



RESEARCH LINKS

Water Saving Agriculture to mitigate impacts of Climate Change

UNALM Campus, Lima, Peru
10th – 14th September 2018



Workshop

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Background

The workshop “*Water Saving Agriculture to mitigate impacts of Climate Change*” is organized by Lancaster University (UK) and La Molina National Agricultural University (Peru), in the framework of the Newton-Paulet Fund, a joint fund between UK’s and Peru’s Governments, represented by the British Council in UK, and by the National Council on Science, Technology and Technological Innovation (CONCYTEC) in Peru. The goal of the Newton-Paulet Fund, named after the renowned Peruvian scientist Pedro Paulet, is to promote science and innovation to contribute to economic development, improve the quality of life in Peru, and strengthen ties to meet future global challenges.

The Workshop

Peru’s food security is frequently threatened by extreme climatic phenomena, especially droughts and excessive rainfall induced by The El Niño phenomenon. From October 2016 to February 2017, Peru faced the worst drought in years, with a state of emergency declared in 17 regions, and over 350 000 hectares of crops lost. Local food security becomes dependent on food imports (eg. in the highland Puno Altiplano region, 87% of food was imported from other areas during drought years, while years of excessive rainfall caused 60% import-dependence). Thus, this workshop on water-saving agriculture, which aims to develop mitigation options via a participatory approach to water management, is timely and important. It requires knowledge exchange between participants and professionals from the two co-hosting institutions, the Lancaster Environment Centre of Lancaster University (UK) and the Faculty of Agricultural Engineering of Universidad Nacional Agraria La Molina (Perú), the wider researcher base in both countries and local stakeholders.

Co-hosting institutions

The Universidad Nacional Agraria La Molina (UNALM) is a public higher education institution specialized in promoting the wise management of natural resources and environmental conservation within agriculture. UNALM has over 300 researchers from different disciplines at eight research centres throughout Peru. Its interdisciplinary work on farming systems maximises opportunities for long-term economic development by working with local communities.

Lancaster Environment Centre’s (LEC) track record in high quality fundamental research has made a significant impact via extensive engagement with local stakeholders. This expertise was recognised by the Plant Water Stress Research group contributing one of LEC’s impact case studies in REF2014 (<http://impact.ref.ac.uk/CaseStudies/CaseStudy.aspx?id=43604>), based on applying water-saving irrigation techniques. By providing innovative postgraduate training opportunities for technical managers within the food supply chain, it maximises delivery of relevant science to industry professionals.

Course program - Logistics

Workshop activities will be developed both centrally (conference centre at UNALM's main campus) and regionally (via field excursions to meet local stakeholders), aiming to bring together actors from throughout the farming system. Beyond the workshop participants (from UK and Peru), we will leverage a wider academic community to ensure participants benefit from local knowledge and rural livelihoods.

Course program – Topics

The El Niño and subsequent La Niña phenomena are serious climatic events causing droughts and flooding that affect Peruvian food security, with the most vulnerable areas comprising the southern highlands, as the Puno Altiplano, and the coastal valleys. These climate effects are exacerbated by human water resources management, via excessive irrigation abstraction and/or hydrological changes resulting from land clearing. It is therefore timely to develop this workshop with the following technical themes:

1. Catchment Water Management: Societal needs (domestic, agricultural, industrial); Hydrological sustainability and ecosystem service provisioning; spatio-temporal scaling issues
2. Water Policy: Climate variability and infrastructure planning; institutional systems for water management and development; economic valuation of water
3. Water-saving agriculture in cropping systems: Diagnosing crop water stress, breeding for drought resilience; irrigation scheduling.

Call for applications

The Fellowship

Researcher Links Workshop grants programme, a part of the Newton-Paulet Fund (<http://www.britishcouncil.org/education/science/researcher-links>), will provide financial support to bring together a UK/Peru bilateral cohort of early career researchers to take part in the workshop “*Water Saving Agriculture to mitigate impacts of Climate Change*”. The programme is supported by UK government and Peruvian government funding through CONCYTEC, and will cover all expenses (workshop fees, domestic and international transport, accommodation, meals and local transport) to 17 participants from Peru and 17 from UK.

Target participants

Professionals (with relevant experience) and early career researchers (less than 10 years after obtaining their MSc or PhD degree) of diverse backgrounds including e.g. plant scientists, agronomists, environmental hydrologists, human nutritionists, social scientists, policy makers. Participants should aim to update their knowledge of how to meet new challenges of agricultural water management, and to mitigate climate change impacts on food and health security.

Eligibility criteria

Early career researchers (ECRs) recruited to participate in the workshop must:

- Have a PhD or equivalent research experience, with no more than 10 years after obtaining their postgraduate degree.
- In the case of MSc, it must be MSc degree + at least 5 years of proven research experience

- BSc participants with professional title and at least 6 years of proven research activity, will be also considered in the participants selection process.
- A maximum of a third of ECRs can be affiliated to UNALM and/or LEC.
- Participants must be based in the UK or in Peru.
- Availability to attend the entire duration of a workshop from Monday 10 to Friday 14 September 2018
- Involvement in agricultural water management issues and whether their present position allows them to implement management decisions.
- Selection of 50% female participants from both sides (Peru and UK) will be prioritized.
- Fulfilled Application Form, which includes a motivation letter (no more than 300 words) stating the relevance of the course to your professional development.
- English proficiency at intermediate level as minimum.
- For Peru: applications from participants based in provinces outside Lima city are encouraged.
- Participants from for-profit organisations and international institutions are welcome to apply, but (according to the funding rules) they cannot be granted. They must bear their own costs of participation (USD850 – international travel not included), which must be paid through a bank-transfer (details in page 6) by 17 July 2018.

Language

The official language of the course will be English. However, for Peruvian participants, an acceptable understanding/speaking level of the language will be considered, which will be assessed by a personal interview with short-listed participants during the selection process. For UK participants, knowledge of Spanish will be an asset.

How to apply

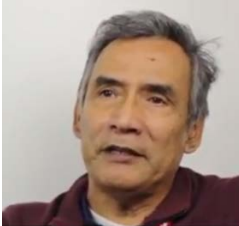

Send your CV (including contact details of at least two referees) and the fulfilled Application Form to workshop@lamolina.edu.pe. Please take into account that all applications will be acknowledged, but only short-listed participants will be contacted for a personal interview. Deadline for applications: June 28, 2018.

The selection of early career researchers to participate in the workshop will be fair and transparent. Equal gender balance and diversity are focused in the selection process of participants. Lancaster University and Universidad Nacional Agraria La Molina ensure that no applicants will be excluded from participation on the basis of ethnicity, gender, religious belief, sexual orientation or disability.





Schedule of Participant Recruitment

2018	Activity
May, Monday 7	Announcement of workshop
June, Thursday 28	Deadline for applications
June, Saturday 30	Notify short-listed participants
July 1 - 6	Personal interview of short-listed participants (if required)
July, Friday 10	Notify selected participants
July, 10-17	Selected participants confirm their availability
July 18 – August 1 st	Participants to make their travel arrangements
September 8-9	Arrival to Lima
September 10-14	Workshop development

Course coordinators

	<p>Prof. MSc. Andrés V. Casas Díaz Faculty of Agricultural Engineering, UNALM Expert on Crop Production Enhancing horticultural crop production through the wise management of natural resources and environment conservation within agriculture.</p>
	<p>Prof. Dr. Ian Dodd Lancaster Environment Centre, Lancaster University Expert on Sustainable Agriculture Understanding how plants sense chemical/physical/biological changes in the soil environment (especially altered water availability) and communicate this information to the shoot. Increasing crop water use efficiency by developing different deficit irrigation techniques.</p>

Academic mentors

	<p>Prof. Dr. Nick Chappell Lancaster Environment Centre, Lancaster University Expert on Hydrological processes Determining the impact of land use changes on flood responses, erosion, sediment delivery and a range of water quality characteristics. Understanding landscape-level water flows in the humid tropics, utilising new sensors and modelling technologies.</p>
	<p>Prof. MSc. Jerónimo García Villanueva Faculty of Sciences, UNALM Expert on Agro-climatology, Atmospheric Pollution and Modelling Meteorology focused on agriculture. His research on climate change in South America has evidenced a significant decrease on rainfall patterns from 1960 to present in southern Peru and southern Chile.</p>
	<p>Prof. MSc. Rosa María Miglio Toledo Faculty of Hydraulics Agricultural Engineering, UNALM Expert on Water quality, use and management Innovative approaches related to management of water quality and use, wastewater management and treatment, sewage sludge management, wetlands treatment systems, dry sanitation systems and management of sanitation sub-products</p>
	<p>Dr. Jaime Puertolas Simon Lancaster Environment Centre, Lancaster University Expert on Water-saving Eco-Physiology Irrigation techniques to optimize crop production saving water. Physiological plant responses to water stress, especially in root-to-shoot signalling. Use of soil moisture sensors for irrigation scheduling. Responses of woody seedlings to water stress in forest restoration.</p>

Tentative Program for the workshop *Water Saving Agriculture to mitigate impacts of Climate Change*

September 2018	Tentative program & itinerary
Saturday 8 and Sunday 9	Arrival to Lima
Sunday 9	Morning: Guided visit to Lima City Center Afternoon: Guided visit to Miraflores and The Costa Verde
Monday 10	Morning (8-13 hrs): Introduction to the course. Self-presentation of participants. Class. Afternoon (14-15 hrs): Introduction to the workshop itinerary. Departure to Puno at 16:00 hrs.
Tuesday 11	Morning: Puno – Visits: Titicaca Lake Basin, Huancané Hydraulic Irrigation. Afternoon: Discussions & preparation of Action Plans Evening: Departure from Puno to Arequipa (6 hours trip)
Wednesday 12	Morning: Arequipa and surroundings – Visits: Majes & La Joya Hydraulic Irrigation. Afternoon: Departure to Nazca (8 hours trip)
Thursday 13	Nazca, Ica and surroundings – Visits: Private agricultural enterprises on crop production. Afternoon: Departure to Lima (6 hours trip). After arrival, discussions & preparation of Action Plans.
Friday 14	Campus UNALM, Lima: Presentation of Action Plans. Conclusions and Closing session
Saturday 15 and Sunday 16	Departure

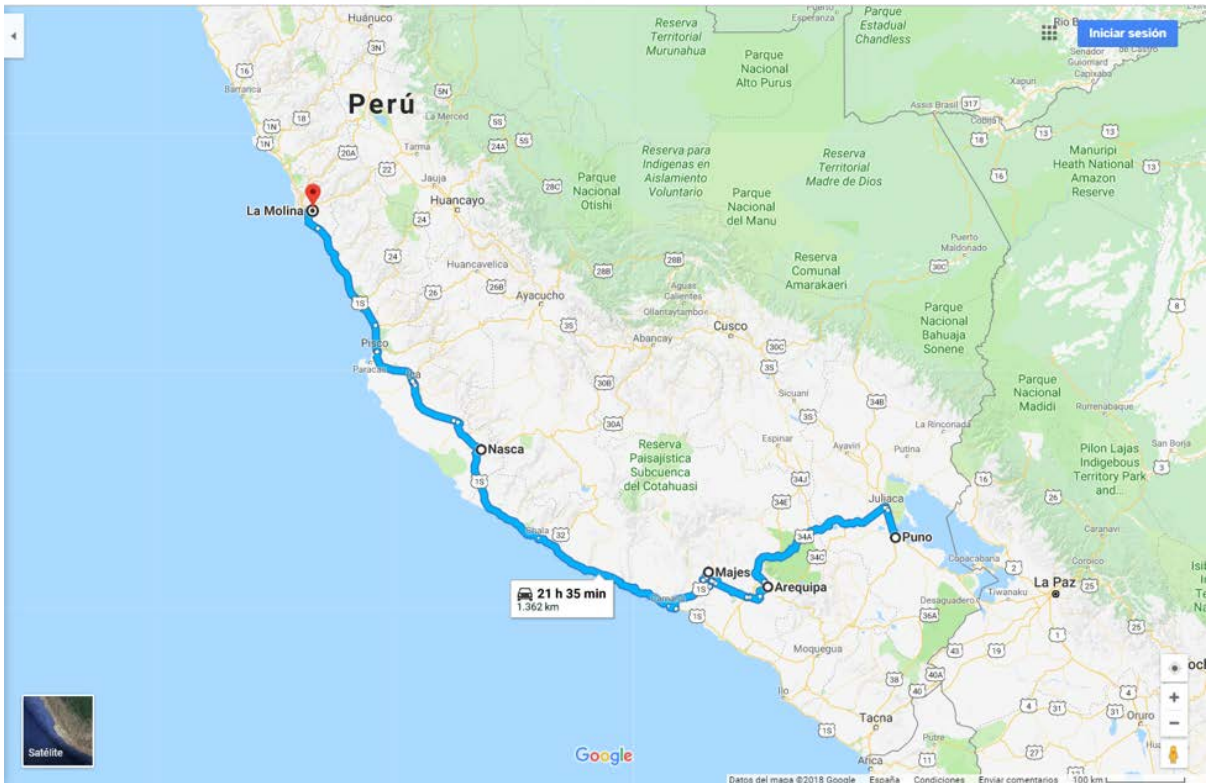
Tours and excursions for companions

The UNALM Events Team can arrange city tours and excursions outside of Lima city to archaeological ruins (Pachacamac, Caral, etc.) for companions of participants, for the days of the workshop in Lima, during the days of the workshop outside of Lima, and even after the event. Please request more information via email to workshop@lamolina.edu.pe.

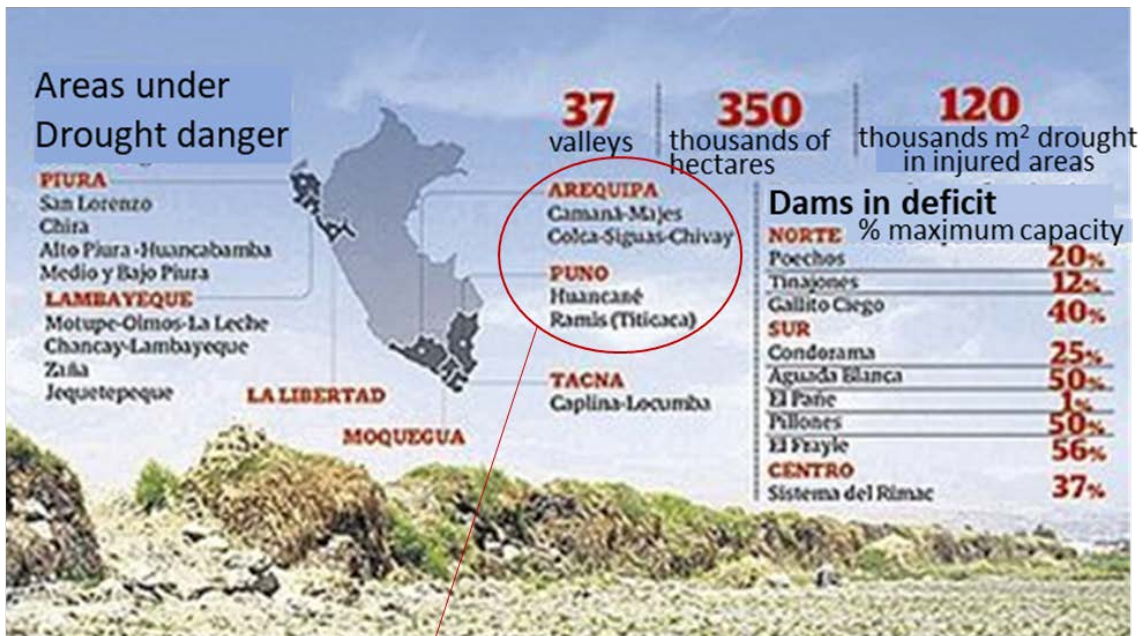
Information for participants from private companies and international institutions

Registration for the workshop must be done through a money transfer or deposit to the bank account listed below. The ticket must be sent to workshop@lamolina.edu.pe. In case an invoice is required, please present the original ticket at your arrival to the event.

BANK	SWIFT code	INTER-BANK ACCOUNT NUMBER (CCI)	CURRENCY	HOLDER / BENEFICIARY
BANCO DE CREDITO DEL PERU (BCP)	BCPLPEPL	002-191-00041717115855	US DOLLARS	FUNDACIÓN PARA EL DESARROLLO AGRARIO



Why have we chosen an itinerary to southern Peru?



Largest areas under drought over years (shown data from 2016-2017)



UNIVERSIDAD NACIONAL AGRARIA
LA MOLINA



Doubts? Concerns?

In the event that you have any concerns or queries in relation to your application, you should send an email to workshop@lamolina.edu.pe in accordance with the provisions of this call for applications by the application deadline.