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New dossier added to Knowledge for Development

Agroforestry

<http://knowledge.cta.int/en/content/view/full/11800>

Knowledge for Development has recently published a new dossier on agroforestry. Research in agroforestry is distributed amongst several actors (universities, national and international research and development centres) and is now included in several major debates on the future of the planet's resources. This dossier has been prepared to assist the scientific community to seize this opportunity to advance agroforestry's potential for contributing solutions for viable plant and animal production systems especially in the context of climate change, for the fight against poverty, for food security, for economic, social and political stability, and for a greener agriculture. Moreover, it seems to be essential that this widely dispersed scientific community finds methods of disseminating its findings to users to increase understanding of agroforestry's importance for sustainable agricultural and rural development. This dossier includes two lead articles and a wealth of annotated links to background materials available on the web. The dossier was prepared by CABI and CIRAD in collaboration with CTA. Editor in chief, Judith Francis, CTA, 2010.

Agroforestry, basic situation, challenges and opportunities

<http://knowledge.cta.int/en/content/view/full/11804>

by Ouattara N'Klo (Minister for Environment, Water and Forests, Ivory Coast; Regional Director of the Environment of Bas-Sassandra), Ronald Bellefontaine (UPR Forest Genetics, Cirad-Bios), Dominique Nicolas (UMR SYSTEM, Cirad-Persyst, coordinator of the agroforestry working group), Frédéric Bourg (Directorate of research and strategy, Cirad)

The authors of this article explain that agroforestry a scientific field that is currently in the news because of the numerous debates on environmental aspects of human development, is an ancient practice that exists on all continents. It is a result of the farmer's desire to diversify and intensify his cropping system. This practice, widely researched as it is, must now be promoted more efficiently, primarily to governments, through an improved structuring of existing knowledge networks.

Is agroforestry a suitable response to climate change?

<http://knowledge.cta.int/en/content/view/full/11812>

by Ouattara N'Klo (Minister for Environment, Water and Forests, Ivory Coast; Regional Director of the Environment of Bas-Sassandra), D. Louppe (CIRAD, Department of Environments and Society, Chief editor of Flamboyant and scientific publisher), Frédéric Bourg (Directorate of research and strategy, CIRAD)

The authors of this article argue that the exploitation of natural resources – land, water, biodiversity is reaching saturation point and this is compounded by expanding population growth. The degradation of the natural forests is aggravating the impact of climate change. Agroforestry systems, can contribute to the mitigation of the effects of climate change, mainly by improving the microclimate and the biodiversity and the attainment of food security goals. Peri-urban agroforestry also deserves consideration in the context of the diminution of arable lands near inhabited areas. Responding to climate change requires an unprecedented mobilization of the international scientific community who must rethink paradigms which previously guided research for development agendas.

CTA S&T Programmes

Call for expression of interest

<http://knowledge.cta.int/en/content/view/full/11798>

CTA wishes to identify companies/organizations who will be invited to submit a full tender to provide services for the content management of "Knowledge for Development". This web portal seeks to put information on science, technology and innovation (ST&I) issues at the fingertips of ACP and EU scientists, policy makers and stakeholders and their international colleagues and provide them with a platform to dialogue on relevant issues in support of agricultural and rural development. The website is fully operational and bilingual offering content in both English and French. It includes RSS feeds and new social media (twitter, facebook). **Deadline 09 July 2010**

Innovation systems, food security and economic development

<http://knowledge.cta.int/en/content/view/full/11619>

by Judith Ann Francis, Senior Programme Coordinator S&T Strategies, CTA

Innovation and technological change are associated with productivity gains and economic development but have yet to yield these results in the ACP region. The fact that the ACP agricultural sector continues to serve as an economic foundation suggests that priority should be given to building endogenous ACP capacity for understanding innovation processes and analyzing and strengthening agricultural, science, technology and innovation (ASTI) systems. Over the years, CTA has led training workshops on the ACP ASTI systems and supported analyses of the systems. The case studies confirm that little innovation is taking place in the agricultural sector and ACP countries are unable to respond effectively to the multiple complex challenges facing the sector. Small farmers and agro-processors are innovating within their existing knowledge base; however they are reluctant or constrained to adopt new knowledge and technologies because of lack of markets and limited financial and technical support. The knowledge infrastructure (universities, R&D organizations, extension services) is inadequate and governments are not investing in ST&I in support of agricultural and rural development. Existing resources are not being optimized due to the inadequate linkages among key actors and the scientific community is disconnected from other actors including policymakers.

The future of agricultural research for development

<http://knowledge.cta.int/en/content/view/full/11623>

by Dr Jean-Luc Khafaoui, CIRAD, France

Over the past few years the context of agricultural research for development and, more generally, of international agricultural research has rapidly been evolving. For example, the role of agriculture in development processes in southern countries has acquired new recognition; global problems, such as climate change, food safety and new diseases have moved to the top of the international policy agenda; and research topics tend to transcend the traditional North-South divide due to new models of research cooperation and research questions that concern both southern and northern countries. This has resulted in a convergence of agricultural research for developing and developed countries, in particular in Europe. Consequently, there is renewed appreciation for the way agricultural research enhances economic development in southern countries and responds to global challenges.

ICTs and nano and biotechnology can transform ACP agricultural science and innovation

<http://knowledge.cta.int/en/content/view/full/11617>

by Advisory Committee on S&T for ACP Agricultural and Rural Development

The Advisory Committee on S&T for ACP Agricultural and Rural Development (AC) is a think tank of leading ACP and EU experts who meet regularly to deliberate on critical issues concerning ACP agriculture. In 2009, the AC had at the top of its agenda the issue of ICTs transforming agricultural science and innovation: implications for ACP agriculture. The AC further explored the key scientific disciplines that would be needed for transforming ACP agriculture, the opportunities new technologies offer for improving agricultural research and innovation and the investments needed in research infrastructure to allow ACP scientists to actually use and benefit from these technologies. Although, current low priority of agricultural development on ACP policy agendas may be cause for worry, the growing international consensus and, renewed support for agricultural research and the rapid spread of ICTs and nano- and biotechnology should certainly be considered as positive developments. In fact, they concluded that in the future, these new technologies will unquestionably determine the agricultural science and innovation agenda in ACP countries and will become the most important scientific disciplines along with post harvest technology, innovations systems research and natural resources management for transforming ACP agriculture.

Building Africa-wide capacity in Biosciences

<http://knowledge.cta.int/en/content/view/full/11621>

by Professor Aggrey Ambali, NEPAD S&T, South Africa

Biosciences provide powerful new ways of improving crop and livestock productivity while minimizing threats to environmental and human health. Problems that so far proved intractable to conventional agricultural research might well be solved in the future by two interrelated fields in the biosciences, namely genomics and bioinformatics. The challenge for Africa is to enlist biosciences in research programmes focused on enhancing development and reducing rural poverty. The Biosciences eastern and central Africa (BecA) is addressing this challenge. This shared research platform (BecANet) will enable African scientists to undertake cutting-edge bioscience research, targeted at priorities identified and set by national research centres and universities. BecA will complement and support this research platform by providing training and access to state-of-the-art biosciences services, such as effective management of intellectual property, biosafety and other regulatory issues in Africa and improved access to bioinformatics databases.

South Africa: National Advisory Council on Innovation (NACI)

<http://knowledge.cta.int/en/content/view/full/278>

NACI commissioned the development of a directory of indicators together with a directory of the associated data sources which provided information on the availability of indicator time series. The focus was on South African based data sets and international data sets that could be valuable for South African policy makers, strategists, business leaders and academics.

The tipping point

<http://knowledge.cta.int/en/content/view/full/11897>

by Audia Barnett, Scientific Research Council, Jamaica

The concept of a tipping point sees a tiny pebble making numerous ripples. A glance at some Caribbean countries will reveal similar trends. St. Lucia for example, a country with a population of a mere 160,000, has produced two Noble Laureates! Trinidad and Tobago is the US's largest supplier of Natural gas. Nations all over the world seem to be promoting "Innovation" as an excellent "tipper". The concept of Innovation is highly acclaimed by President Obama who in promoting his Innovation Strategy. Therefore, as Jamaica boldly embarks on the tortuous journey of economic recovery, an innovation strategy, hinging on the triple helix relationship between researchers, private sector and the public sector appears to be a lucrative option.

Developments

New prescription needed for medicinal plants

<http://knowledge.cta.int/en/content/view/full/11780>

Medicinal plants are valuable species: they provide income and healthcare to thousands of people around the world. Greater numbers of people rely on traditional medicines, mostly based on herbs, for their primary healthcare than 'conventional' or western medicines. But 15,000 species of medicinal plants are globally threatened from, among other things, loss of habitat, overexploitation, invasive species and pollution. To conserve this valuable natural resource, IUCN, Plantlife International and TRAFFIC are calling for governments to endorse a revised and updated Global Strategy for Plant Conservation that aims to halt the continuing loss of the world's plant diversity. (Source: IUCN, 18 May 2010)

Kenya: University of Nairobi to establish African seed institute

<http://knowledge.cta.int/en/content/view/full/11676>

Seed scientists from Iowa State University are working with the University of Nairobi and other groups to increase food security and reduce poverty in sub-Saharan Africa, with help from a new grant from the Alliance for a Green Revolution in Africa (AGRA). Through AGRA's US\$4.49 million grant over three years, ISU's Seed Science Center, the University of Nairobi (UoN), the International Maize and Wheat Improvement Center and private business experts are establishing a Seed Enterprise Management Institute at the College of Agriculture and Veterinary Sciences in Kabete, Kenya. (Source: SoyaTech, 21 April 2010)

Nigeria: Scientists call for biodiversity barometer

<http://knowledge.cta.int/en/content/view/full/11679>

For the first time, scientists have put a figure on how much it would cost to learn about the conservation status of millions of species, some of which have yet to be identified. The price tag is US\$60 million according to a team of scientists, including those from the International Union for Conservation of Nature (IUCN) and Conservation International, who presented their case in Science magazine in an article called 'The Barometer of Life'. 'Our knowledge about species and extinction rates remains very poor, and this has negative consequences for our environment and economy', said Simon Stuart, chair of IUCN's Species Survival Commission. (Source: Daily Independent (Lagos), 21 April 2010)

New marine centre to study continent's climate challenges

<http://knowledge.cta.int/en/content/view/full/11790>

A new collaboration between Norway and South Africa will collect oceanic data to help better understand and cope with the effects of climate change across Africa. The Nansen-Tutu Centre for Marine Environmental Research was launched on 20 May 2010 in Cape Town, South Africa. It will gather information on the three oceans surrounding southern Africa - the South Atlantic Ocean, the Indian Ocean and the Southern Ocean. The centre will carry out systematic and long-term measurements of the oceans and will also develop new methods of data integration. The research will focus on modelling the state of the oceans, the marine environment and ecosystems, and the relationship between climate anomalies in different parts of the world. (Source: All Africa, 21 May 2010)

Africa revives hardy, local rice against Asian cousin

<http://knowledge.cta.int/en/content/view/full/11793>

Scientists are reviving long-ignored African rice varieties, to cut dependence on Asian varieties that may be less able to withstand the impacts of climate change on the poorest continent, a report said on 21 May. Historically, scientists have focused on breeding useful traits such as disease resistance from African rice into Asian rice. Now the focus is on the reverse – using African rice as the basic crop and improving it with Asian genes. 'African rice was initially ignored by mainstream research', said Koichi Futakuchi, a scientist at Africa Rice Center (AfricaRice) in a statement. 'Now, for the first time, we're reversing the gene flow.' (Source: Reuters, 21 May 2010)

A new platform to promote access to agricultural science

<http://knowledge.cta.int/en/content/view/full/11748>

The Coherence in Information for Agricultural Research for Development (CIARD) initiative seeks to make agricultural research information publicly available and accessible to all. It works with organizations that hold information or create new knowledge, helping them to disseminate it more efficiently and making it easier to access. The CIARD Manifesto and other tools provide a framework of policy and practices for those holding and creating information and knowledge to share their outputs globally and more efficiently. The new website provides a virtual platform for institutions to participate in CIARD activities; evaluate their information management practices against a checklist of good practices; share and follow pathways towards better accessibility of information; and contribute case studies.

ASSAf launches a TWOWS National Chapter

<http://knowledge.cta.int/en/content/view/full/11672>

In October 2009, the Academy of Sciences for the Developing World (TWAS) announced the establishment of a National Chapter of the Third World Organization for Women in Science (TWOWS). Currently, there are 76 full members of TWOWS in South Africa, some of whom are also members of ASSAf. These TWOWS members are currently inactive in the international organization and do not reap the benefits of networking or strengthening links, due to the absence of an in-country coordinating structure. With the establishment of a TWOWS National Chapter, it is planned to initiate activities that will agree strongly with South Africa's science and technology policy of increasing the participation of women in science. An executive committee will hold its second meeting in May 2010 to discuss, among other issues, the TWOWS National Chapter 2010/2011 strategic action plan. (Source: TWOS, April 2010)

Collaborative mapping of horticultural projects in world's poorer countries now in progress

<http://knowledge.cta.int/en/content/view/full/11681>

Horticulture Collaborative Research Support Program (CRSP) and GlobalHort are working together to catalogue past and ongoing horticultural projects in the world's poorer countries. Over 600 horticultural projects have so far been gathered and mapped (<http://hortcrsp.ucdavis.edu/main/worldwidehort.html>). Please take the time to fill out a short survey at. (Source: Horticultural CRSP, 21 April 2010)

UNIDO and partners launch International Industrial Biotechnology Network

<http://knowledge.cta.int/en/content/view/full/11666>

An International Industrial Biotechnology Network (IIBN), which will assist its members in accessing and developing biotechnologies for sustainable industrial development, was launched at a symposium hosted by UNIDO. IIBN will add economic value to under-utilized or unexplored biological resources through the use of novel biotechnology techniques and processes. It seeks to catalyze South-South and North-South partnerships between public research institutions, industry and regulatory agencies committed to sharing expertise and technology, to generate economic value from biodiversity and thereby reduce the pressure from biota. (Source: UN, 29 March 2010)

University of West Indies recognizes outstanding researchers

<http://knowledge.cta.int/en/content/view/full/11876>

The booklet *Recognizing Outstanding Researchers* presents an attractive compilation of research activities undertaken at the University of West Indies. The various sections describe the research in lucid language for everyone to comprehend. All the research projects described meet strict criteria established by each faculty, and demonstrate their superiority over the pool of other high quality submissions. In the last two years the UWI, Mona has embarked on a multi-pronged method of ensuring the widest dissemination of the cutting-edge research. Dissemination of this work will facilitate the development of professional relationships and important collaborative activities with author institutions.

Selected publications

Taro Improvement and Development in Papua New Guinea - A Success Story

<http://knowledge.cta.int/en/content/view/full/11670>

by APAARI, August 2009

Taro (*Colocasia esculenta*) is a crop of prime economic importance, used as a major food in the Pacific Island Countries including Papua New Guinea (PNG). It is the second most important root staple crop in terms of consumption, and is ranked as the fourth after sweet potato, yam and cassava in terms of production. PNG is currently ranked fourth highest taro producing nation in the world. This success story illustrates how the National Agricultural Research Institute (NARI) of PNG in collaboration with national, regional and international partners implemented a south Pacific regional project on taro conservation and utilization (TaroGen), and how the threat of taro leaf blight disease was successfully addressed by properly utilizing national capacity.

A behavioral change perspective of Maroon soil fertility management in traditional shifting cultivation in Suriname

<http://knowledge.cta.int/en/content/view/full/11728>

by L. Fleskens and F. Jorritsma, Human Ecology 38 (2), April 2010

In Suriname, the Maroons have practiced shifting cultivation for generations, but the increasing influence of modern society is causing a trend of decreasing fallow periods, with potentially adverse effects for the vulnerable tropical soils. Combining methods from cultural ecology and environmental psychology, this study identifies two groups with divergent behavioral intentions. Semi-permanent cultivators intend to practice more permanent agriculture and experiment individually with plot-level soil fertility management. Shifting cultivators rely on traditional knowledge that is not adequate for their reduced fallow periods, but perceive constraints that prevent them practicing more permanent agriculture.

AIDA Policy Brief - Why invest in Africa's drylands?

<http://knowledge.cta.int/en/content/view/full/11317>

by J. Francis, R. von Kaufmann, D. Clavel, A. Ekwamu, D. Hamidou, H. Mloza-Banda, A. Mwangombe, J. Verhagen

In Africa, 43% of the land area is classified as drylands and annual water availability per capita is about 5,000m³. This includes several countries in: the Sahel, the Greater Horn and some parts of Southern Africa. 268 million people, more than 40 % of the continent's population, live in these areas and many of them depend on farming and pastoralism for livelihoods and food. The perception that Africa's drylands are non-productive remains and their importance and contribution to the food and nutrition security and livelihoods of drylands people is not being given sufficient attention. The challenging environmental conditions suggest that little can be done to sustainably raise productivity and improve livelihoods. Yet, on the contrary, Africa's drylands have considerable potential for development and can provide multiple goods and services. Much can be achieved in Africa's drylands if policies and research programmes reflect the realities of dryland ecosystems. It is essential to recognize and involve traditional users and owners of the drylands in policy development, programme planning, research design and implementation and in monitoring and evaluating co-innovation processes.

AIDA Report - Making dryland research matter

<http://knowledge.cta.int/en/content/view/full/11316>

Addressing the need for European-African partnership for Ethiopia and Niger

by Y. Abebaw, V. Geerts, M. Hailu, K. Leuvelde, C. Lont, N. Mohamed, M. Mulder,
WUR-ACT Student Report, June 2009

Farmers themselves also innovate and experiment with ways of coping with the difficulties of dryland agriculture. This report provides an overview of the research efforts currently underway in dryland Africa. The actors that engage in this research are very diverse; International research institutions, donor organizations, NGOs, national governments and their agricultural research systems all have their policies affecting this research. African dryland agriculture faces several challenges: the soil is poor in nutrients and under threat of further depletion. The study found that there are different policies and strategies to bring field knowledge into research programmes. According to both the Ethiopian and Nigerien government policies, farmers play a key role in identifying the problems and developing solutions. These policies also address farmers' participation, however in practice there is limited participatory research. To efficiently tackle dryland problems, there is a need for harmonization of policies and interventions in the field.

The use of agrobiodiversity by indigenous and traditional agricultural communities in: Adapting to climate change

<http://knowledge.cta.int/en/content/view/full/11730>

by Platform for Agrobiodiversity Research (PAR), 18 May 2010

Over the past two years, the Platform for Agrobiodiversity Research has been collecting information on the ways in which indigenous peoples and rural communities have been using agrobiodiversity to help cope with climate change. The information comes from over 200 different stories, reports and articles from many different sources. PAR also set out some of the ways in which agrobiodiversity can be used to help improve the adaptability and resilience of the farming systems managed by rural communities and indigenous peoples around the world.

Molecular markers for tropical trees

<http://knowledge.cta.int/en/content/view/full/11642>

by World Agroforestry Centre, 2009

Molecular techniques can provide more detailed information than phenotypic studies of genetic variation are able to do and can be applied to devise more optimal management strategies for trees within natural and human landscapes. Proper genetic management is crucial, as trees are planted to combat poverty, fight malnutrition, provide medicines and fulfil other needs, such as the mitigation of climate change and the prevention of soil degradation. A new technical manual could help researchers in developing countries understand the process behind mapping the genetic diversity of tropical trees.

Events

CTA Post-ISDA Experts Workshop ASTI Systems and book launch

<http://knowledge.cta.int/en/content/view/full/11609>

Location: Montpellier, France

Date: 01 - 02 July 2010

CTA will host a post ISDA symposium event from July 01- 02 for 30 trained ACP experts and invited ISDA delegates with the support of Professor Banji Oyeyinka, one of the lead consultants who worked with CTA, the ACP community and other development partners in designing the ASTI training programme and case study methodology. The delegates will review the methodology, selected case studies and the progress made. They will also share experiences and identify the lessons learned over the past five years for guiding the process for mainstreaming innovation system thinking in the agricultural and economic development agendas in the ACP region. Professor Oyeyinka will also launch his new book Latecomer Development: Innovation and Knowledge for Economic Growth.

Scientific Research Council: Caribbean S&T conference on 'green technologies for survival'

<http://knowledge.cta.int/en/content/view/full/11872>

Location: Kingston, Jamaica

Date: 09 - 11 November 2010

The conference organizers invite twenty minutes presentations in the following areas: Food security, renewable energy, climate change and environmental management, trade, health and safety, and tourism. Abstract to be submitted by 30 July 2010; full papers by 10 September 2010.

Nanotech Insight

<http://knowledge.cta.int/en/content/view/full/11739>

Location: Cairo, Egypt

Date: 27 February - 2 March 2011

This series of conferences aims to integrate the scientific and sociological aspects of nanoscience and technology with lasting relationships between industry and academia, and between scientists, technologists and legislators in the developed and developing areas of the planet.

Jobs for ACP Scientists

Scientific affairs officer: UNECA

<http://knowledge.cta.int/en/content/view/full/11742>

This post is located in the ICT, Science and Technology Division (ISTD) in Addis Ababa, Ethiopia. Under the general guidance of the director of ISTD, the scientific affairs officer contributes to the implementation of Science, Technology and Innovation (STI) initiatives under ECA's 'Fostering Information, Science and Technology for Development' sub-programme. **Deadline: 21 June 2010**

Fellowships and grants

Fellowships for Africa's future researchers, The Future Agricultures Consortium (FAC)

<http://knowledge.cta.int/en/content/view/full/11743>

The Future Agricultures Consortium (FAC) is launching a new fellowship programme for the next generation of researchers working on the future of agriculture in Africa. The Early Career Fellowship Programme is designed for professionals who have recently graduated from post-graduate studies and are beginning their careers. The programme is a key step towards strengthening the research capacity of young students to carry out high-quality research and engage in pro-poor policy making. **Deadline: 30 June 2010**

MS/PhD scholarships at SEARCA

<http://knowledge.cta.int/en/content/view/full/11630>

Launched in November 2005, the SEARCA PhD research scholarship provides financial support to a limited number of qualified PhD students, whose research is relevant to the priority thrusts of SEARCA. This scholarship programme aims to provide PhD students with the opportunity to use the resources and facilities available at SEARCA and its network of universities for their research; produce quality research papers for publication, and; enable them to work with SEARCA's R&D personnel on mutually identified areas of concerns/interests in agriculture and rural development. Any graduate student who is a citizen of any SEAMEO member country, and is pursuing a PhD in agriculture or related sciences from any university in the world, is eligible to apply for the scholarship. **Deadlines to apply: 1 April and 1 September**

IFS research grants

<http://knowledge.cta.int/en/content/view/full/11632>

Applications for IFS research grants are welcome from young scientists in developing countries to do research on the sustainable management, use or conservation of biological or water resources. This broad statement covers natural science and social science research on agriculture, soils, animal production, food science, forestry, agroforestry, aquatic resources, natural products, water resources, etc. **Deadline to apply: 30 December 2010**

AWF Grants for Water Resources Development Activities in Africa

<http://knowledge.cta.int/en/content/view/full/11747>

The African Water Facility (AWF) is an initiative led by the African Ministers' Council on Water (AMCOW) aimed at mobilizing resources to finance water resources development activities in Africa. The African Development Bank (AfDB) hosts the AWF on the request of AMCOW. The recipients of AWF could be: i) central or local African governments; ii) African municipalities; iii) non-governmental organizations and civil society organizations; iv) community-based organizations; v) regional, sub-regional and sectoral organizations (e.g. Regional Economic Organizations, River Basin Organizations, etc). **Deadline to apply: open**

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