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2 PhD positions in Climate Smart Agriculture in East Africa Programme at Wageningen University

Apply before 12 November 2018

The majority of people in East Africa who are dependent on agriculture for their livelihoods will experience an increased vulnerability due to climate variability and change.

The *Climate Smart Agriculture, East Africa (CSA-EA)* programme funded by the Dutch Government will promote climate smart agriculture (CSA) as a way to transform and reorient agricultural systems to the new realities of climate change. The proposed programme will use an inclusive business development approach for CSA in arable farming in Kenya, Tanzania and Uganda. It will thereby contribute to the availability of climate resilient and sustainably produced food for the growing population in East Africa.

The programme will deliver impact in the following areas:

- Productive capacity and income increased for 300,000 smallholder farmers;
- Business performance improved for 50 agribusiness SMEs and 30 cooperatives for climate-proof value chains;
- Climate resilient sustainable food production practiced on 600,000 hectares with more carbon,- energy,- and water efficient production systems.

The implementation strategy of the CSA-East Africa programme is based on complementary interventions at three levels: (a) farming systems, (b) inclusive value chains, and (c) the enabling environment.

This five year program will be implemented by SNV (Netherlands Development Organization) in partnership with Wageningen University and Research, CGIAR's Climate Change, Agriculture and Food Security Programme, Agriterra, and Rabo Partnerships.

Within this exciting programme there are opportunities for the placement of two PhD students. The research of the PhD students will focus on identifying the main impact of climate smart agriculture interventions on developing more resilient farming systems and value chains. One of the students will study the impact of climate smart agriculture interventions on climate resilience of the farming systems, value chains and policies from a financial/economic perspective while the other student will focus on the environmental and biophysical impacts.

Both PhD students will be enrolled in one of the graduate schools of **Wageningen University**. The *PhD students are expected to spend about 18 months in Wageningen, The Netherlands and 30 months in East Africa (Kenya, Tanzania, and/or Uganda).*

The students will be supervised by staff from Wageningen University and staff from the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), and will fulfil tasks under the Climate Smart Agriculture East Africa programme and its operational and management structure to ensure that all research contributes directly to the overall goal and objectives of the CSA-EA programme. PhD research will be embedded in the project and PhDs will elaborate on preliminary findings from (other) project activities and will be supportive to these activities. Both PhD are expected to closely collaborate with each other.

Description of PhD projects:

PhD 1. Impact of the implementation of different climate smart agricultural interventions on economic and climate resilience performance at farm-household, value chains and community/landscape level.

Supervisor: Prof dr Ruerd Ruben, Wageningen University and Research

To attract investment from the private sector in climate change adaptation it is necessary to better understand how climate smart agriculture interventions contribute to profitability, resilience and risk reduction at the level of farming systems, household livelihoods and value chain competitiveness. There are several different opportunities for farmers in East Africa to adapt their farming businesses, reduce emissions and minimise the negative impacts of climate change. The key question is what are the potential welfare effects of different types of CSA interventions for farmers and other actors in the value chain partners may provide additional incentives for the required change processes in order to implement and scale climate-proof market-oriented farming system.

Tasks of the PhD student will include:

- Review the existing and planned CSA programs and the available incentives that affect the implementation CSA interventions in East Africa;
- Collect socio-economic data on different CSA practices in farming systems and livelihood strategies for a representative sample of treated farm-households and relevant control groups;
- Perform Cost-Benefit appraisal (welfare effects) and Environmental effect analysis (climate emissions) for an integrated socio-economic & environmental assessment of CSA impact in East African farming systems;
- Assess the impact of climate smart agricultural interventions on the resilience of farming systems and farmers engagement with different value chains;
- Analyse the potential impacts of different policies and financial incentive for large scale implementation of CSA practices.

Methods

- Selection of 3-4 different CSA practices
- Survey amongst treated and non-treated farm households
- Risk games to assess (changes in) risk aversiveness
- Impact analysis (based on PSM and Diff-in-Diff)
- Analysis of emissions a plot/farm level
- Value chain linkages and incentives

Requirements

We are looking for an enthusiastic team player with the following qualifications:

1. National from Kenya, Uganda or Tanzania
2. A relevant MSc degree in (agricultural) economics or other relevant social science discipline
3. Affinity with Climate and Agriculture
4. Knowledge and Experience with quantitative and qualitative socio-economic research methods
5. Proven ability to work in interdisciplinary teams and interest in working within a business oriented climate smart agricultural development programme
6. Strong oral and written communication skills in English, especially regarding academic writing and presentation

PhD 2. Impact of large scale implementation of climate smart agricultural interventions on climate resilience of different value chains and farming systems from an agricultural production and environmental perspective.

Supervisor: Prof Fulco Ludwig, Wageningen University and Research

Climate change in East Africa can potentially have far-reaching consequences for the agriculture sector, management of natural resources and food security. Many farming systems in Africa are currently highly vulnerable to climate variability and change. At the same time there is need to improve agricultural production in East African farming systems. These challenges require a response that integrates improved food security for vulnerable groups with climate adaptation and mitigation of food crop production and supply systems. The adoption of climate smart and ecologically sustainable production methods is essential for improving productivity and resilience of the existing food crop production and supply systems. However, until now there is limited data and information available on the impacts of different climate smart agriculture (CSA) interventions on agricultural production, food security and ecological resilience of the farming systems and large landscapes. To fill this knowledge and data gap the PhD student will assess the impacts of (large scale) implementation of CSAs on the resilience and ecological sustainability at different scales.

Tasks and methods of the PhD student will include:

- Review the currently implemented and planned CSA interventions in East Africa
- Collection of field data on Climate Smart Agricultural interventions (yield, quality, cropping calendars,)
- Develop an integrated water-food-climate modelling system based on the integrated Wofost – VIC WUR modelling system.
- Assess the impact of climate smart agricultural interventions and climate information services on the environmental/ecological resilience of farming systems and different value chains
- Analyse the potential opportunities, limitations and trade-offs of large scale implementation of CSA interventions

Requirements

We are looking for an enthusiastic team player with the following qualifications:

1. National from Kenya, Uganda or Tanzania
2. An excellent academic record and an MSc degree in a relevant natural science discipline related to climate, environmental and/or agricultural sciences (Masters completed)
3. Strong skills related to data analyses and model development
4. Experience in the use of climate, hydrological or agricultural models
5. Affinity with Climate and Agriculture
6. proven ability to work in interdisciplinary teams and interest in working within a business oriented climate smart agricultural development programme
7. strong oral and written communication skills in English, especially regarding to academic writing and presentation

We offer

- A fully funded PhD position at Wageningen University for 48 month as a sandwich PhD student.
- As a sandwich PhD student you will spend 18 month of your degree at Wageningen University. 30 months are spent conducting research within the project in East Africa being hosted by one of the SNV offices.
- You will spend the first 6 months at Wageningen University to develop your research proposal and follow a tailor-made education and training programme. You will also spend the last 6 months at Wageningen University to finish your PhD thesis. Depending on progress, training and supervision needs in between trips to Wageningen University will be organised.
- The scholarship offers €1400/month during your stay in the Netherlands and €700/month during your stay in East Africa. Health Insurance, travel, visa and tuitions costs will be covered by the project.

More information:

On the PhD programme at Wageningen University: <https://www.wur.nl/en/Education-Programmes/PhD-Programme.htm>

On the Project and SNV: <http://www.snv.org/project/climate-smart-agriculture-east-africa-csa-ea>

For more information please Contact:

Prof Fulco Ludwig, fulco.ludwig@wur.nl, + 31 6 36277868

Prof Ruerd Ruben, ruerd.ruben@wur.nl, + 31 70 3358310

Dr Annemarie Groot annemarie.groot@wur.nl +31 317 483935

To apply:

Applications should be submitted before **12 November 2018** by email to Fulco.Ludwig@wur.nl, including the following information:

1. An application letter explaining your motivation:

(a) Please indicate clearly in the subject line of your letter for which PhD position you would like to apply

(b) Indicate clearly in your letter why you are interested in this position and how your experience links to the position requirements

2. A detailed CV including personal details (name, contact details, age, gender), academic training, work experience and a list of publications. Please include language skills, computing and (academic) software skills and research for development networks.

3. Scanned copies of academic diplomas (bachelors and masters) and associated lists of marks/qualifications for courses followed. Diplomas will be validated by NUFFIC.

4. Names and addresses (including telephone and email) of three referees who are knowledgeable about the candidate's professional qualifications



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