and nutrition: The importance of plant identification and nomenclature, *Journal of Food Composition and Analysis*, Vol. 6 (23), pp. 486-498, 2010.

At the International Scientific Symposium on Biodiversity and Sustainable Diets organized by the FAO in Rome on 2-5 November 2010, Dr. Mark Nesbitt, ethnobotanist and curator at the Royal Botanic Gardens (Kew, UK) and his colleagues showed results from their analysis of the quality of botanical information in published papers. They found that in many cases, when the botanical names as given in the papers are used, it becomes very difficult to identify the species concerned accurately enough to use automated searches of databases. This could pose a problem as researchers seek to build a case for the value of lesser-known wild and cultivated species in building sustainable and nutritious diets. In light of his study, Dr. Nesbitt recommends that 'best practices' in naming plants be developed and implemented where needed in academic and research institutions.

Message in a Bottle - Learning our way out of unsustainability

<http://knowledge.cta.int/en/content/view/full/12650>

Prof. Dr. Ir. Arjen E. J. Wals

Inaugural lecture by Prof. Dr. Ir. Arjen E. J. Wals upon taking up the posts of Professor of Social Learning and Sustainable Development, and UNESCO Chair at Wageningen University (The Netherlands) on 27 May 2010.

Education and learning (excerpt)

Over time a whole range of instruments and mechanisms has evolved to address the undesired side effects of un-sustainability, particularly those who were easily and immediately observable. These instruments and mechanisms include: sociotechnological innovations, legislation, policies, fiscal policy and economic incentives and social marketing. In addition, alongside and occasionally in connection, communication, education and learning have always played a role in finding a response to the loss of nature, environmental degradation, natural resource depletion and, indeed, the current sustainability crisis. The significance of these learningbased instruments has varied though from country to country but also within countries over time, and some scholars argue that most education, communication and learning in industrial and post-modern times has accelerated un-sustainability and the loss of nature as they argue that they primarily have been serving economic ends at the expense of other more fundamental ones (Orr, 2003; Senge, 2010)."

Potential and limitations of soil organic matter build-up in dry areas

<http://knowledge.cta.int/en/content/view/full/12628>

By M. A. Hamza and W. K. Anderson; *African Journal of Agricultural Research* Vol.

5(20), pp. 2850-2861, 18 October 2010.

Semi-arid areas comprise a large portion of the world's agricultural crop land. These areas are characterised by high temperature and low rainfall which hinders soil organic matter accumulation. The reported experiments were designed to study the effect of soil organic matter (SOM) from green manure crops on soil physical properties in two contrasting soils, sandy clay loam and loamy sand under the severe conditions of high temperature and low rainfall that exist in the eastern wheat belt of Western Australia. Cereals and legume crops were incorporated by disc cultivation into the soils as green manure for four consecutive years. Two plant groups, cereals and legumes were used to provide green manure. Results show the SOM increased from around 1.28 to 1.96%, well below the critical value suggested in the literature for more humid areas to sustain healthy soil, and not as high as expected from the high quantity of green material returned to the soil. These results point to the dominant role of soil and weather conditions in the low rainfall cropping zone of Western Australia in limiting the build-up of soil organic matter content, regardless of amount or composition of green manure applied. The most likely reason for the low rate of accumulation of organic matter is the low rainfall and high temperatures experienced in the experiments, factors that almost certainly restricted the activity of the soil microorganisms. The increases in soil organic matter and the improvement of soil physical properties associated with it indicate that green manure can play a vital role in improving and maintaining soil physical fertility under the arid conditions of these experiments (similar to the Sahel climate).

Factors affecting the choices of coping strategies for climate extremes

<http://knowledge.cta.int/en/content/view/full/12632>

Factors that positively influence coping include education of the head of household, gender of household head being male, farm income, livestock ownership, access to extension for crop and livestock production, farmer-to-farmer extension, temperature, ownership of radio, and better-quality house. Thus, to increase coping with covariate shocks, such as climate extreme events, policies should encourage income generation and asset holding (especially livestock), both of which will support consumption smoothing during and immediately after harsh climatic events.

'The New Harvest: Agricultural Innovation in Africa'

<http://knowledge.cta.int/en/content/view/full/12638>

Filled with case studies from within Africa and success stories from developing nations around the world, 'The New Harvest' outlines the policies and institutional changes necessary to promote agricultural innovation across the African continent. Incorporating research from academia, government, civil society, and private industry, the book, written by Calestous Juma, Professor of the Practice of International Development and Director of the Science, Technology, and Globalization Project at Harvard University, suggests multiple ways that individual African countries can work together at the regional level to develop local knowledge and resources, harness technological innovation, encourage entrepreneurship, increase agricultural output, create markets, and improve infrastructure. Main features:

- Integrates research and policy ideas from an international panel of some of the most influential thinkers on agricultural development
- Presents enactable policy ideas for advancing agriculture throughout Africa, at the national and regional levels
- Includes a wealth of case study material from Green Revolution and educational initiatives in India, China, and throughout Latin America

'The New Harvest' is a product of the Agricultural Innovation in Africa Project, funded by the Bill and Melinda Gates Foundation. It was launched in Tanzania at a special summit of five East African presidents on 2 December 2010. It has received endorsements from a Nobel laureate, a World Food Prize winner and four sitting presidents.

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Call for paper proposals for ASTI-FARA conference

<http://knowledge.cta.int/en/content/view/full/12624>

The ASTI initiative and the Forum for Agricultural Research in Africa (FARA) are currently calling for proposals for papers for their jointly convened conference, 'Agricultural R&D: Investing in Africa's Future: Analyzing Trends, Challenges, and Opportunities,' to be held in Accra, Ghana, 5–7 December 2011. The deadline for paper proposals is 15 January, 2011.

Job opportunities at the International Maize and Wheat Improvement Center (CIMMYT)

<http://knowledge.cta.int/en/content/view/full/12626>

The International Maize and Wheat Improvement Center (CIMMYT) is opening 32 new career-track positions in plant breeding, agronomy, molecular genetics, crop physiology and pathology, cereal chemistry, bioinformatics and related fields, socioeconomics, web marketing, and intellectual property law. Deadline for applications: 31 December 2010.

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Organizations

PACE-Net: Pacific-EU Network for Science and Technology

<http://knowledge.cta.int/en/content/view/full/12408>



The Pacific-EU network for Science and Technology will establish a bi-regional dialogue platform on S&T between EU and the 15 countries member of the Africa Caribbean Pacific (ACP) Group of the Pacific region, namely Cook Islands, Federate States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea (PNG), Solomon Islands, East Timor, Tonga, Tuvalu and Samoa. PACE-NET will examine possible synergies or complementarities with EU activities, especially with respect to challenges faces by developing countries. In particular, synergies with the European Development Fund shall be found. PACE-Net dialogue activities led will be fed by a preliminary critical and analytical work on the current S&T cooperation landscape in the region. The outcomes of the project will be transmitted to key stakeholders of the Pacific Islands Countries and Territories (PICTs). (Source: Cordis; End date of project: 30 April 2013).

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