

# BOOK OF ABSTRACTS

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## I. SESSION DESCRIPTION

**ID: T9b**

Food security in Wet Tropical Forests: an ecosystem services approach

**Format: Hybrid**

**Hosts**

	Name	Organisation	E-mail
<b>Host</b>	Moara Canova	Center for Meteorological and Climatic Research Applied to Agriculture (CEPAGRI) -State University of Campinas	moaraambiental@gmail.com
<b>Co-Hosts</b>	Maíra Padgurschi	Brazilian Center for Research in Energy and Materials/CNPEM.	mairap@unicamp.br
	Marko Alves Monteiro	Department of Science and Technology Policy (State University of Campinas, Brazil)	markomonteiro@unicamp.br
	Ana Cruz	Graduate course in the program in Ecology, Institute of Biology - State University of Campinas (UNICAMP)	ana.cruz.luisa@gmail.com

## Abstracts

Fifty years after the 'Green Revolution' and over the discourse of agricultural expansion for eradicating hunger, the world still faces multiple forms of food insecurity. Food Security and Nutrition (FSN) are a Human well-being (HWB) category where all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. However, most agricultural expansion to obtain global FSN occurs frequently at the expense of natural systems such as Tropical Forests and their Ecosystem Services (ES). Therefore, research on ES has grown substantially over the past decade. However, their impacts on HWB still need to be assessed in some regions and for some groups of people, especially in low- and middle-income countries in tropical regions. Furthermore, the improvement of well-being, also through FSN, has become one of the main goals of international politics on environments and sustainable development, brought by the United Nations Development Programme (UNDP) and Convention on Biological Diversity (CBD). Hence, it is evident that a healthy ecosystem is relevant either as a provider system or an economic-political system to support the availability and stability of food. Nonetheless, most studies involving ES and FSN only presume the relationship between them, promoting gaps in these correlations, mainly regarding the practice actions necessary for users' needs while respecting cultural diversity. Therefore, establishing a participatory design approach with the population avoids such

gaps in the multiple interests, which formally embraces the process of knowledge building and the values of different social actors.

### Goals & Objectives

Gathering practice experiences and research from wet tropical forests in the LAC region which can contribute to comprehending the relationship between ES and FSN and may support the development of actions to increase regional food security.

### Planned Output

It will be proposed formulating a document in a format of brief communication with the main approached results at the session. The idea is to disseminate the information either in the scientific journals (e.g., Nature Sustainability), or in the communication means, which also achieve an audience **non-scientific, for example magazines such as “El País” or representative ones of those.**

### Session Format

The entire session is estimated to last between 90 and 120 minutes. The organization must open the session with a lecture of 10 to 15 minutes, followed by lectures of two guest speakers of equivalent duration. We intend to aggregate abstract presentations of 3 to 5 minutes each since scientific and non-scientific experiences regarding the theme, preferably from various Latin American regions. Afterwards, the organization group will host a discussion with all the participants, facilitating a debate on the ideas and conclusions attained during the session.

### Acceptance of voluntary contributions

Yes, I allow any abstract to be submitted to my session for review.

### Relation to ESP Working Groups or National Networks

Thematic Working Groups: TWG 9 – ES & Public health.

## II. SESSION PROGRAMME

**Date of session:** Wednesday 8<sup>th</sup> November

**Time of session:** 14:45–15:30 hr

### Timetable speakers

Time	First name	Surname	Organization	Title of presentation
14:45– 14:50	Moara	Canova	Center for Meteorological and Climatic Research Applied to Agriculture (CEPAGRI)	Introduction and opening lecture
14:50– 14:55			Guest speaker lecture	
14:55– 15:05	Ana Luisa	De Carvalho Cruz	State University of Campinas (UNICAMP)	The paradox between Ecosystem Services availability and food security in Central Amazon: a case study based on perception
15:05– 15:15	Jorge	Alvarez	Universidad Nacional Agraria de la Selva	Conservación y restauración ecológica de ecosistemas forestales y humedales amazónicos en el Alto Huallaga, Huánuco – Perú
15:15– 15:30			Facilitated Discussion	

### III. ABSTRACTS

#### 1. *Type of submission:* Abstract / Resumen

#### T. Thematic Working Group sessions / Sesiones del Grupo de trabajo Temáticas T9b – Food security in Wet Tropical Forests: an ecosystem services approach

The paradox between Ecosystem Services availability and food security in Central Amazon: a case study based on perception

*First author(s):* Ana Luisa de Carvalho Cruz

*Presenting author:* Ana Luisa de Carvalho Cruz

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The Amazon Rainforest is a global and local powerhouse Ecosystem Services (ES) maintenance. However, the climate change effects have threaten the safety supplying of ES to population. The ES are directly and indirectly liable for food security (FS), such as in the dimensions of availability by providing food and supporting its production, and stability by regulating climate and water flows. Therefore, this research aims to identify ES related to FS in three municipalities in the Amazonas state– Brazil, considering the context of climate change and regional shifts. Furthermore, we investigate from an ecosystem perspective and local perception the paradox found in the region, where high biodiversity coexists with low food security. To achieve this, it was collected either secondary data or primary data, through conduction of 216 interviews in three municipalities in Amazonas, representing a gradient of food vulnerability: Manaus (medium), Carauari (medium–high), and Tabatinga (very high). Preliminary results show that out of the total 19 identified ES, the majority (59%) belong to the provisioning category. The ES “Food (Crops/Livestock)” was the most frequently mentioned in all cities, especially in Tabatinga. In addition, Tabatinga’s residents are the ones who most attributed there is a low abundance of those ES. About vulnerability, the group of individuals who identified themselves as “Frequently/Always vulnerable regarding food” had the lowest percentage of individuals who did not perceive any ES related to food. Analysis will be performed to verify differences in this perception among municipalities on the assumption that vulnerable individuals relying more on access to food items from forests. From the results, we aim to demonstrate to the community and governance bodies that decision–making should take into account the cultural aspects of traditional and riverine communities, often marginalized, who perceive a high quantity of ES and play a role in their maintenance and preservation.

*Keywords:* Amazon; perception of local communities; food security; ecosystem services; vulnerability.

2. *Type of submission:* Abstract / Resumen

[T. Thematic Working Group sessions / Sesiones del Grupo de trabajo Temáticas T9b – Food security in Wet Tropical Forests: an ecosystem services approach](#)

Conservación y restauración ecológica de ecosistemas forestales y humedales amazónicos en el Alto Huallaga, Huánuco – Perú

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La investigación se desarrolla en la Amazonía peruana, en la región Huánuco, donde existe una relación ancestral de la población local con estos ecosistemas. No obstante, los cambios de uso del suelo, por deforestación, drenado mecánico de humedales, originan pérdida de la biodiversidad y liberación de carbono almacenado en los bosques, afectan significativamente a estos ecosistemas, y amenazan la conectividad hidrológica y ecológica del bosque. El desarrollo de esta investigación es muy importante, pues, se evalúa y determina los problemas sociales, económicos y ambientales, que viene afectando a los ecosistemas amazónicos. La propuesta es: fortalecer capacidades locales, con la finalidad de formar aliados en la conservación y restauración de ecosistemas amazónicos que beneficiarán a presentes y futuras generaciones. Además, se realizará inventarios y muestreo de biodiversidad, determinando la situación actual de las mismas. Asimismo, se realizarán encuestas a la población local, diferenciando por categoría de edades, actividades productivas, costumbres y conocimiento sobre la importancia de conservar y restaurar dichos ecosistemas. En consecuencia, el impacto a lograrse será muy importante, pues, se estará promoviendo acciones y estrategias de conservación y restauración de ecosistemas amazónicos y, a la recuperación de los bienes y servicios ambientales el mejoramiento de la calidad de vida de la población local a corto, mediano y largo plazo. Los resultados esperados son lograr conservar y cuantificar la biodiversidad y carbono almacenado en los ecosistemas amazónicos del ámbito del proyecto, generar bienes y servicios ecosistémicos y valoración ecológica y económica de los mismos, con la finalidad de mejorar la calidad de vida de las comunidades dentro o cerca a los humedales, obtener resultados cuantitativos como: áreas cubiertas por humedales, cantidad de personas que viven dentro de humedales y se benefician de los mismos, producción de alimento para personas y la fauna silvestre, además de productos o materia prima para artesanías, construcciones y afines.

*Keywords:* Bosques, biodiversidad, ecosistemas, bienes, servicios