

# Knowledge for Development

Observatory on Science, Technology and Innovation for ACP Agricultural and Rural Development

*"K4D lets scientists and policymakers express themselves"*

March 2012 newsletter

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[CTA S&T Programme](#)

[Developments](#)

[Publications](#)

[Events](#)

[Grants & Competitions](#)

[Jobs](#)

[Web resources](#)

## Feature articles: 'Agricultural science, technology & innovation systems'

### CTA experience: Capacity building on innovation systems

Judith Ann Francis, CTA



In 2004, CTA launched a capacity building initiative to improve understanding of the innovations systems concept and its relevance for science, technology and innovation (ST&I) policy and agricultural transformation in the African, Caribbean and Pacific (ACP) Group of States. ACP experts received training to increase understanding and gain buy-in for applying the concept to the agricultural sector. The training was followed by the conduct of country case studies applying a standardized methodological framework for analysing the agricultural, science, technology and innovation (ASTI) system. The analysis focused on reviewing the

policy environment; identifying the key actors in the innovation system and assessing their habits and practices, competencies and performance and; the linkages between actors as well as an assessment of overall system performance.

The commodities selected for the case studies were either important for food security or diversification or under threat of loss of preferential markets. The analysis served to identify the strengths and weaknesses in ACP ASTI systems. It was noted that: (i) there is a disconnect between policy and action; (ii) public research capacity and infrastructure are limited; (iii) the linkages between research, academia, other actors (extension workers, for example) and the productive sector are weak and this impedes information and knowledge flows and learning and; (iv) accessing finance, venture capital and markets remain constraints to innovation.

The scientific community needs to be more engaged in policy processes as well as contribute to the generation, sharing and uptake of knowledge to drive innovation in the ACP agricultural sector for food security, economic development and the sustainable management of natural resources. Policy and institutional change as well as their implementation and visionary leadership are needed. Improving competencies of all the actors including research and academia especially for generation of new knowledge and adaptation of existing knowledge and fostering closer linkages among the various actors will also contribute to strengthening the ACP agricultural innovation systems. CTA and its partners learned much in the execution of this capacity building initiative on the innovation systems concept.

In this issue of the K4D newsletter, some selected case study reports on ACP ASTI systems which were led by ACP scientists are presented.

### CTA-ISRA ASTI system case study report: Rice industry in the Senegal River Valley

This report is based on an analysis of the agricultural science, technology and innovation (ASTI) system using the rice industry in Senegal's River Valley as a case study. It applies the innovation systems approach using a standardized methodological framework. The methodology included: (1) an analysis of the vision and policies underlying innovations in the rice industry; (2) identification and mapping of the different players and an evaluation of their practices, competencies and interactions and; (3) identification of the constraints and achievements in generating and using innovations in the industry. The study concludes that production improvements and innovations in the rice sector require a combination of several closely interlinked factors ranging from political vision to actors' behaviour. There is room for improving industry performance e.g. equipping more farmland, increasing water availability, increasing yields and improving rice quality. Some of the recommendations include: (1) the establishment of a sustainable funding system for research (e.g. tax on agricultural imports); (2) research on available technologies and agricultural equipment that can be adapted and easily adopted at relatively low costs; (3) annualising credit schemes to ensure adequate financing for agricultural activities; (4) identifying short- and medium-term credit lines and mechanisms to finance hydro-agricultural equipment and facilities; (5) eliminating taxes on agricultural machines and equipment, and their spare parts; (6) promoting and facilitating synergy among institutions in order to better meet demands for innovations.

[Read the article: knowledge.cta.int/en/content/view/full/15276](http://knowledge.cta.int/en/content/view/full/15276)

## CTA-University of Zambia ASTI system case study report: Dairy industry in Zambia

This case study aimed at assessing the status of the dairy sub sector in Zambia using an innovation system approach. Efforts made by the Zambian government to nationalise milk production by favouring local producers through subsidies and price control, saw the departure of foreign producers from the Zambian dairy sector. Since then, the country has been producing milk below its optimum capacity. The significant absence of extension services despite efforts by NGOs to train farmers in dairy management is identified as one of the factors adversely affecting the sector. Recommendations for improving the industry include: (1) improving information sharing and interaction among stakeholders to meet set goals and objectives; (2) establishment of dairy breeding centres; (3) review of extension services and the privatization of the veterinary services; (4) reinforcement of capacity building programmes through training in dairy management techniques; (5) promoting the cultivation of pasture and fodder crops for dairy animals; (6) increasing funding to research institutions and (7) development of innovative dairy products to increase milk consumption in Zambia.

[Read the article: knowledge.cta.int/en/content/view/full/15284](http://knowledge.cta.int/en/content/view/full/15284)

[Back To Top](#)

## CTA S&T Programme Activity Updates

### Reminder: Call for abstracts '3<sup>rd</sup> Africa-wide Women and Young Professionals in Science competitions' - Deadline: 14 May 2012.

[knowledge.cta.int/en/content/view/full/14983](http://knowledge.cta.int/en/content/view/full/14983)

The competitions seek to promote excellence and recognize and reward outstanding African women and young professionals who are undertaking scientific and innovative research, technology and engineering related development activities and communicating the outputs (knowledge, technologies and approaches) to improve agricultural performance and socio-economic development in Africa. Any science, technology and innovation (ST&I) related research and development activity linked to the theme 'Feeding 1 billion in Africa in a changing world' which has been undertaken within the last five years and shows measurable impact (potential or demonstrated) on agricultural development or rural livelihoods in Africa, is eligible.

Entrants are required to submit an extended abstract (1000 - 2000 words) that clearly details the ST&I project.

Abstracts received by May 14th, 2012 will be evaluated by a panel of experts including scientists, policy makers, farmers, gender and information and communication experts. The top 20 semi-finalists in each competition will be announced on 11th July, 2012. They will be sponsored to attend a scientific writing and communication workshop which will be held in conjunction with the 3rd RUFORUM biennial conference, in September 2012 in Uganda. The top 10 finalists in each competition will vie for the top five places during the Finals which will be held at the FARA GA in Ghana in 2013. Prizes include trophies, cash awards (US\$ 500 to US\$ 5,000) plus electronic equipment (e.g. computers) and book prizes. All papers which are accepted will be edited and published.

Read the announcements and concept note on the [K4D website](#).

### Nightmare 2020 - CTA/CCST/CARDI/UWI Caribbean agriculture and science film and video competition

[knowledge.cta.int/en/content/view/full/15286](http://knowledge.cta.int/en/content/view/full/15286)

Kevin Richard Bhall has a degree in Mechanical Engineering from the University of the West Indies. His winning film titled 'Nightmare 2020' was done in the medium of hand-drawn animation, which he drew and co-written by Bhall and Aaron Ramsingh (both of whom are citizens of Trinidad and Tobago). The novel aspects of the film relates to an apocalyptic vision of Trinidad and Tobago. Based on global trends and predictions of the effects of global warming, the visuals of the film 'Nightmare 2020' attempt to demonstrate a picture of Trinidad and Tobago if these effects continue unchecked. It is hoped to bring these global issues closer to home and to encourage people to actively choose to make proper informed decisions, regarding the development of their country on every scale. Their hope is that the film inspires people to be more aware of the local issues regarding climate change, so that they may choose to make contributions, in any and every way, to the fields of agriculture and science within the region.

<http://vimeo.com/36085310>

### Technological and institutional innovations triggered by a farmer-to-farmer rice parboiling video in Central Benin

*Espérance Zossou, Africa Rice Center (AfricaRice), Cotonou, Benin - 2010/2011 Africa-wide Women in Science competition*

The Training and Visit (T&V) system was the principal agricultural extension approach in Benin from 1985 to 1999. This approach was based on producing large amounts of purely technical advice, using standardised, detailed and rigorously monitored schedules of contact farmer visits and staff training sessions. T&V drew heavily on the adoption and diffusion of innovation. However, farmers were dissatisfied with these extension activities because their real needs were not taken into account, and there were calls for changes in the traditional public extension systems, which were seen as outdated, top-down, paternalistic, inflexible, bureaucratic and inefficient, and therefore less able to cope with the dynamic demands of modern agriculture.

The success of any sustainable development programme is determined largely by the level of farmers' participation. As extension systems are increasingly decentralised and fragmented, non-governmental organisations (NGOs) and the private sector are redefining their roles to fill certain niches. To strengthen rural learning and support the multitude of existing and emerging service providers, the Africa Rice Center (AfricaRice) developed a series of farmer-to-farmer videos according to the zooming-in, zooming-out (ZIZO) approach, which leads to locally appropriate and regionally relevant videos.

The video 'Cashing In with Parboiled Rice' was using this approach in collaboration with women rice processors in Benin, who were primarily involved in participatory technology development on parboiling. This paper, compares the effectiveness of conventional training and video as rural learning approaches, and discusses the challenges of such videos in creating technological and institutional changes among service providers and rural entrepreneurs.

## Integration of farmers in technology developments as a basis for enhancing sweet potato productivity in Kenya

*J.K. Mwololo et al., Makerere University, Uganda - 2010/2011 Africa-wide Young Professionals in Science competition*

Sweet potato is a food security crop for smallholder farmers in Eastern Africa. Pest and disease constraints are the most important biotic stresses, with viral diseases being the most devastating. Through a focus-group discussion, it was established that lack of clean sweet potato planting vines is a major constraint in production. Consequently, most farmers establish a new crop from virus-infected volunteer plants or an old sweet potato crop.

The objectives of the study were to identify farmer-friendly technologies for conservation and maintenance of healthy planting vines; disseminate the best appropriate technology for farmers and varieties tolerant to sweet potato virus diseases (SPVD); and expose farmers to sound sweet potato production and value-addition practices for increased income generation. The experiments evaluated spraying with dimethoate, physical barriers to virus vectors (insect-proof net and polythene), maize plants as a physical barrier surrounding plots, and roguing. Parameters monitored were SPVD incidence, whitefly and aphid populations. High numbers of whiteflies were recorded on the control and none on the plots protected by net or polythene barriers. Disease control through roguing was effective, and netting and polythene covers can be of value for rapid multiplication and maintenance of sweet potato planting materials. Through a participatory approach, the roguing, net and polythene-cover technologies were demonstrated to farmers in coastal Kenya alongside farm trials to evaluate 17 sweet potato genotypes for resistance and/or tolerance to the SPVD.

By end of the project, more than 100 farmers had adopted roguing on their farms. Disease-tolerant varieties were also disseminated to the farmers after the end of the evaluation period. The on-farm evaluation trials formed a basis for training farmers. Some farmers from the two key groups had an opportunity to attend a farmer-exchange visit in Uganda by courtesy of the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM). Integration of farmers in research, coupled with capacity-building, can enhance the adoption of new technologies, thereby enhancing sustainability.

[Read the article: knowledge.cta.int/en/content/view/full/15294](http://knowledge.cta.int/en/content/view/full/15294)

[Back To Top](#)

## Developments | [RSS](#)

### Press release: PACE-Net Conference strengthens research, development and innovation partnership between Europe and the Pacific

[knowledge.cta.int/en/content/view/full/15208](http://knowledge.cta.int/en/content/view/full/15208)

The Pacific is too important for Europe and the world to be left out. This was one of the main conclusions of the PACE-Net Conference held in Brussels, from March 20th to 23rd 2012. PACE-Net stands for 'Pacific-European Network' ([www.pacenet.eu/](http://www.pacenet.eu/)), a three-year cooperation project between the two regions and is financially supported by the European Commission. This PACE-Net conference brought together more than a hundred senior researchers and officials from Europe, Australia, New Zealand, and the Pacific Island States such as Fiji, Samoa, Papua New Guinea (PNG), Tuvalu, Kiribati, French Polynesia, and New Caledonia.

Central to the event was two days of interactive workshops relating to 1) water, 2) agriculture and forestry, 3) natural hazards, 4) fisheries and 5) mid-term research, development and innovation policies. Each workshop developed integrated research, development and innovation framework drafts for equitable Pacific-EU partnerships. These drafts address the sectors and cross-cutting theme from their significance for both the EU and the Pacific, existing and required policies, a strategic needs assessment for research, development, and innovation, as well as the required actions and corresponding funding strategies. On the final day, the framework drafts, presentations and feedback from the high-level panel were discussed with the workshop participants. [Read the press release on our website.](#)

### Giant swamp taro: untapped potential in the Pacific

[knowledge.cta.int/en/content/view/full/15277](http://knowledge.cta.int/en/content/view/full/15277)

World Watch Institute's 'Nourishing the Planet' project describes another little known food crop with an untapped potential for securing food security. Giant swamp taro (*Cyrtosperma chamissonis*) is more abundant on Pacific atolls than its cousin, the taro (*Colocasia esculenta*), but it is much less commercially available. Its traditional cultivation is labour intensive and dependent upon a consistently saturated environment, which makes it practical to grow only in small, marshy plots. Swamp taro is a native plant of the Philippines that has dozens of varieties thriving on most of the tropical islands in the Pacific. Giant swamp taro is grown and harvested in small patches for its underground tubers, called corms. Atoll farmers often grow giant swamp taro as part of complex polycultures, in the shade of larger trees. Researchers consider the potential of giant swamp taro to be largely untapped, partly because it is not often studied by researchers and techniques for improving the plant's cultivation have not been developed.

([Nourishing the Planet](#), 27/02/2012)

### Mapping of land and forest cover in the Solomon Islands

[knowledge.cta.int/en/content/view/full/15285](http://knowledge.cta.int/en/content/view/full/15285)

The UN Development Programme and the South Pacific Geoscience Commission (SOPAC) Division of the South Pacific Community (SPC) in partnership with the Solomon Islands Government, plan to use remote sensing technology and Geographic Information System (GIS) to map land and forest cover in the Solomon Islands. The exercise will map agriculture and forest cover, including pasture, mangroves, and forest plantations. It will contribute in monitoring climate change and land use on the islands.

([SOPAC](#) via [IISD](#), 23/03/2012)

## **ICT/ICM in agricultural research for development (AR4D) in the Asia-Pacific region: A status report (2011)**

[knowledge.cta.int/en/content/view/full/15289](http://knowledge.cta.int/en/content/view/full/15289)

[This report](#) presents the results of an assessment of the status, use and application of ICT/ICM in AR4D in the national agricultural research and innovation systems in 19 countries in the Asia-Pacific region. The findings are based on data gathered through a survey of ICM managers in addition to the country status reports in different ICT/ICM workshops organized by APAARI in 2010-2011. It concludes that most national systems for AR4D have very weak coordination in developing, implementing, operating and managing their information systems. They lag behind, in implementing new concepts and technologies to improve their information services. There is an urgent need for transforming these systems to impact agricultural and their country's overall development. Countries with lesser capacities to share information and knowledge will have lesser capacities to participate effectively in the emerging knowledge based global economy. Key indicators are provided on the status of ICT/ICM in AR4D in Fiji, Papua New Guinea and Samoa. The report stresses the need for mainstreaming ICT/ICM in AR4D at different levels; increased political commitment; increased, improved and targeted investment; capacity development; improving governance; and enabling greater sharing of data, information and knowledge at all levels.

## **ECOWAS launches project to monitor agricultural information in West Africa**

[knowledge.cta.int/en/content/view/full/15293](http://knowledge.cta.int/en/content/view/full/15293)

The Economic Community of West African States (ECOWAS) has developed and launched a project in Accra to monitor agricultural data and information in the sub-region. The project dubbed 'ECOWAS Agricultural Information System' (ECOAGRIS) aims to help decision makers to have and use reliable data and updated analyses to better formulate and monitor strategies for agricultural development. It would also help to effectively manage food security issues and promote the trade of food products in the sub-region. The initiative was designed with the inception of Agricultural Policy of ECOWAS and Comprehensive Africa Agricultural Development Program.

([Ghana Business News](#), 7/03/2012)

## **Achieving agricultural development through capacity building for African higher education**

[knowledge.cta.int/en/content/view/full/15298](http://knowledge.cta.int/en/content/view/full/15298)

Worldwatch's *Nourishing the planet* project features an opinion piece on capacity building for African higher education, focusing the discussion on the 'Feed the Future' initiative by the US government aid department. The report highlights the [Africa-U.S. Higher Education Initiative](#), led by the Association of Public and Land-grant Universities, which recently championed an effort that resulted in USAID awarding eleven long-term university partnerships linking U.S. and African universities. Awards were made through the Higher Education for Development programme. These partnerships are aimed at building the African institutional and human capacity to tackle food security. They are expected to contribute to improving agricultural education in African universities as well as fundamentally transform them into intellectual and scientific centres that can take on the region's food security challenges.

([Nourishing the planet](#), 01/03/2012)

## **Opinion: Scientists must be taught to manage**

[knowledge.cta.int/en/content/view/full/15299](http://knowledge.cta.int/en/content/view/full/15299)

This column by a young researcher published in *Nature* develops the argument that scientists are not trained to run labs and manage a research team, leading to added pressure. The author believes a logical framework for lab management would be instrumental in the success of research start-ups and argues for basic management training at post-doc and professor level.

([Nature](#), 28/03/2012)

## **Caribbean RIE Network, March 2012 Updates: From 'icehouse' to 'hothouse'?**

[knowledge.cta.int/en/content/view/full/15263](http://knowledge.cta.int/en/content/view/full/15263)

[The March 2012 updates](#) of the Caribbean Research Innovation and Entrepreneurship Network focus on a number of innovations in the agricultural sector in the region. One story covers [agribusiness incubation](#) and comments on Trinidad's National Integrated Business Incubator System (IBIS): 'Business incubation is a process that a number of small and large countries have used to deliver tangible benefits from a range of innovation and entrepreneurship initiatives. Successful business incubation is not that easy to set up and deliver. Every successful business incubator in the world is in fact not just a simple entity with a team of people based in a physical building. Rather, it is a complex ecosystem that embraces many different aspects of business establishment and development including concept proofing, product and service validation, the formation of extensive networks and alliances on a global (niche) scale, developing a strong funding component and encouraging sharing and collaboration at every level and in every area. In addition, a significant number of business incubators have developed models that eventually enable them to become self-funding. The ones which provide a "free ride" tend to have low success rates and fail as support for them wanes'.

(Caribbean RIE Network, 03/2012)

## **New European Innovation Partnership to focus on 'Agricultural Sustainability and Productivity'**

[knowledge.cta.int/en/content/view/full/15300](http://knowledge.cta.int/en/content/view/full/15300)

Late February 2012, the European Commission unveiled its plans for two new European Innovation Partnerships (EIPs) that will go some way to meeting the environmental and social issues facing Europe in the near future. The EIP that focuses on agriculture will deal with the increasing challenges food security poses for Europe, where, in this century, there will be a sharp rise in demand for feed, fibre, biomass, and biomaterials. This demand will come at the same time as a slow-down in production, due to cuts in agricultural research and the effects our actions have had on the environment and natural resources.



This new partnership will seek to encourage innovations for sustainable food security.  
([CORDIS](#), 01/03/2012)

### **A European project to achieve more sustainable production and distribution of foodstuffs**

[knowledge.cta.int/en/content/view/full/15305](http://knowledge.cta.int/en/content/view/full/15305)

The SENSE project (Harmonised Environmental Sustainability in the European food and drink chain) brings together researchers, producers, transformers and distributors in order to achieve a harmonised, integral methodology that can be used to evaluate the environmental impact of food products accurately and efficiently. The project SENSE (7th FP) aims to contribute towards getting the food and drink sector to engage in more environmentally sustainable production, transformation and distribution of its products. The current situation presses the need to have tools that will help to reduce the environmental impact of food and drink throughout their production chain, starting with their production and transformation and going right up to their commercial distribution. The SENSE members will be focusing specifically on creating a methodology applied to the juice, dairy, meat and aquaculture sectors, chosen for their importance in the European market.

([EurekAlert](#), 22/02/2012)

### **Inexpensive process uses *moringa* tree protein to produce clean drinking water**

[knowledge.cta.int/en/content/view/full/15308](http://knowledge.cta.int/en/content/view/full/15308)

Researchers at Pennsylvania State University describe, in a podcast for the Global Challenges/Chemistry Solutions project, a new water-treatment process that uses the seeds of the *Moringa oleifera* tree to purify and clarify water inexpensively and sustainably. Following past research that identified a protein in *moringa* seeds with cleaning properties in water, the scientists added an extract of the seed containing the positively charged *moringa* protein (which binds to sediment and kills microbes) to negatively charged sand. The resulting 'functionalized', or 'f-sand', proved effective in capturing lab-grown E. coli and damaging their membranes. The f-sand was also able to remove sediment from water samples. The results open the possibility that f-sand can provide a simple, locally sustainable process for producing storable drinking water. [Global Challenges/Chemistry Solutions](#) is a series of podcasts describing some of the 21st century's most daunting problems, and how cutting-edge research in chemistry matters in the quest for solutions.

([EurekAlert](#), 29/02/2012)

### **Plants remember drought, change responses to survive**

[knowledge.cta.int/en/content/view/full/15312](http://knowledge.cta.int/en/content/view/full/15312)

A research team from the University of Nebraska-Lincoln, US, has shown that plants subjected to a previous period of drought are able to better withstand new periods of water stress. The research confirms for the first time the scientific basis for what home gardeners and nursery professionals have often learned through hard experience: Transplants do better when water is withheld for a few days to drought harden them before the move. This phenomenon of drought hardening was documented when scientists compared the reaction of plants that had been previously stressed by withholding water to those not previously stressed. The pre-stressed plants bounced back more quickly the next time they were dehydrated. Specifically, the non-strained plants wilted faster than trained plants and their leaves lost water at a faster rate than trained plants. Plant nurseries adopting this drought hardening process could ensure smallholder farmers in drought-prone regions.

([ScienceDaily](#), 15/03/2012)

### **Water resources in Europe and Africa**

[knowledge.cta.int/en/content/view/full/15316](http://knowledge.cta.int/en/content/view/full/15316)

The report *Current Water Resources in Europe and Africa* published by the Joint European Research Centre (JRC) shows variations in yearly freshwater generation from 10 mm to over 500 mm for Europe and from less than 0.1 mm to over 500 mm for Africa. The report outlines existing uncertainties and points to many future research challenges, knowledge gaps, and data gaps in the field of water resources estimation and identifies that further research efforts are needed for improved water management. While acknowledging that estimating water scarcity is a challenging exercise, improving the data on water abstractions is critical, as the most recent pan-African data on water abstractions is from the year 2000. The lack of available observed river flow data for Africa, for example, creates a major bottleneck in calibrating and verifying hydrological models for the continent. Satellite data provide improved meteorological data for Africa, but data on water abstractions need to be updated more frequently.

([Physorg](#), 14/03/2012)

### **U.S. food safety policy enters a new era**

[knowledge.cta.int/en/content/view/full/15320](http://knowledge.cta.int/en/content/view/full/15320)

[This note](#) from the US Department of Agriculture Economic Research Service, explains how the recently passed (2011) Food Safety Modernization Act (FSMA) embodies a farm-to-fork, preventive approach that reflects an established scientific/managerial consensus on how to improve food safety systems (i.e. a more comprehensive Hazard Analysis and Critical Control Points (HACCP) process). It argues for more research on food safety initiatives similar to the HACCP process to help guide implementation of the Act. It presses the importance of a positive relationship between scientists and policy makers for more relevant regulations in the food industry.

### **A methodological framework to design and assess food traceability systems**

[knowledge.cta.int/en/content/view/full/15323](http://knowledge.cta.int/en/content/view/full/15323)

[This paper](#) from the *International Food and Agribusiness Management Review* presents a methodological framework to

design, assess and manage food traceability systems (TS). The services delivered for the multiple beneficiaries of the TS are listed and featured by a series of high-level performance criteria. Also proposed is a library of modular technical solutions to guide designers in choosing appropriate traceability solutions. Technical and practical performance criteria are provided for daily traceability control. The proposed performance system can be used in a design methodology as well as for auditing a traceability system. The model serves as a base for an Information System applied to a poultry processing company.

### **Global fisheries numbers game**

[knowledge.cta.int/en/content/view/full/15325](http://knowledge.cta.int/en/content/view/full/15325)

Researchers from the University of British Columbia, Canada, presented at the annual meeting of the American Association for the Advancement of Science (AAAS), new results from a case study that found that fishing agreements between the European Union (EU) and Madagascar, for access to Madagascar's seafood, are not as fair as they may appear on paper. The problem is rooted in incomplete data about fisheries, the authors believe. The official numbers from the UN underestimate how much fishing fleets around the world catch, because they exclude smaller-scale operations and recreational activities. Analysis indicates that when these data are included, the final fisheries catches can be six times higher than commercial catch numbers alone.

([Science](#), 19/02/2012)

### **Shrimp farms have high carbon footprint**

[knowledge.cta.int/en/content/view/full/15328](http://knowledge.cta.int/en/content/view/full/15328)

Fifty to sixty percent of shrimp farms are located in tidal zones in Asian countries, mostly on cleared mangrove forests. The carbon footprint of the shrimp from this land use is about 10-fold greater than the land use carbon footprint of an equivalent amount of beef produced from a pasture formed from a tropical rainforest.

([Physorg](#) via [The Atlantic Wire](#), 18/02/2012)

### **Research reveals why fishermen keep fishing despite dwindling catches**

[knowledge.cta.int/en/content/view/full/15331](http://knowledge.cta.int/en/content/view/full/15331)

Research led by the University of East Anglia (UEA), UK, challenges previously held notions about poverty and adaptation by investigating why fishermen stick with their trade despite dwindling catches. The research team surveyed almost 600 fishers in five African countries and found that half of the fishermen would not be tempted to seek out a new livelihood - even if their catch declined by 50%. Fishermen in the more vibrant and developed economies were less likely to give up the trade than those from poorer communities. The researchers noted that fishermen in Madagascar, a country they rated as poor, would sooner leave the fisheries sector than those in the Seychelles, a wealthier country. Decisions are influenced by much more than simple profitability; the fishermen also consider job satisfaction, family tradition, sense of identity among a range of other factors. Fisheries are challenged by the combined effects of overfishing, climate change, deteriorating ecosystems and conservation policies. Understanding how fishermen respond to these changes is critical to managing fisheries, and identifying intervention points for conservation policies, the authors believe.

([Alpha Galileo](#), 9/02/2012)

### **Inland fish farming in high demand in PNG**

[knowledge.cta.int/en/content/view/full/15334](http://knowledge.cta.int/en/content/view/full/15334)

Malum Nalu has a short report on the aquaculture programme in Papua New Guinea. An officer of the Agriculture and Resource Development Centre (ARDC, within the Department of Agriculture and Livestock) highlights the interest of fishermen and identifies the challenges faced including lack of skilled manpower, funding constraints and facilities which need to be upgraded.

([Malum Nalu](#), 02/2012)

[Back To Top](#)

## **Selected publications | [RSS](#)**

### **Thematic dossier from the CSFD on dryland pastoralism**

[knowledge.cta.int/en/content/view/full/15338](http://knowledge.cta.int/en/content/view/full/15338)

The latest [thematic dossier](#) of the French science committee on desertification (CSFD) focuses on pastoral systems in sub-Saharan Africa, their relevance, their many roles, threats to them, as well as interactions between pastoralism and natural resources. It also questions the conditions for sustainable pastoralism.

### **Contested agronomy: Agricultural research in a changing world**

[knowledge.cta.int/en/content/view/full/15341](http://knowledge.cta.int/en/content/view/full/15341)

[Contested agronomy: Agricultural research in a changing world](#) addresses the interconnected policy and development issues within the field of agronomy and agricultural research by exploring key developments since the mid-1970s. The book focuses in particular on the emergence of the neoliberal project and the rise of the participation and environmental agendas, taking into consideration how these have had profound impacts on the practice of agronomic research in the developing world.

*Contested Agronomy* explores, through a series of case studies, the basis for a much needed 'political agronomy' analysis that highlights the impacts of problem framing and narratives, historical disjunctures, epistemic communities and the increasing pressure to demonstrate 'success' on both agricultural research and the farmers, processors and consumers it is meant to serve. This book is not available online but is highly recommended for professionals, researchers and students engaged in

agriculture, science and technology studies and other aspects of ARD.

### **Integrated natural resource management in the highlands of eastern Africa: From concept to practice**

[knowledge.cta.int/en/content/view/full/15344](http://knowledge.cta.int/en/content/view/full/15344)

German, L. et al. International Development Research Center (IDRC), Earthscan, 2012.

[This book](#) documents a decade of research, methodological innovation, and lessons learned in an eco-regional research-for-development program operating in the eastern African highlands, the African Highlands Initiative (AHI). It summarizes the experiences of farmers, research and development workers, policy and decision-makers who have interacted within an innovation system with the common goal of implementing an integrated approach to natural resource management (NRM) in the humid highlands. This book demonstrates the crucial importance of 'approach' in shaping the outcomes of research and development, and distils lessons learned on what works, where and why. It is enriched with examples and case studies from five benchmark sites in Ethiopia, Uganda, Kenya, and Tanzania, whose variability provides the reader with an in-depth knowledge of the complexities of integrated NRM in agro-ecosystems that play an important role in the rural economy of the region.

### **Intra-household access to livestock information and financial services in Kenya**

[knowledge.cta.int/en/content/view/full/15348](http://knowledge.cta.int/en/content/view/full/15348)

Access to timely and reliable information on livestock production and marketing is important in addressing the production and marketing aspects of the sector alongside access to financial services. [This study](#) analyzes the intra-household disparities in access to information and financial services among rural households in selected districts in Kenya. Specifically, it compares women's access to information on livestock production and financial services with that of men. Results show that informal channels such as farmer to farmer interactions were the key sources of information for livestock production and marketing. Men in male headed households received more training and were exposed to greater and more varied topics than women. Men borrowed more from formal credit providers such as banks and co-operatives while women mainly borrowed from their community groups and neighbours. Analysis of determinants of savings by women revealed that women's age and education positively and significantly increase their probability to save.

### **Asia-Pacific Network for Global Change Research, Science Bulletin, issue 2, March 2012**

[knowledge.cta.int/en/content/view/full/15351](http://knowledge.cta.int/en/content/view/full/15351)

[The latest issue](#) of the Science Bulletin from the [Asia-Pacific Network for Global Change Research](#) (APN) outlines the projects that were funded or completed between April 2011 and March 2012. Centred on the adaptation of agriculture to climate change, topics include, among other: pests and disease risks, water management practices that take into account floods and drought, and the use of meteorological data for local agriculture. (MediaTerre, 23/02/2012)

### **PAERIP Newsletter, issue 3**

[knowledge.cta.int/en/content/view/full/15354](http://knowledge.cta.int/en/content/view/full/15354)

[This 3<sup>rd</sup> edition](#) of the PAERIP (Promoting African European Research Infrastructure Partnerships) quarterly e-Newsletter highlights some of the key outcomes of the project activities over the period December 2011 to February 2012. This issue features the *Second report on Research Infrastructures*, an analysis of the Horizon 2020 initiative, a report on the EU-Africa Trust Fund, and more.

[Back To Top](#)

## **Events | [RSS](#)**

### **Climate Change and Population Conference on Africa**

[knowledge.cta.int/en/content/view/full/15358](http://knowledge.cta.int/en/content/view/full/15358)

Dates: 01-04 July 2012

Venue: University of Ghana, Legon, Ghana

The Co-Chairs of the Scientific Steering Committee of the Climate Change And Population Conference On Africa under the auspices of the IDRC African Adaptation Research Centre of Excellence Initiative at the Regional Institute for Population Studies, University of Ghana Legon Accra, is pleased to announce the above stated conference. For more information, visit [www.ug.edu.gh/climateconference/index.php](http://www.ug.edu.gh/climateconference/index.php).

### **ICRA three week course on 'Design and management of interactive learning in rural innovation'**

[knowledge.cta.int/en/content/view/full/15234](http://knowledge.cta.int/en/content/view/full/15234)

Date: 5 -23 November 2012

Venue: Wageningen, The Netherlands

Meant for professional staff of extension and rural advisory services involved in linking relevant rural and agricultural stakeholders in joint learning and action-research programmes, [this course](#) has the following objectives: enhance participants' competencies to facilitate, trigger and coach collective learning in rural innovation; strengthening the capacities of learning facilitators within the context of existing innovation processes, programmes, and projects.

### **Caribbean Regional Fisheries Mechanism eighth annual scientific meeting**

[knowledge.cta.int/en/content/view/full/15360](http://knowledge.cta.int/en/content/view/full/15360)

Date: 20-30 June 2012

Venue: Kingstown, St. Vincent and the Grenadines

This meeting is meant for national and regional technical and scientific fishery experts who have responsibility for conducting fishery research and fishery assessment activities and for formulating fisheries management advice. The objectives of the meeting are: (i) to use the available and relevant data to assess the status of those fishery resources for which management advice is needed, (ii) to discuss, and interpret the results of completed fishery data analyses, taking into account local and traditional knowledge and understanding of the fisheries concerned, (iii) to make recommendations for management of the fisheries investigated for completed assessments, (iv) to make recommendations for improvements in statistics, research and assessments, and (v) to provide training in fishery data manipulation and analysis.

More information [here](#).

[Back To Top](#)

## Grants, Competitions and Calls | [RSS](#)

### **Call for proposals: INTRA-ACP academic mobility scheme**

[knowledge.cta.int/en/content/view/full/15236](http://knowledge.cta.int/en/content/view/full/15236)

Deadline: 10 May 2012

[This call](#) aims to strengthen cooperation between higher education institutions in Africa, the Caribbean and the Pacific in view of increasing access to quality education that will encourage and enable students to undertake postgraduate studies, and to promote student retention in the region along with mobility of staff (academic and administrative) while increasing competitiveness and attractiveness of the institutions themselves. In Africa, this mobility scheme is called the 'Nyerere Program'.

### **Sponsored course on climate change in South Africa**

[knowledge.cta.int/en/content/view/full/15169](http://knowledge.cta.int/en/content/view/full/15169)

Deadline: 20 May 2012

The Climate System Analysis Group (CSAG) based at the University of Cape Town will be running its annual course, 'Winter School: Using climate information for adaptation and policy development', from 9-20 July 2012. This 2-week intensive course has been developed specifically for developing country participants and aims to take participants through the full spectrum of climate and climate change related topics. Online application is now open at <http://www.csag.uct.ac.za/winterschool> and early application is encouraged as places are limited. More information [here](#).

### **ERA-ARD Call for Proposals 'Improving rural livelihoods in Sub-Saharan Africa: Sustainable and climate-smart intensification of agricultural production'**

[knowledge.cta.int/en/content/view/full/15239](http://knowledge.cta.int/en/content/view/full/15239)

Deadline: 22 May 2012

The ERA-ARD II Transnational Call was launched on March 8th, 2012. This first ERA-ARD II Transnational Research Call provides new opportunities for researchers and other stakeholders (farmers, farmer organizations, NGOs, policy makers, etc.) to take part in multilateral research cooperation in the field of sustainable and climate change resilient intensification of agricultural production. Research consortia interested in applying for funds will be able to apply up to the limits set aside by the respective national funding organisation. Please visit the [Open Call web page](#).

### **Louis Malassis international scientific prize for agriculture and food**

[knowledge.cta.int/en/content/view/full/15259](http://knowledge.cta.int/en/content/view/full/15259)

Deadline for submission: 16 July 2012

Agropolis Fondation created the 'Louis Malassis International Scientific Prize for Agriculture and Food' which aims to recognize individuals for their exemplary and promising contribution in promoting agricultural innovation through research, development and capacity building in the North, South or in the Mediterranean in order to improve food and agricultural systems sustainability as well as contribute to addressing food security and poverty reduction.

The Prize consists of two categories: 'Louis Malassis Distinguished Scientist Prize' and the 'Louis Malassis Young Promising Scientist Prize'. More information on the [Agropolis website](#).

### **4th call for proposals for EDULINK II**

[knowledge.cta.int/en/content/view/full/15238](http://knowledge.cta.int/en/content/view/full/15238)

Deadline for submission: 30 July 2012

EDULINK II is open to public or private Higher Educational Institutions (HEIs), networks of HEIs and Regional Institutions of Higher Education. The current Call for Proposals is designed to continue fostering co-operation in the field of Higher Education between the countries of the African, Caribbean and Pacific Group of States (ACP States) and the European Union. For further information please visit the [EDULINK website](#). To download all official documentation including guidelines and application forms please visit the [Funding page of the EuropeAid Website](#). To download the EDULINK II information leaflet, click [here](#).

[Back To Top](#)

## Jobs | [RSS](#)

### **2 Director positions at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)**



Deadline: 10 May 2012

### **Director, CGIAR Research Program 3.5 'Grain Legumes'**

ICRISAT is seeking an innovative, dynamic and creative Program Director who is a strong believer in partnerships to lead and manage the CGIAR Research Program on Grain Legumes. The Consultative Group for International Agriculture Research (CGIAR) Research Program on Grain Legumes (CRP 3.5) will apply modern crop improvement, agronomic management, seed systems interventions, up-scaling and out-scaling technologies/innovations, and related high-priority value-chain interventions to maximize the benefits that grain legumes offer to smallholder farmers, especially women, in developing countries.

[www.icrisat.org/careers/director-gl-3.5.htm](http://www.icrisat.org/careers/director-gl-3.5.htm)

### **Director, CGIAR Research Program 3.6 'Dryland Cereals'**

ICRISAT is seeking an innovative, dynamic and creative Program Director who is a strong believer in partnerships to lead and manage the CGIAR Research Program on Dryland Cereals. The Consultative Group for International Agriculture Research (CGIAR) Research Program on Dryland Cereals (CRP 3.6) will focus on four staple cereals (barley, finger millet, pearl millet, and sorghum) that are of particular significance to smallholder farmers, especially women, in marginal dryland environments of Africa and Asia. The program will enhance the use of genetic resources and breeding efficiency, produce high yielding varieties with resistances to major biotic and abiotic stresses, improve crop management to reduce yield gaps, and improve systems to deliver new technologies into the hands of smallholders.

[www.icrisat.org/careers/director-gl-3.6.htm](http://www.icrisat.org/careers/director-gl-3.6.htm)

[Back To Top](#)

## **Web resources | [More on our website](#)**

### **African Drought Monitor**

[knowledge.cta.int/en/content/view/full/15363](http://knowledge.cta.int/en/content/view/full/15363)

Monitoring drought globally is challenging because of the lack of dense in-situ hydrologic data in many regions. This is particularly problematic for developing regions such as Africa where water information is arguably most needed, but virtually nonexistent on the ground in many regions. A potential way forward is to use a modelling framework that couples available satellite remote sensing and in-situ information. This results in physically consistent and spatially and temporally continuous estimates of the water cycle and drought. A [drought monitor](#) based on [this framework](#) and an accompanying web-based user interface have been developed by Princeton University, in collaboration with UNESCO, for operational and research use over Africa. Based on macro scale hydrologic modelling, the system ingests available data to provide a real-time assessment of the water cycle and drought conditions, and puts this in the context of the long-term record back to 1950. The data is made available online for drought research and operational use to augment on-the-ground assessments of drought.

### **EUCARINET Website**

[knowledge.cta.int/en/content/view/full/15364](http://knowledge.cta.int/en/content/view/full/15364)

[EUCARINET](#) is a four-year INCONET Coordination Action, supported by the European Commission (DG RTD-INCO), whose main goal is to strengthen bi-regional sustainable dialogue on Science and Technology between Europe and the Caribbean. Researchers can find an overview of each Caribbean sub-region and the major relevance of R&D plus some interesting links to institutions fostering research and cooperation. It also hosts a [database](#) of all research publications from all Caribbean countries/territories except Puerto Rico and the US Virgin Islands for the period 1999-2009 (based on the Web of Science (WoS,®) online database of Thomson Reuters).

[Back To Top](#)

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