

CLIFF-GRADS

Builds the capability of graduate students from developing countries to conduct applied research on climate change mitigation in agriculture with the goal of expanding knowledge and experience in quantification of agricultural GHG and food loss and waste.

Generates novel climate change research on smallholder farming systems and facilitates South-South knowledge exchange

1ST – December 2017

18 opportunities advertised.

Sixty-five applications were received.

9 scholarships awarded to recipients from Nigeria (2), Tunisia, Ethiopia, Colombia, and Argentina (4).

Hosted at CGIAR centres (CIAT, CYMMIT) and GRA countries (Netherlands, Chile, UK).

2ND – September 2018

50 opportunities advertised (including 10x FLW).

243 applications from students from > 50 developing countries.

33 scholarships awarded to recipients from 18 countries.

Hosted at following institutions:

2019 #CLIFF-GRADS fellows go to
@inra_france @USDA_ARS @ISRICorg
@Thuenen_aktuell @unimelb @intaargentina
@irri @ilri @iniachile @queensu @BangorUni
@CIAT_ @CATIEOfficial @CIFOR @SLU
@SyddanskUniv @ICRISAT @mustmw
@HokkaidoUni @GRA_GHG

3RD call NOW OPEN August 2019

33 opportunities advertised

Hosts come from 17 different countries and international organisations

Awardees to be announced at COP25

Call 4 planned for early 2020

Call 5 planned for second half 2020.

CLIFF – GRADS

Climate, Food and
Farming Network

GRA Development
Scholarships

Call for student applications

The CLIFF-GRADS program invites applications for short-term (4-6 month) scientific training and research on the measurement and management of greenhouse gas emissions and carbon storage in agricultural systems. Students from developing countries¹ who are currently enrolled in PhD research related to agricultural greenhouse gas quantification or mitigation are eligible to apply. Research will be conducted in association with [CCAFS](#) and [GRA](#) scientists' projects. Applications are requested on either of two themes:

- 1) measurement and mitigation of agricultural greenhouse gas emissions or carbon storage in agricultural systems in developing countries, including in the context of enhancing food security;
- 2) quantification and mitigation of greenhouse gas emissions from reduced food loss in high emission supply chains (e.g. dairy, beef, vegetables, fruits) in developing countries, including estimation of costs and constraints to mitigation.

Selected students will be sponsored in the amount of **10,000 -12,000 USD**.

A list of research opportunities available to students is below. The grants can be used to support living and research costs at the host institution and the grant amounts have been determined based on living costs estimated by the institution. Grants may not be used for tuition, university fees or unrelated personal expenses.

Background

CLIFF-GRADS is a joint initiative of the CGIAR Research Program on Climate Change (CCAFS) [low emissions development flagship](#) and the Global Research Alliance on Agricultural Greenhouse Gases (GRA). [CLIFF-GRADS](#) integrates the Global Research Alliance Development Scholarship and the Climate Food and Farming Research Network with the common goal of providing grants to PhD students in developing countries to expand their knowledge and experience in quantification of agricultural greenhouse gases. Research projects are hosted by CCAFS and GRA members and partners. Funding for CLIFF-GRADS is provided by the CGIAR research programme on Climate Change, Agriculture and Food Security (CCAFS), the Government of New Zealand and USAID.

Application requirements

To have their application reviewed, applicants must complete the CLIFF-GRADS Round 3 Student Application [online survey](#) and submit the necessary documentation as described below to the cliffgrads@globalresearchalliance.org email. Please follow this link to complete the survey: <https://www.surveymonkey.com/r/BB58VRC>.

¹ Includes all countries listed as "low-income economies", "lower-middle-income economies", "upper-middle income economies" and "Latin America and the Caribbean" by the World Bank <http://data.worldbank.org/about/country-and-lending-groups>

List of Research Opportunities

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2. Technologies and practices to increase C sequestration in integrated crop-livestock system on humid tropical savannah	7
3. Legumes use in grassland systems of the Argentinean Pampas region: soil quality and greenhouse gas emissions	8
4. Greenhouse gas emissions from crops fertilized with dairy manure in Argentina.....	9
5. Integrating mitigation strategies to decrease methane emissions of dairy cows in pastoral systems.....	10
6. Influence of forage legumes and N fertilizer on N ₂ O emissions in grazed tropical pastures.	11
7. Mitigation of methane emissions and capturing the effects of diet on GHG emissions from Finnish dairy production system.....	12
8. Adding value to rumen methane mitigation compounds through increasing animal efficiency ..	13
9. Use of lipids in dairy systems as a strategy of adaptation and mitigation to climate change.....	14
10. Quantification of carbon foot prints in dairy farms for various feeding management in Thailand.	15
11. Evaluating environmental impacts of the beef cow-calf system by the life cycle assessment method in Thailand.	16
12. Ranking forage-based diets for ruminant methane and nitrogen emissions	17
13. Evaluating enteric methane and excreta based nitrous oxide emissions associated with tropical forage legumes	18
14. Quantification of nitrous oxide (N ₂ O) emissions from beef, milk and crop-pasture rotational production systems in Uruguay.	19
15. Implementing sustainable agricultural and livestock systems for simultaneous targeting of forest conservation for climate change mitigation (REDD+) and peace-building in Colombia.....	20
16. Evaluating effects of increased use of animal manure in horticulture on agricultural greenhouse gas emissions.	21
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17. Greenhouse gas emissions and soil carbon sequestration with tillage systems and crop types	22
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19. Assessing Impact of Cover Crop on Nitrogen Use Efficiency and Greenhouse Gas Emissions Project	24
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23. Crop intensification through improved fertilizer application decision making in Ethiopia to face climate change impacts	28
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27. Assessing the impacts of contourbased water harvesting technologies, soil water retention membranes and nutrient management options on soil organic carbon accumulation and greenhouse gas emissions from coarse-textured soils in Zimbabwe	32
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31. Alternate wetting and drying (AWD) suitability mapping for selected rice growing regions in Thailand	36
32. Temporal patterns of methane emissions from rice in the Vietnamese Mekong Delta: Impact of ambient meteorological conditions	38
AGROFORESTRY RESEARCH OPPORTUNITIES	39
33. Assessing the impacts of contour- Integration of trees into farming systems to increase yield, resilience and carbon stocks	39



Sebastián Vangeli: measuring N₂O emissions in an experiment near North Wyke.



Banira Lombardi: Sampling greenhouse gases from Brachiaria pastures with cattle manure, the International Center of Tropical Agriculture (CIAT), Cali, Colombia.



Sebastián Vangeli: visiting the Broadbalk Experiment, one of the longest-running agronomic experiments in the world, started in 1843.



Banira Lombardi: ready to sample greenhouse gases from a cassava field with colleagues at CIAT, Cali, Colombia.



Florescia Garcia: feeding experimental cows at the unit of Digestion and Metabolism at INIA Remehue, Osorno, Chile



María De Bernardi: collecting soil and pasture cores for the study of GHG Emissions, INIA Remehue, Osorno, Chile.



Florescia Garcia: preparing material for rumen sampling with Emilio Ungerfeld at the Unit of Digestion and Metabolism at INIA Remehue, Osorno, Chile.



María De Bernardi: applying different fertilizers to collected pasture cores, INIA Remehue, Osorno, Chile.

- Round one and two alumni workshop ~40 participants
- 6-7 October, Bali, Indonesia
- Develop strong international network
- Share research experiences
- Build capability