



The World Vegetable Center

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## **The effects of global warming tend to strike densely populated areas more severely** **Researchers quantify national 'socioclimatic' risks**

China, India and the United States are the most 'socioeconomically' vulnerable to climate change, suggests a recently published study in the Proceedings of the National Academy of Sciences.

"By integrating state-of-the-art global climate model experiments with socioeconomic indicators of poverty, wealth and population, we create a unique measure of 'socioclimatic' risk for each nation," says Noah Diffenbaugh, the lead author and assistant professor of earth and atmospheric sciences at Purdue University.

"We need to consider how different societies are threatened by these physical changes in unique ways," said Leigh Raymond, associate director of Purdue's Climate Change Research Center and co-author of the study, in a press release. "Impoverished areas have fewer resources to deal with environmental stress, while wealthy areas have a greater amount of infrastructure that could be lost, and areas with larger populations have more lives at stake."

Nations with large populations will see more significant impacts from climate change because the effects of global warming tend to strike densely populated areas more severely. And when wealth is considered, richer countries come out worse than developing countries.

The study indicates the most vulnerable nations include Bangladesh, China and Myanmar in Asia. In Africa, the western Sahel and southwestern nations are the most exposed while, in the Americas, Brazil and the eastern United States are most at risk.

China and India are particularly vulnerable due to their large populations, high proportions of poor people, and fast economic growth. The United States is also ranked highly because of its large population and wealth.

"Our study is an important first step to get people thinking about the issues from this new perspective," said Raymond.

"Of course, famine is a far more serious risk than property damage. But all of these parameters are relevant to policy decisions, and it seems clear that more sophisticated estimates of national exposures to socioclimatic risk will be highly relevant for negotiations of any future climate change agreement."

*Based on a recent story by Jia Hepeng in SciDev.*

**Full paper:**

<http://www.pnas.org/cgi/content/abstract/0706680105v1>

- Source: Communications

## New Publications (Articles & Books) Received by the Library

Calvo, M.M., Santa-Maria, G. (2008). Effect of illumination and chlorophylls on stability of tomato carotenoids. *FOOD CHEMISTRY*. v.107(4):1365-1370.

Dini, I., Tenore, G.C., Dini, A. (2008). Chemical composition, nutritional value and antioxidant properties of *Allium caepa* L. Var. *tropeana* (red onion) seeds. *FOOD CHEMISTRY*. v.107(2):613-621.

Pedraza-Chaverri, J., Yam-Canul, P., Chirino, Y.I., Sanchez-Gonzalez, D.J., Martinez-Martinez, C.M., Cruz, C., Medina-Campos, O.N. (2008). Protective effects of garlic powder against potassium dichromate-induced oxidative stress and nephrotoxicity. *FOOD AND CHEMICAL TOXICOLOGY*. v.46(2):619-627.

Diaz-Montano, J., Reese, J.C., Schapaugh, W.T., Campbell, L.R. (2007). Chlorophyll loss caused by soybean aphid (Hemiptera: Aphididae) feeding on soybean. *JOURNAL OF ECONOMIC ENTOMOLOGY*. v.100(5):1657-1664.

He, J.M., Hu, J., She, X.P. (2007). Effects of NaCl stress on changes in the ultraviolet-B radiation-induced cyclobutyl pyrimidine dimer and ultraviolet absorbing compound contents in mung bean. *JOURNAL OF PLANT PHYSIOLOGY AND MOLECULAR BIOLOGY*. v.33(5):441-448.

Hulsebusch, C., Wichern, F., Hemann, H., Wolff, P. (2007). Organic agriculture in the tropics and subtropics - current status and perspectives. *Witzenhausen : Kassel University Press GmbH*. iv, 166 pp.

Roberts, D.P., McKenna, L.F., Lakshman, D.K., Meyer, S.L.F., Kong, H., de Souza, J.T., Lydon, J., Baker, C.J., Buyer, J.S., Chung, S. (2007). Suppression of damping-off of cucumber caused by *Pythium ultimum* with live cells and extracts of *Serratia marcescens* N4-5. *SOIL BIOLOGY AND BIOCHEMISTRY*. v.39(9):2275-2288.

Shalaby, T.A. (2007). Factors affecting haploid induction through in vitro gynogenesis in summer squash (*Cucurbita pepo* L.). *SCIENTIA HORTICULTURAE*. v.115(1):1-6.

Kuntashula, E., Sileshi, G., Mafongoya, P.L., Banda, J. (2006). Farmer participatory evaluation of the potential for organic vegetable production in the wetlands of Zambia. *Zambia. OUTLOOK ON AGRICULTURE*. v.35(4):299-305

Chellemi, D.O., Rosskopf, E.N. (2004). Yield potential and soil quality under alternative crop production practices for fresh market pepper. *RENEWABLE AGRICULTURE AND FOOD SYSTEMS*. v.19(3):168-175.

Thestrup-Pedersen, K. (2004). Atopic eczema. What has caused the epidemic in industrialised countries and can early intervention modify the natural history of atopic eczema?. *JOURNAL OF COSMETIC DERMATOLOGY*. v.2:202-210.

Shim, K.H., Sung, N.K., Kang, K.S., Ahn, C.W., Seo, K.I. (1992). Analysis of glucosinolate and the change of contents during processing and storage in cruciferous vegetables. *JOURNAL OF THE KOREAN SOCIETY OF FOOD AND NUTRITION*. v.21(1):43-48.



### Recommended Web Link of the Week: [www.molecular-plant-biotechnology.info](http://www.molecular-plant-biotechnology.info)

“Molecular-Plant-Biotechnology.info” is a web site designed to provide useful and interesting Biotechnology informational resources. Its vision is to create a site with an international reach that is free, informative and a place where people can easily find Biotechnology related reference resources.

More information:

<http://www.molecular-plant-biotechnology.info/>

## New Popular Magazines Now Available in the Library



*Business Weekly* (Chinese) – January 7-13, 2008

*National Geographic* (Chinese) – January 2008

*Time* – January 14, 2008

- Source: Fang-chin Chen/Communications

## Travel

**Dr. Manuel Palada**, 27-29 January 2008, to Chiangmai, Thailand, to visit vegetable soybean production areas and to give a seminar on organic vegetable soybean production.

**Dr. Kadirvel Palchamy**, 11 January–16 February 2008, on annual leave, during which he is also going to collect thrip vectors from tospovirus infected fields in India for further research.

- Source: Yyonne Ting/ASU

## New E-mail Address

Dr. Rachael Symonds  
Postdoctoral Fellow  
Biotechnology /Molecular Breeding:  
rachael.symonds@netra.avrdc.org.tw

- Shirley Chen/Communications



## Reminder from the Comptroller's Office

This is to remind you that changes of address (nationally recruited staff only) should be reported to **Ms. Chuang Pih-ehr** (ext. 143, <[pihehr@avrdc.org](mailto:pihehr@avrdc.org)>), Comptroller's Office by 21 January to enable the issuing of income tax forms.

戶籍地址有異動的同仁，請將變動資料在元月21日前送交會計室莊碧娥小姐(分機143, <[pihehr@avrdc.org](mailto:pihehr@avrdc.org)>)，以便利所得稅申報作業，謝謝合作。

- Source: Comptroller's Office

## New Recruitment I: Welcome to AVRDC, Sokona!



I am pleased to inform you that we have appointed **Dr. Sokona Dagnoko** as Vegetable Breeder for the National Breeding Unit based in Mali as a part of the Project "Vegetable Breeding and Seed Systems for Poverty Reduction in Africa" for an initial period of two years, effective 7 January 2008. She

reports directly to Jan Helsen, Project Administrative Manager.

Sokona recently received her PhD in Plant Breeding and Genetics from Cornell University, Ithaca, New York, USA. She has five years experience in practical plant breeding in multiple environments across western Africa, including on-station as well as on-farm trials.

Sokona's major responsibilities as vBSS Vegetable Breeder for Mali are (1) support the program's national

breeding unit (NBU) in Mali; (2) develop and release new vegetable varieties; (3) with the country Liaison Officer and Project Manager, prioritize crops and breeding objectives for each crop, and design efficient breeding strategies. Priority will be given to varietal development of tomato, chili pepper, sweet pepper, onion, cabbage, and locally important indigenous vegetables; (4) establish infrastructure, procure equipment and supplies, conduct staff training, and design plant breeding protocols in consultation with the Research Manager and Project Administrative Manager and in accordance with AVRDC's policies and regulations; (5) collaborate closely with staff of the NBU, AVRDC staff at the Regional Center for Africa in Tanzania, and AVRDC headquarters; (6) develop cooperative linkages with contract seed producers, NARS regulatory personnel, and seed distribution channels; (7) monitor program activities; (8) perform any other duties required by the vBSS Project Administrative Manager or the Director of AVRDC's Regional Center for Africa.

- Lilia Tan Habacon, Human Resources Manager

## New Recruitment II: Welcome to AVRDC, Maureen!



I am pleased to inform you that we have appointed **Ms. Maureen Mecozzi** as Editor for an initial period of two years, effective 10 February 2008. She will report directly to Warwick Easdown, Head of Communications.

Maureen received her Master of Science in Sustainable Agriculture/Rural Development from Imperial College, London, UK in 2005. She has over 10 years of experience as a writer, editor and web designer.

Maureen's major responsibilities are to set editorial standards for the Center, provide editorial services at the global, regional and project levels and assist in conceptualizing, writing and production of the Center's publications. Specific duties include (1) setting editorial

standards for the Center and editing the Center's annual reports, regional reports, research papers and global newsletters; (2) editing time-critical documents as requested by senior management; (3) working with scientists who have proposed research and development publications to clarify their writing objectives, provide technical and language editing and assistance in final production; (4) providing editorial quality control for content posted on the Center's websites; (5) supervising outsourced writers or editors or publications produced jointly with other organizations; and (6) facilitating the delivery of training to scientists in key aspects of writing and editing.

Maureen will be reachable at extension 572 (Communication Services Office on the ground floor of Chandler Hall) and 821 (apartment in the Center's compound).

- Lilia Tan Habacon, Human Resources Manager

## Position Announcement Research Assistant (vBSS project) – Pepper Unit

AVRDC – The World Vegetable Center is seeking a Research Assistant who will be working at the Pepper Unit and for the Vegetable Breeding and Seed Systems for Africa (vBSS) Project.

**Scope of Responsibilities:** Executes the plans outlined by the senior scientist and Principal Research Assistant according to the objectives of Action Plans and the PMS (Project Management System); Actively participates in facilitating the daily activities of the Pepper Unit.

**Specific Duties and Tasks:** Assists in all aspects of the International Chili Pepper Nursery and International Sweet Pepper Nursery, as outlined by the senior scientist; Manages seed harvests and seed inventory; Executes seed requests and shipments at the instruction or approval of the senior scientist; Cooperates with other units regarding interdisciplinary activities; Prepares routine administrative forms (job orders, requisitions, leave requests etc.) and assures maintenance of unit facilities and equipment with the field assistant; Assists in technical aspects of the breeding activities, including data collection, computer input and statistical analysis of research results, and actively prepares summary reports of research findings, in the English and Chinese languages; Assumes responsibility for particular activities, including crossing blocks, assays, selections, generation advance, trials, and report preparation, in consultation with unit head and Principal Research Assistant; Maintains computer files safely, with regular backups and archiving; Maintains photographic database of yield trial entries, and other plant info; Supports activities in coordination with National Breeding Units established under the Vegetable Breeding and Seed Systems for Africa project.

**Qualifications:** Bachelor of Science degree or equivalent, in Horticulture or related discipline; Working knowledge of vegetable crops, breeding, or related skills; Fluent in spoken and written Mandarin, Taiwan-

ese, and English languages; Experience in using computer programs such as Windows, Word, Excel, PowerPoint, Access.

**Application:** Submit a letter of application, Curriculum Vitae, with names, and contact addresses (phone number and e-mail) of three referees. Send to: Ms Felisa Wang, Human Resources, AVRDC - The World Vegetable Center, P.O. Box 42, Shanhua, Tainan 74199, Taiwan; e-mail: [jobapply@netra.avrdc.org.tw](mailto:jobapply@netra.avrdc.org.tw).

**Closing Date:** The closing date for application is 15 February 2008.

番椒組 徵 「計畫研究助理」乙名

**主要負責：**依據專家或資深助理提出的研究工作；積極地參與番椒育種組試驗工作及日常管理工作。

工作包括：協助專家提出之所有國際性的辣椒及甜椒育種研究；管理種子採收及儲藏；種子索求及寄送事宜；與其他單位合作參與各學科間之研究；處理一般行政業務，例如打工作申請單、採購單、請假單等；試驗器材之管理與維護；育種研究之技術協助，如：收集研究資料、輸入電腦、結果統計與分析、準備中文及英文研究報告；與專家及資深助理商議有關雜交試驗，品系進代與選拔試驗；維護電腦檔案之安全、做備份、歸檔；產量試驗品系圖檔與資料繼續與保存；協助非洲「國家育種」計劃之進行。

**應徵資格：**園藝或相關科系畢業之學士或同等學歷；具作物、育種知識或相關技能；中、英文說寫流利，會說台語；熟悉Word, Excel, PowerPoint, Access等電腦軟體。

- Source: Felisa Wang/Human Resources

## Matchball to Rest: Tennis Courts Are Undergoing Renovation

The Center's tennis courts will be closed starting today, 11 January, to 18 January in order to repair cracks.

因網球場裂縫整修，自即日（元月1日）起到元月18日暫停使用。

- Source: Janice Chou, TSO

## 2007 AVRDC Annual Party

Chinese New Year is approaching. The 2007 AVRDC Annual Party will be held on Friday, 18 January 2008 from 18:00 to 20:30. This year, the party will be on HQ campus at the area around the circle in front of Shen Hall (administration building). This announcement serves as an invitation to all AVRDC staff.

We have lined up a lively program for the party: Chinese yo-yo performance by Shih Shin elementary school children, some exciting performances by ladies and gentlemen of AVRDC, some songs and the drawing of raffle prizes. We will also make sure there is some down time for everybody to just enjoy the dinner and chat with friends and colleagues.

Each participating staff member will receive a ticket for the raffle prize draw. Please remember to bring the ticket to the party: drop one in the raffle box and keep one for the door prize. To accommodate those who live in Tainan, the bus will depart the Center at 20:45 on Friday, 18 January. Please call Iin Luther (123) or Angela Chen (402) if you have any questions.

本中心2007年度聯歡會將於元月18日(星期五)晚6時至8時30分在行政大樓前圓環舉行。康委會特此邀請所有同仁踴躍參加。我們安排了可口美食以及豐富節目:有善化小新國小扯鈴隊、亞蔬俊男美女隊表演精彩歌舞加上最受歡迎之摸彩活動,希望所有同仁盡情享受難得之歡樂時光。每位參加者都可抽獎,請記得將摸彩券投入摸彩箱並保留存根領獎。當晚交通車將於8時45分開出。其他詳情請洽盧卡婷(分機123)或陳美洪(分機402)。

- Source: Iin Luther, Chair 2007 R&S Committee



**A Time For Spring Fever:** “Common Cosmos” is the name of the flower that is transforming some of the Center’s organic fields into a blaze of reds and violets at the moment. Primarily sown to enhance landscape architecture, the flowers are expected to attract beneficial insects (such as pollinating bees) and to a minor degree to also to protect the soil from erosion.

- Source: Communications & CEM (H.H. Tsai, Peter Juroszek)