



International Atomic Energy Agency

INFORMATION SHEET

- Title:** IAEA/RCA Workshop on the Establishment and Maintenance of the Databases of CSI and FRN Data of the Region
- Project Number and Title:** RAS-5.055 Improving Soil Fertility, Land Productivity and Land Degradation Mitigation
- Venue:** Kathmandu, Nepal
- Date:** 2 - 6 June 2014
- Deadline for Nominations:** **21 April 2014** (Please note that it will not be possible to consider those applications received after the deadline date due to administrative reasons).
- Organizers:** The International Atomic Energy Agency in cooperation with the Government of Nepal, through the Ministry of Science and Technology.
- Language:** English
- Host Country Organizer:** Mr Padam Raj Devkota,
Ministry of Science and Technology
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- Participation:** This workshop is open to participants from RCA Member States within the RAS-5.055 project and representatives of donor and international organizations. Each participating country is invited to nominate one participant.
- Participants Qualifications:** The workshop is open to one participant each from IAEA Member States in the Asia and Pacific region that are participating in the IAEA/RCA Project RAS-5.055, and will directly contribute to the project on the use of soil Fallout Radionuclides (FRN) and compound specific stable isotope (CSSI) techniques to assess and apportion the sources of soil erosion in landscapes and to identify hot spots of land degradation at a landscape level for effective soil conservation measures. The workshop is addressed to the project counterparts who are directly involved in the generation and interpretation of soil FRN and CSSI data.
- Background Information** The expanding population and economic development in the region is putting severe pressure on the utilization of the limited soil and water resources.

Response to poverty alleviation and food supply concerns have resulted in rapid deforestation and clearing of lands for agricultural cultivation. Furthermore, the steady increase of animal-derived protein in the diet of many Member States has significant implication on land-use. In some Member States, maize, which is used as animal feed, is increasingly grown in areas of steep slopes. This causes erosion and has a degrading impact on soil and water quality. In addition, inappropriate intensification of agricultural activities through the increased utilization of pesticides, fertilizers and livestock waste to enhance agricultural productivity can potentially lead to degradation of both soil and water. Sustainable agriculture will depend on maintaining an appropriate balance between environmental protection and the use of soil nutrients and water resources for crop and livestock production systems. There are available data on soil erosion rates in agricultural landscapes within the region. However, insufficient data exist with regard to the identification of hot-spot areas of land degradation in agricultural catchments for effective soil conservation measures, and the area-wide environmental impacts of erosion, sedimentation and the associated nutrients and pesticides on land productivity. Scientific data on the distribution, source and pathway of soil redistribution within landscapes are needed to address and then mitigate land degradation processes and to discriminate anthropogenic from natural causes such as the El Niño phenomenon, La Niña events and the prevailing climate change. Therefore an integrated approach is required to solving problems related to this declining soil and water quality caused by inappropriate land use intensification (combining aspects of livestock management with cropping systems and plant breeding) and ultimately the environmental impacts of these processes on nutrient cycling and water quantity and quality. Furthermore, in many Member States, the predicted climate variability and change could lead to more extreme weather events, such as droughts and flooding, both in terms of magnitude and frequency. To combat climate change, improved agricultural greenhouse gas emission inventories and models are needed in all states, so that developed and developing nations can constructively engage in negotiations to limit emissions without undermining sustainable development (including local agricultural development). In soil and land use studies, isotopic techniques play a crucial role in providing tracers to study those natural and anthropogenic processes. This will result in outcomes at a variety of different scales, from providing individual farmers with insights on more effective and efficient livestock, to improved crop, soil and agricultural water management, as well as giving political decision makers the background to enable informed decisions to be made on adaptation and mitigation options at national and regional levels.

Purpose of the Workshop:

The purpose of this one week workshop is to formulate the establishment and maintenance of data base of compound specific stable isotopes (CSSI) and fallout radionuclides (FRN) data of the region. This information will be used to provide comprehensive data of stable and radionuclide isotopes (IsoSources) for further extrapolation to other areas of the region with only information obtained from conventional non-nuclear isotopic data with the ultimate aim in the use of both conventional and isotopic data for modelling-simulation purposes to identify management factors that can minimize land degradation and improve land productivity and environmental sustainability.

Expected Output:

The expected output of this workshop will be to develop a consolidated action plan to establish and maintain data base of CSSI and FRN with the

purpose of developing a comprehensive and sustainable data for IsoSource modelling to identify the sources of soil erosion in landscapes and trace the proportion of different sources of nutrients including soil organic carbon and nitrate from farmlands. Information obtained through IsoSource modelling will be used by relevant stakeholders/decision makers/policy makers in Member States to develop on-farm management strategies and to make informed policy decisions that can enhance land productivity and environmental sustainability.

Application Procedures:

Nominations for the workshop should be submitted to the IAEA online through the Technical Cooperation Department's InTouch system (<http://intouch.iaea.org>). Should this not be possible, nominations may be submitted on the standard IAEA Nomination Form for meetings/workshops, (available on the IAEA website: <http://www.iaea.org>). Completed forms should be endorsed by relevant national authorities and returned to the Agency through official channels, i.e. the office of the National RCA Representative.

The completed nomination forms should be sent to the Programme Management Officer for this project, Oscar Acuña, through IAEA Official Fax (+43-1-26007) or E-Mail (Official.Mail@iaea.org), not later than **21 April 2014**. **Nominations received after this date or which have not been routed through the established official channels cannot be considered.**

The applications should contain sufficient information to establish the nominees have the required qualifications. The nominated candidate may not be selected if sufficient information is not provided.

Advanced nominations through facsimile (+43-1-2600-7), or e-mail (Official@iaea.org) are welcomed. The facsimile / e-mail should contain the following basic information about the candidate: name, date of birth, academic qualifications, and current position including the exact nature of the duties carried out, proficiency in English and full contact address including telephone/email/facsimile numbers.

Language Certificate:

In countries where English is not an official or a customary language, nominations must be accompanied by a **separate certificate** of the candidate's proficiency in English. This certificate should be issued by a language school, cultural institution or an embassy of a country in which English is spoken.

BSITF/ASITF:

It is recommended that meeting and training course participants complete the courses *Basic Security in the Field: Safety, Health and Welfare II (BSITF II – new version mandatory as of 1 September 2012)* and *Advanced Security in the Field (ASITF)* prior to undertaking missions to duty stations where UN security phases are in effect.

The aim of these courses is to educate participants on how best to avoid or minimize potential dangers and threats, and to show what individuals can do if they find themselves in insecure situations.

- Access to the courses, further information and FAQ can be found under the following link:

https://training.dss.un.org/courses/v21/pages/dss_login_register.php

Upon successful completion of the courses, certificates will be generated automatically. Copies of these certificates should be uploaded directly through the InTouch platform under “My Files” or forwarded as an e-mail attachment to the IAEA administrative contact indicated below.

Please keep a copy of these certificates, as they are *valid for a period of three (3) years*. If you are already certified on the BSITF II and ASITF courses, please upload them directly through InTouch or forward them to the IAEA administrative contact.

A printed copy of the certificate should be attached to the nominations.

**Administrative
and Financial
Arrangements:**

Nominating Governments will be informed in due course of the names of the candidates who have been selected and will at that time be given full details on the procedures to be followed with regard to administrative and financial matters.

During their attendance at the workshop, participants from countries eligible to receive technical assistance will be provided by the IAEA with a stipend sufficient to cover the cost of their accommodation, food, and minor incidental expenses. The IAEA will also provide the participants with a round-trip air ticket, economy/excursion class, from their home countries to Heidelberg, Australia, and return. Shipment of accumulated course materials to the participants' home countries is not the responsibility of the IAEA.

The organizers of the course do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in nominating participants, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.