



## **Associate Professional Officer- Crop Livestock Systems/Modeling (Supported by the Ministry of Foreign Affairs, Government of the Netherlands)**

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), with headquarters at Patancheru, Andhra Pradesh, India, invites applications for **Associate Professional Officer -Crop Livestock Systems/Modeling**.

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### **General Information:**

Title of the posting: Crop-Livestock Systems Analyst/Modeler  
Location: ICRISAT, Bamako, Mali  
Duration of the assignment: Initially one year, with the possibility of extension to 3 years.  
Grade: P1 step I or P2 step I the first year, depending on the level of education and experience

### **Eligibility:**

**Candidates from the Netherlands / European Union Countries.;** candidates having worked earlier as JPO/ JE/ APO/ AE or not eligible. Please check the minimum qualification requirements and the list of eligible countries on the website of the Dutch Ministry:

[http://www.minbuza.nl/en/Key\\_Topics/Development\\_Cooperation/Associate\\_Experts\\_Programme](http://www.minbuza.nl/en/Key_Topics/Development_Cooperation/Associate_Experts_Programme)

ICRISAT is one of the CGIAR international agricultural research centers. It operates throughout sub-Saharan Africa with facilities and staff in Mali, Niger, Nigeria, Nairobi, Malawi and Zimbabwe, as well as its headquarters in India. Bamako, Mali is the regional headquarters for West and Central Africa (WCA). ICRISAT staff collaborate closely with NARES, sister IARCs, ARIs, NGOs and private sector organizations from a further 20 sub-Saharan countries through sub-regional networks. In Bamako ICRISAT hosts ILRI, ICRAF and AVDRC on its research station at Samanko, as well as having a GIS laboratory with the Institute for Economie Rurale (IER) in Bamako. ICRISAT has a station in Niger with more than 10 scientists from various disciplines. It is a country where access to innovations is very limited. Please visit our website: [www.ICRISAT.ORG](http://www.ICRISAT.ORG).

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### **Supervision**

Direct supervision by: Dr. Tom van Mourik, ICRISAT, Bamako, Mali  
Title of the supervisor: Project Scientist, Integrated Striga & Soil Fertility Management

### **Content and methodology of the supervision:**

Dr Van Mourik will design the research program with the input from Dr. Peter Craufurd, Director of ICRISAT's Resilient Dryland Systems Research Program. Dr Van Mourik will also provide day-to-day supervision of experiments, data analysis and publication of the results. An agreed training/mentoring program that will set targets for research outputs and for building the skills of the APO, with quarterly reviews, will be designed and implemented. ICRISAT has a six-month interim and annual review process for all staff which includes the direct supervisor, regional director and research program director.

### **Position Overview:**

Crop-livestock-tree systems, ranging from intensive in higher potential zones to extensive (agro-pastoralism) in lower potential zones, are the major agricultural system across WCA. While much research has been conducted on the components of these systems, especially crops, relatively little has been done on the system per se and the interactions and tradeoffs between components. In order to gain a better understanding of the system, a framework that combines crop, natural resource and livestock management is required. The Wageningen FARMSIM group of models is one such modelling framework that has been successfully used in East and Southern Africa. Through this position, we would like to test whether this framework can be successfully used in crop-livestock systems in WCA. The position would contribute directly to building capacity in the area of systems analysis and modelling in WCA, as well as potentially influencing the setting of research targets.

***Duties and Responsibilities:***

The Crop-Livestock Systems Analyst/Modeler will help implement and further develop the Wageningen conceptual and modeling framework for crop-livestock systems (NUANCES-FARMSIM-LIVSIM: Rufino et al., 2011. Agric. Syst. 104: 175-190), in Mali. The APO will collate existing knowledge and data on crop-livestock systems and interactions, identify gaps in knowledge - especially the quantitative data needed to run the model, and with the supervisors, help design suitable experiments and data collection. These gaps may include nutrient cycling, livestock dynamics and household decision-making. This research program would be conducted in collaboration with Wageningen Agricultural University and with staff from the International Livestock Research Institute (ILRI) based at Bamako, Mali. We would expect the APO to publish results in peer-reviewed international journals.

***Training and Learning Opportunities to the APO:***

Through joint work with ICRISAT and other CGIAR scientists, as well as interactions with WAU, the APO will acquire skills in designing and managing research on crop-livestock systems and their components.

The APO will also acquire ability in the following professional areas:

- Use of FARMSIM and its components and apply this to data collected *in situ*.
- become conversant with system models, geospatial tools and methods
- become familiar with research planning processes and key African institutions and researchers in his/her field.
- learn how to work within a multidisciplinary research team
- gain experience in publication in peer-reviewed journals and other suitable dissemination outlets and experience in proposal development

***Skills and Competencies required:***

- Understanding/ analysis of systems; natural resource management
- Ability to work in multi-cultural society and to learn French, if needed
- To be a Good team member
- Capable of independent thought and work

***Minimum Qualifications:***

M.Sc. in a relevant specialization of soil science, natural resource modeling, ecosystem modeling or related field OR B.Sc followed by a minimum of three years of working experience. Candidates with PhD qualification may also apply.

***Experience:***

Preferably 2 years relevant professional experience in crop or livestock modeling is expected with a maximum experience of 4 years.

***General information:***

Living conditions in Bamako, Mali are good. Weather conditions are good most of the year with a hot season in April/May, and rains from June through September. Housing is comfortable and secure and there is plenty of opportunity for shopping, recreation, sport and dining out. There are good international air travel connections to Europe and elsewhere in Africa and telephone, internet and email facilities are available both at ICRISAT's country office and through local suppliers. The research facilities at ICRISAT are good with a number of other institutions co-located at the research station. Medical, dental and primary education facilities are available locally.

**How to apply:** Applications including curriculum vitae (giving contact address with email Id, date of birth, nationality, marital status – if married with spouse and children details), list of publications, and names and addresses of three referees should be sent to Human Resources, ICRISAT, Patancheru, Andhra Pradesh 502 324, India, or by email to: [icrisatjobs@cgiar.org](mailto:icrisatjobs@cgiar.org), clearly indicating the position applied in the subject column.

**Application deadline:** The position will remain open until **31May 2011**. **Applicants will receive acknowledgement of receipt of their submission.**

*ICRISAT is an equal opportunity employer and particularly welcomes applications from women candidates. Please note that only shortlisted candidates will be contacted.*