



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
INTERNATIONAL ATOMIC ENERGY AGENCY

FAO/IAEA Technical Meeting

Combating Soil Degradation to Enhance Food Security in Africa: The Role of Nuclear Techniques in Developing Improved Soil, Water and Nutrient Management Practices

ICRAF Headquarters, Nairobi, Kenya

10-12 October 2005

**ANNOUNCEMENT
AND
CALL FOR PAPERS**

1. INTRODUCTION

Traditional shifting cultivation with long-duration fallow periods previously sustained low but relatively stable production of food crops in Africa. Shifting cultivation, however, has disappeared as increasing population density and pressures for land use led to intensive, sedentary agriculture on small-scale land holdings and expansion of agriculture into marginal areas. The intensification of agriculture in small land holdings in Africa has typically not been accompanied by sufficient inputs of nutrients through biological nitrogen fixation, organic materials and mineral fertilizers to match the outputs of nutrients through harvested products and losses. The result has been widespread soil degradation through processes such as mining of soil nutrients and depletion of soil fertility, soil erosion, accelerated acidification, salinization and desertification in smallholder agriculture in Africa. This continued degradation reduces the capacity to increase food production. Therefore, although large areas of forests, wetlands, river valley bottoms and grassland savannah have been put under crops production, the food gap (requirements minus production) keeps widening. The population is thus trapped in a vicious cycle between land degradation and poverty, and the lack of resources and knowledge to generate adequate income and opportunities to overcome the degradation. It is then urgent to invest to combat soil and land degradation to reverse this vicious circle.

This Meeting, held by the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture, will take the form of a seminar on the role of nuclear techniques in the development of improved soil water and nutrient management practices.

VENUE

ICRAF Headquarters, Gigiri, Nairobi, Kenya
 World Agroforestry Centre (ICRAF)
 United Nations Avenue, Gigiri
 PO Box 30677-00100 GPO
 Nairobi, Kenya
 Telephone: +254 20 524000 or via USA +1 650 833 6645
 Fax: +254 20 524001 or via USA +1 650 833 6646

OBJECTIVES

- a) to review recent advances in the use of nuclear and related techniques for developing integrated soil, water and nutrient management practices to combat land degradation and desertification
- b) to enhance knowledge and awareness of the potential of nuclear and related techniques to obtain unique information to enable formulation of integrated strategies to combat land degradation at national and regional scales
- c) to provide a forum for participants to exchange ideas and experiences and establish linkages for future collaboration

SCOPE AND ISSUES TO BE ADDRESSED

The use of isotopic tracers and soil moisture neutron probes to quantify stocks and flows of nutrients, water and soil in cropping systems.

Specific issues to be addressed are:

- a) nutrient mining and replacement, including macro and micronutrient deficiencies and toxicities
- b) carbon sequestration

- c) soil acidity
- d) soil salinization
- e) water management
- f) soil erosion and sedimentation

WORKING LANGUAGE

The working language of the Meeting will be English.

PARTICIPATION

The Meeting is intended for researchers from countries listed in Annex A, directly involved in field and/or laboratory research activities that make use of nuclear techniques and are related to one of the specific issues to be addressed in the Conference.

All persons wishing to participate in the Meeting are requested to complete a Participation Form (see attached Form A) and send it as soon as possible to the competent official authority (Ministry of Foreign Affairs, Ministry of Agriculture, national FAO or national atomic energy authority) for subsequent transmission to the IAEA. A participant will be accepted only if the Participation Form:

- a) is transmitted through the government of a Member State of the sponsoring organizations or by an organization invited to participate and
- b) is received by the IAEA no later than **30 June 2005**.

EXPENDITURES

As a general rule, the sponsoring Organizations do not pay the costs of attendance, i.e. travel and living expenses, of participants. However, limited funds are available to help meet the cost of attendance of selected specialists mainly from developing countries with low economic resources. Generally, not more than one grant will be awarded to any one country.

If governments wish to apply for a grant on behalf of one of their specialists, they should address specific requests to the IAEA Secretariat to this effect. Governments should ensure that applications for grants:

- a) are received by the IAEA no later than **30 June 2005**, and
- b) are accompanied by a duly completed and signed Grant Application Form (see attached Form C)

Applications that do not comply with conditions a) and b) cannot be considered.

The grants awarded will be in form of lump sums that usually cover only part of the cost of attendance.

CONTRIBUTED PAPER

a) Submission of extended synopses

Persons who wish to present a paper at the Meeting must submit an extended synopsis (in English) together with the completed Form for Submission of a Paper (Form B) and the Participation Form (Form A) to the competent national authority for official transmission to the IAEA in time for them to be received by the IAEA by **30 June 2005**. In addition, the synopsis should be sent electronically to the IAEA Scientific Secretary, Mr. C. Bernard, e-mail: C.Bernard@iaea.org. Authors are urged to make use of the Extended Synopsis Template in Word 2000. The template,

specifications and instructions for preparing the synopsis and using the synopsis template and a sample extended synopsis can be found in the “IAEASynopsis.zip” file that may be downloaded from the Technical Meeting Web sites.

The synopsis will be considered by the Programme Committee only if the Participation Form A and Paper Submission Form B have been received by the IAEA through the official governmental channels.

b) Acceptance of papers

Authors will be informed of whether their paper has been accepted by the Programme Committee on the basis of the extended synopsis submitted. At the same time, authors of accepted papers will be advised of the assigned paper number and session of presentation. The accepted synopses will be reproduced in unedited form in the Book of Extended Synopses.

PROCEEDINGS

It is intended that the proceedings of the Meeting will be published as a CD-Rom and that all participants will receive a free copy of the proceedings.

DOCUMENTS AND WEB SITES

Information on the Meeting as it becomes available will be placed on the two following web sites:

<http://www.iaea.org/worldatom/Meetings/>

http://www.iaea.org/programmes/nafa/d1/mtc/05_rtm.html

A preliminary programme of the Meeting will be sent to participants before the meeting. It will also be available from the above-mentioned web sites.

The final programme and Book of Extended Synopses will be distributed at registration.

ACCOMMODATION

A range of accommodation will be available. Detailed information on accommodation and other items will be sent directly to all designated participants well in advance of the meeting.

VISA

If you require a visa to enter Kenya, please submit the necessary applications to the nearest diplomatic or consular representative of Austria as early as possible (please note that this procedure may take up to three weeks).

ORGANIZERS

The Meeting is organized by the International Atomic Energy Agency (IAEA) in cooperation with the Tropical Soil Biology and Fertility Institute of CIAT (Nairobi), Kenyatta University (Nairobi) and World Agroforestry Centre-ICRAF (Nairobi).

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CHANNELS OF COMMUNICATION

The Participation Form and the Form for Submission of a paper, together with two copies of each synopsis, and, if applicable, the Grant Application Form, should be sent to the competent official authority (Ministry of Foreign Affairs, Ministry of Agriculture, national FAO or national atomic energy authority) for transmission to the IAEA.

Subsequent correspondence on scientific matters should be sent to the Scientific Secretary (Mr. C. Bernard) and correspondence on administrative matters to the IAEA Conference Service Section (Ms. C. Vilaplana).

Annex A

Member States of FAO and IAEA to be invited

Combating Soil Degradation to Enhance Food Security in Africa: The Role of Nuclear Techniques in Developing Improved Soil, Water And Nutrient Management Practices

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Algeria	Republic of the Congo	Libya	Senegal
Angola	Egypt	Madagascar	Seychelles
Benin	Equatorial Guinea	Malawi	Sierra Leone
Botswana	Eritrea	Mali	South Africa
Burkina Faso	Ethiopia	Mauritania	Sudan
Burundi	Gabon	Mauritius	Swaziland
Cameroon	Gambia	Morocco	Togo
Cap Verde	Ghana	Mozambique	Tunisia
Central African Republic	Guinea	Namibia	Uganda
Chad	Guinea Bissau	Niger	United Republic of. Tanzania
Comoros	Kenya	Nigeria	Zambia
Côte d'Ivoire	Lesotho	Rwanda	Zimbabwe
Democratic Republic of Congo	Liberia	Sao Tome & Principe	