

Anthony Okon Nyong, Ph.D.

Acting Director

Centre for Environmental Resources and Hazards Research,
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Nationality: Nigerian
Date of Birth: 13 September, 1963
Languages: Excellent English, passable French that can improve

Summary of Experience: Eighteen years research and administration experience that has focused on the interactions between human activities and the environment. My research focus since 1995 has focused on climate risk assessment and management in the African Sahel. I have demonstrated ability in planning, implementation and monitoring of action research activities on climate change vulnerability assessments and adaptation. I have served as a member of the Team that prepared Nigeria's first National Communication. I am also part of the team working on the second National Communication.

Education:

Ph.D. Geography, 1999, School of Geography and Geology, McMaster University, Hamilton, Ontario, Canada.

Post-Graduate Specialist Certificate, Geographic Information Systems, 1998, McMaster University/ Mohawk College of Applied Arts and Technology, Hamilton, Ontario, Canada.

M.Sc. Land Surveying (Specialization: Environmental Remote Sensing), 1987, Faculty of Engineering, Ahmadu Bello University, Zaria, Nigeria.

B.Sc. (Hons) Geography and Regional Planning, 1983, Faculty of Social Sciences, University of Calabar, Calabar, Nigeria

Career Development:

Training Course on Modelling Future Climate Using PRECIS, University of Cape Town, South Africa. March 3 – 7, 2003

Training Course on Project Development for Climate Change Vulnerability and Adaptation, International Centre for Theoretical Physics, Trieste, Italy, June 3 – 14, 2002.

Intensive Training Course on Development and Application of Scenarios in Impacts, Adaptation and Vulnerability Assessments for Climate Change, Tyndall Centre for Climate Change, University of East Anglia, Norwich, UK. April 15 – 26, 2002

Training Course on Population, Health and Environment, The Rand Corporation, Santa Monica, California, USA. Jan 11 – 13, 2000.

Application of Remote Sensing Techniques to Agriculture, Weather and Water Resources, International Centre for Theoretical Physics, Trieste, Italy, 27 Feb - 12 Mar 1989.

Professional Experience: Centre for Environmental Resources and Hazards Research, University of Jos, Nigeria

2002 – Current

Associate Professor/Acting Director,

My duties include the day-to-day running of the centre that provides research and consultancy services in the areas of Global Environmental Change and development. The Centre trains graduate students (M.Sc. and Ph.D.) in Environmental Resource Planning and Population and Manpower Planning. The Centre also runs short courses for Governmental and Non-Governmental/Civil Society Organizations. I am responsible for strategy development, policy formulation, performance reporting, project management and public outreach at the Centre.

In addition to directing the activities at the Centre, I lead the research initiatives at the Centre.

PI (AIACC-funded research), Assessing the vulnerability and adaptation of poor rural households to droughts in the West African Sahel, (2001-2005),

START Visiting Scientist – Stockholm Environment Institute, Oxford. I worked on a research to develop a spatial drought vulnerability model for the West African Sahel, 2003.

Consultant – Working with DFID (UK), IDRC and CIDA to develop a 10-year Capacity Building Programme for Climate Change Adaptation Research in Africa.

I have collaborated on several research projects with other research institutions and universities in Africa, UK and the USA.

1987 - 2002

Lecturer/Senior Lecturer/Research Scientist, Department of Geography and Planning, University of Jos. I taught graduate and undergraduate courses in Water Resources Management, Environmental Resources Planning, Techniques in Environmental Management, Geographic Information Systems, Statistics and Research Methods. I also supervised graduate and undergraduate students' dissertations. I served on the Board of the University Consultancy Services where I participated actively in the design and implementation of several national and community-based projects. I also participated in several internationally funded research and development programmes.

Research Assistant (Ph.D Studentship), A CIDA-funded collaborative action research project between McMaster University, Canada and University of Jos, Nigeria, on Efficient Rural Water Development and Use in Northern Nigeria. The project aimed at developing environmentally-sound, culturally-accepted and sustainable water

management strategies among the rural populations in semi-arid northern Nigeria. I led the fieldwork and data collection activities for the project and developed a GIS for the project. I also worked closely with selected communities to establish pilot water and sanitation projects and train local managers to manage the projects (1994 – 1999)

GIS/Database Coordinator, EEC-funded collaborative project between the University of Durham (UK) and the University of Jos. The aim of the project was to rehabilitate abandoned Minelands on the Jos Plateau through the restoration of livelihood systems and the re-invigoration of decaying mining settlements. The project was geared towards poverty reduction in the decaying settlements. Being a multi-disciplinary research project, my responsibility was to coordinate the data collection and handling such that it would be available seamlessly to all participating researchers and institutions. I participated in the development of an environmental strategy for the redevelopment of these affected communities (1987 – 1998).

Lecturer, Department of Topographic Sciences, College of Environmental Studies, Kaduna Polytechnic, Kaduna. I taught map reading, cartography and introduction to environmental science. I also worked as a consultant with the Institution's Consultancy Unit where I participated in environmental and socioeconomic baseline data collection for the preparation of the design of Abuja, Nigeria's new Capital (1983-1984).

Professional Responsibilities:

Member, Science Advisory Committee, Global Environmental Change and Food Systems, June 2006 till Date.

Member, Scoping Committee for Global Environmental Change, ICSU Africa Regional Office.

Member, Pan-African Committee for START (PACOM). START is the Global Change SysTem for Analysis, Research and Training with Headquarters in Washington, DC. and is funded by the International Geosphere-Biosphere Program, the International Human Dimensions Program and the World Climate Research Program. START assists developing regions and countries in the implementation of global change research and capacity building. PACOM is the scientific planning committee for Africa, Oct 2005 till present.

Member, Interim Task Force to set up an African Network on Global Environmental Change, similar to the IAI for the Americas and the Asia-Pacific Network (Sept 2005 till present).

Facilitator, UNDP and Federal Ministry of Environment, Nigeria Training Workshops on development of relevant environment-poverty sustainability indicators and on mainstreaming environment into Nigeria's sectoral plans and Policies (March – Nov, 2005).

Team Leader, Federal Ministry of Environment Nigeria developing a strategy for mainstreaming climate change adaptation into Nigeria's PRSP. Facilitated by UNDP (August, 2005).

Coordinating Lead Author, Africa Chapter, Fourth Assessment Report of the Impact of Climate Change, Working Group II of the United Nations' Intergovernmental Panel on Climate Change, 2004 till present.

Member, Task Group on providing and managing Data for developing Climate Scenarios and for Impact assessment, United Nations Intergovernmental Panel on Climate Change (TGICA) (2003 till present).

Member, AIACC Data, Methods and Synthesis Steering Group, <http://sedac.ciesin.columbia.edu.aiacc>

Technical Consultant, The UNESCO cross-cutting project on the application of remote sensing to the integrated management of ecosystems and water resources in Nigeria, Federal University of Technology, Minna and The National Remote Sensing Centre, Jos.

Contributing author and Expert Reviewer, UNDP Technical Report on Adaptation Policy Framework for Developing Countries (2003-2004)

Chairman, Working Group I for the Preparation of the Nigeria National Document for the World Summit on Sustainable Development in South Africa in August – September, 2002.

Consultant, National Centre for Remote Sensing, Jos, Plateau State, Nigeria (2001 – present).

Consultant, Department of Drought and Desertification Control, Federal Ministry of Environment, Abuja. Nigeria (2003 – present).

Graduate Students Coordinator, School of Geography and Geology, McMaster University, Hamilton, Canada (1997 – 1998).

Chair, Nigerian Cartographic Association, Plateau State Chapter, Nigeria, 1992 - 1994

President, Nigerian Remote Sensing Society, Plateau State, Nigeria, 1989 - 1992.

Computer Skills

GIS Packages - ArcView, Arc/Info, MapInfo, IDRISI

Statistical Packages - SPSS, SPLUS, MINTAB and Epi-Info

Operating Systems - UNIX, Windows

Database and Spreadsheets - DBASE, Quattro Pro, MS Access, Excel

Remote Sensing - ERMapper, IDRISI

Other Skills:

Very Good field work skills, Sound oral and written communication, Good Analytical skills, A good team player

Awards and Fellowships: START Visiting Scientist, Stockholm Environmental Institute, Oxford Office, 10b Littlegate Street, Oxford OX1 1QT, UK, 2004.

Ph.D. Research Fellowship, Canadian International Development Agency, Jan 95 – Jun 98.

Junior Research Associate (Remote Sensing and Geographic Information Systems), International Centre for Theoretical Physics, Trieste, Italy, Feb 89 – Jan 93

Professional Memberships: Nigerian Association of Hydrological Sciences
Nigerian Cartographic Association
Remote sensing and Geomatics Association of Nigeria
Canadian Cartographic Association
Canadian Regional Science Association

PUBLICATIONS

2006

Nyong, A.O. and Niang-Diop, I. (2006): Impacts of Climate Change in the Tropics: the African Experience, in *Avoiding Dangerous Climate Change*, Schellnhuber, H J., Cramer, W., Nakicenovic, N., Wigley, T. and Yohe, G (Eds). Cambridge University Press, 2006.

Leary, N., C. Conde, A. **Nyong** and J. Pulhin (eds) (Forthcoming), *For Whom the Bell Tolls, Case Studies of Climate Change Vulnerability* (Forthcoming).

Ziervogel, G., **Nyong**, A.O., Osman, B., Conde, C. and T. Downing (2006), "Climate Variability and Change: Implications for Household Food Security. AIACC Working Papers, <http://www.aiaccproject.org>.

Nyong, A., Adepetu, A., Berthe, A., D. Dabi and V.C. Ihemegbulem (Forthcoming), In Leary, N., C. Conde, A. Nyong and J. Pulhin (eds) (Forthcoming), *For Whom the Bell Tolls, Case Studies of Climate Change Vulnerability* (Forthcoming).

Nyong, A. O., F. Adesina and B. Osman-Elasha (2006). The value of indigenous knowledge systems in integrating mitigation and adaptation to climate change. *Journal of Mitigation and Adaptation* (Forthcoming)

Fiki, C.O., **Nyong, A.O.** and Dabi, D.D. (2006) Evolving Practices of Community Development in Nigeria: Governmental Contexts or Interdisciplinary Tools, *Journal of Community Practice* (Forthcoming)

Dabi, D.D. and **A.O. Nyong** (2006), "Incorporating Community-Based Adaptation Strategies into Rural Development Policies in a Developing Economy". *Journal of Environmental Sciences*. (Forthcoming)

Osagbemi, M. O., **Nyong, A. O.** and A. A. Adepetu (2006). Assessing the impact of the promotion of self-protective strategies in the light of spouse-sharing practice among the Okun, Nigeria. *African Journal of Reproductive Health*. (Forthcoming)

2005

Conde, C; Lonsdale, K; **Nyong, A. O.** and Aguilar, Y. (2005). Stakeholder Engagement in the Adaptation Process. In Lim, B., E. Spanger-Siegfried, I. Burton, E. Malone, and S. Huq

(eds.). 2005. *Adaptation Policy Frameworks for Climate Change: Developing Strategies, Policies, and Measures*. Cambridge University Press, New York.

Downing, T.E; M. Grubb; R.S.J. Tol, **A.O Nyong** and others (2005): Scoping Uncertainty in the Social Cost of Carbon, Final report on Social Cost of Carbon: A Closer Look at Uncertainty.

2004

Nyong, A.O. and S.P. Gusah (2004): Municipal waste Audit for Abuja Federal Capital City. A Final Report submitted to DFID and the Federal Capital Development Authority, Abuja.

2003

Nyong, A. O., D. D. Dabi and J. E. Dung (2003). A Decision Support System for Citing Rural Water Facilities in Katarko in Yobe State, Nigeria using GIS. *International Journal of Environmental Dynamics*. 1: 1-15.

Nyong, A. O., Adepetu, A. A., Ihemegbulem, V.C. and Dabi, D. D. (2003). Household Factors that Influence Adaptive Capacity in Northern Nigeria. *AIACC Notes*, 2(2): 6-8.

Ihemegbulem V.C.; **Nyong, A.O.**; Adepetu, A.A. and D.D. Dabi (2003): Vulnerability of Rural Populations in the West African Sahel to Drought and Climate Change and to Food Security. Technical Report No.2. Assessment of Impacts and Adaptations to Climate Change in Multiple Regions, START Secretariat, Washington, U.S.A.

Ezeutah, E. and **A.O. Nyong** (2003). *Site Appraisal and Draft Landuse Plan for Saraji District, Abuja Phase III*. Technical Report Submitted to Federal Capital Development Authority, Abuja

2002

Ihemegbulem, V. C. and **A. O. Nyong** (2002). Jos. In *Atlas of Nigeria, Jaguar-Jeune-Afrique*, France

Osagbemi, M.O. V.O. Okpara, **A.O. Nyong**, V.C. Ihemegbulem, and L.O. Ashadumo (2002) Characteristics of Female Child Labour in Jos Metropolis, *Journal of Environmental Sciences*, 6(1): 103-110.

Nyong, A. O., Osagbemi, M. O., Ihemegbulem, V. C. and E. J. Dung (2002). Demographic Characteristics of Rural Semi-Arid Nigeria: Implications for Sustainable Water Use. *Journal of Environmental Sciences*, 4 (1): 22 – 35.

Ihemegbulem V.C.; **Nyong, A.O.**; Adepetu, A.A. Berthe A. Dabi D.D. and P. Sow (2002): Rural Households and Droughts in the West African Sahel: Vulnerability and Effective Adaptation Measures, Technical Report No. 1. Assessment of Impacts and Adaptations to Climate Change in Multiple Regions, START Secretariat, Washington, U.S.A.

2001

Osagbemi, M. O., Adepetu, A. A., Aliu, Y. F., **Nyong, A. O.**, Olowolafe, E.O. and L.O. Oshadumo (2001). The Practice of Spouse-Sharing (Ale/Alase) among the Okun in Nigeria: Does Knowledge of HIV/AIDS and Perception of Risk Increase Protective Practices. *Journal of Environmental Sciences* 4(1): 144-156.

Nyong, A. O. and P. S. Kanaroglou (2001). A Survey of Household Domestic Water Use Patterns in Rural Semi-Arid A survey of domestic water use in rural northern Nigeria. *Journal of Arid Environments* 49: 387-400.

2000 and earlier

Osagbemi, M. O., A. A. Adepetu, **A.O. Nyong** and A. S. Jegede. (2000): *The Practice of Spouse-Sharing among the Okun People of Nigeria: Does Knowledge of HIV/AIDS and Perception of Risk Increase Protective Practices?* Working Paper 2 Submitted to Strategic Component on Social Science Research on Reproductive Health, Department of Reproductive Health and Research, World Health Organization.

Nyong, A. O. and J. O. Kolawole (1999a). Bush Fires and the Future: Modelling Changes Resulting From Bush Fires in the Savanna and Forest Ecosystems. In *Bush Fires in Nigeria*, Eziashi A.C. (Ed.). pp. 68-75.

Nyong, A. O. and P. S. Kanaroglou (1999b) Water Availability and its Influence on Population Distribution in Northern Nigeria, *Journal of Environmental Sciences*, 3(1): 65-79.

Nyong, A. O. and P. S. Kanaroglou (1999c). Modelling Seasonal Variations in Domestic Water Demand in Rural Northern Nigeria: Implications for Policy. *Environment and Planning A*. 34(4):145-158

Nyong, A. O. and P. S. Kanaroglou (1999d). A survey of domestic water use in rural northern Nigeria. *Journal of Human Ecology*, 27(4): 537-555.

Nyong, A.O (1997). Demographic Adjustment to Domestic Water Scarcity in Northern Nigeria. *Proceedings of an International Workshop on Research in Northern Nigeria*. Proceedings of an International Workshop on Northern Nigeria, McMaster University, Pp. 30-48.

Nyong, A. O. (1989). *Applications of Remote Sensing and GIS Techniques to the Mapping of the Land Use of Naraguta Region of Plateau State, Nigeria*. Proceedings of an International Workshop on Remote Sensing Techniques with Applications to Agriculture, water and Weather Resources. ICTP. Trieste, Italy. February 28 - March 13, 1989. Pp. 1-18.

Nyong, A. O. (1988a). Error Modelling on the Zeiss PK-1 Monocomparator. In *Proceedings of the Workshop on Surveying and Mapping for National Development*. Port Harcourt, Nigeria. May 6 - 8, 1988. Pp.32-40

Nyong, A. O. (1988b). Population Data Acquisition from Remotely Sensed Data. In *Proceedings of the Workshop on Surveying and Mapping for National Development*. Port Harcourt, Nigeria. May 6 - 8, 1988. Pp. 9-15.

Selected Presentations at Conferences/Meetings

Nyong, A.O. (2005), Household strategies for securing food in the West African Sahel, UNEP,GEF and AIACC Side Event at COP 11, Montreal, December 6, 2005.

Nyong, A.O. (2005), Climate Change and Health: Africa's Adaptation Needs. WHO/Health Canada Side Event at COP 11, Montreal, December 1, 2005.

Nyong, A.O. (2005), Adaptive Capacity for Food Production in the West African Sahel, C-CIARN Side Event on Living with Climate Change: Sharing Adaptation Experiences, COP 11, Montreal, December 2, 2005

- Nyong, A.O.** (2005): *Drought and Conflict in the West African Sahel: Developing Conflict Management Strategies*. Invited Lecture at the Woodrow Wilson International Centre for Scholars, Environment Change and Security Program, October 18, 2005.
- Nyong, A. O.** (2005): *Africa's Vulnerability to Climate Change: Can Kyoto make a Difference?* Invited Presentation at the International Conference on Global Warming: Looking Beyond Kyoto. Yale Centre for the Study of Globalization, October 21-22, 2005.
- Nyong, A.O.** and C. Fiki (2005): *Drought-Related Conflict Generation, Resolution and management in Sahelian Northern Nigeria*. Paper presented at the International Workshop on Climate Change and Human Security, Oslo, Norway, 21-23 June, 2005.
- Nyong, A.O.** (2005): *Technologies for adapting to Climate Change in the water and agricultural sectors*. An invited paper presented at the UNFCCC Workshop on Transfer of Technology for Adaptation. Hilton Hotel, Tobago, 15 – 18th June, 2005.
- Nyong, A.O.** (2005): *Adapting to Climate variability and Change among poor rural households: Evidence from the Field*. Poster presented at the Royal Society Discussion Meeting, Royal Society, 6-10 Charlton Terrace, London, UK, April 26-28, 2005.
- Nyong, A.O.** (2005): *Climate Change and Food Security in Northern Nigeria*: Paper presented at the AIACC Synthesis Workshop in the Rockefeller Conference Centre, Bellagio, Italy, March 6-13, 2005.
- Nyong, A.O.** (2005): *Impact of Climate Change in the Tropics: The African Experience*. A Keynote Address presented at the Scientific Symposium on Stabilization of Greenhouse Gases, Met Office, Exeter, United Kingdom, 1-3 February, 2005
- Nyong, A.O.** (2005): *The Economic, Developmental and Livelihood Implications of Climate Induced Depletion of Ecosystems and Biodiversity in Africa*. Invited Paper prepared and Presented on behalf of WWF at the Scientific Symposium on Stabilization of Greenhouse Gases, Met Office, Exeter, United Kingdom, 1-3 February, 2005.
- Nyong, A.O.** (2004). *The AIACC Data, Methods and Synthesis Activity (DMS)*. Paper presented at the 2nd AIACC Asia and the Pacific Regional Workshop, Traders Hotel, Manilla, Philippines, November 2 – 5, 2004.
- Nyong, A.** (2004) *Adapting to Droughts in Semi-Arid Northern Nigeria: Influencing Factors and Enhancing Opportunities*. Paper presented at UNFCCC In-Session Workshop on Impacts of, and vulnerability and Adaptation to, Climate Change. Hotel Maritim, Bonn, Germany, 18 June 2004,
- Nyong, A.O.** (2004): *Vulnerability of poor rural households to climate variability and change in the West African Sahel*. Paper presented at the Second International Conference on Climate Impact assessment, June 28 – July 02, 2004, Grainau, Germany.
- Nyong, A.O.**; Berthe, A.; Dabi, D. (2004) *Developing Local Scale Socio-Economic Scenarios for Climate Change Impact Assessment in Northern Nigeria*. Paper presented at the Second AIACC Regional Workshop for Africa and Indian Ocean Islands, Hotel Ngor Diarama, Dakar, Senegal.
- Berthe, A.; **Nyong, A.**, Adepetu, A. A. (2004) *Rural Household Livelihood Strategies and Food Insecurity in the Sahel: Case Study of Mali*. Paper presented at the Second AIACC Regional Workshop for Africa and Indian Ocean Islands, Hotel Ngor Diarama, Dakar, Senegal.

- Nyong, A.O.**, Adepetu, A.A. Berthé, A., Ihemegbulem, V.C., and Dabi, D. (2003): *Rural Households and Drought in the West African Sahel: Vulnerability and Effective Adaptation Measures*. Paper presented at the AIACC/UNEP Side Event at COP9, Milan, Dec.9, 2003.
- Nyong, A.O.**; Adepetu, A. A.; Ihemegbulem, V.C.; Dabi, D.D (2003). *Livelihood Strategies among Poor Rural Households to Cope with Droughts in Northern Nigeria*. Paper presented at the UNFCCC Expert Workshop on Local Coping strategies and Technologies for Adaptation. Delhi, India. 12-13 November 2001.
- Nyong, A.O.** (2003). *What Makes Capacity Building for Adaptation to Climate Change Work?* Paper presented at the Adaptation Research Workshop, New Delhi, India, November 9-11, 2003.
- Nyong, A.O.** (2003). *Designing Adaptation Strategies for Droughts in the Sahel: Some thoughts from Northern Nigeria*. Paper presented at the Adaptation Research Workshop, New Delhi, India, November 9-11, 2003.
- Nyong, A.O.**; A.A.; Adepetu, A. A.; Ihemegbulem, V.C.; Dabi, D.D (2003). *Vulnerability and adaptive Capacity of Rural Populations in the Sahel*. Paper presented at the Stanford University Energy Modelling Forum, Snowmass, Colorado, August 1 - 8, 2003.
- Nyong, A.O.** (2003). *Vulnerability of Rural Populations to Climate Change: Implications for Food Security in West Africa*. Invited paper presented at an international conference on Climate Change, Carbon Dynamics and World Food Security, Organized by University of Ohio, Cornell University, World Bank and WHO, University of Ohio, Columbus, June 11-14, 2003.
- Nyong, A.O.** (2003) *Environmental Degradation and Global Changes: the Nigerian Situation*. An invited paper presented at the World Environment Day, June 3, 2003, Abuja.
- Nyong, A.O** and V. C. Ihemegbulem (2003). *The Way We Live: Livelihood Systems in the Sahel*. Paper presented at the UNDP/TWAS workshop on Climate Change Research in Africa, Johannesburg, South Africa, March 10-14, 2003.
- Nyong, A.O.**; Adepetu A, and Berthe A. (2002): *Participatory Rural Appraisal in Climate Change Vulnerability Research*. Paper presented at the AIACC Training Course on Vulnerability and Adaptation to Climate Change, Trieste, Italy. June 3 – 14, 2002.
- Nyong, A.O.** (2002). *Reducing Vulnerability to Weather and Climate Extremes: A Lecture Presented at the Year 2002 World Meteorological Day Celebration, Jos, Sponsored by the Meteorological Department, Federal Ministry of Aviation, March 25, 2002*
- Nyong, A.O.** (2001). *ECODEM: An Ecological-Demographic Model for Nigeria*. A paper presented at the International Workshop on Population, Health and Environment, RAND Corporation, Santa Monica, California, USA January 11 - 13, 2001
- Nyong, A.O.** (2000). *Early Warning Systems for Drought and Desertification Management in Nigeria*. A paper presented at the National Seminar on Drought Preparedness, Organized by the Federal Ministry of Environment, Shiroro Hotel, Minna, Niger State, 21 - 23 November, 2000.
- Nyong, A.O.** and N. Ononiwu (2000). *Rain Water Harvesting as a Drought Mitigation Strategy*. A paper presented at the National Seminar on Drought Preparedness, Organized by the Federal Ministry of Environment, Shiroro Hotel, Minna, Niger State, 21 - 23 November, 2000.

- Nyong, A.O.** (1995). Population Density and Water Availability in North Eastern Nigeria: An Ordered Logit Estimation. Paper presented at the 19th Annual Meeting of the Canadian Regional Science Association, University of Quebec at Montreal, Montreal, Quebec. June 3-5, 1995.
- Nyong, A.O.** (1988). *Application of Remote Sensing Techniques to Monitoring Oil Spills in Nigeria's Coastal Zone*. Paper Presented at the 30th Annual Conference of the Nigerian Geographic Association, Port Harcourt, April, 1988.