

## Motivation letter

My main motivation to be part of the board of directors of the Agroecology Europe is to directly contribute to the development of the organization and promotion of Agroecology.

Agroecology has been the main axis of my academic and professional life. Initially as a student, I worked with the promotion of agroecology among farmers in South and Central America. Later on, as professional, I used agroecological principles to design and improve farming systems in different regions of the world. Presently, I Associate Professor at the Swedish University of Agricultural Sciences, where I teach students topics in cropping systems and sustainable plant production systems. I also have different research project that approach sustainable cropping systems. I occasionally also teach and supervise students in different universities in Germany and Brazil.

My motivation to join the board of directors is to engage actively in the promotion of Agroecology Europe within the academia – by organizing, together with students, trainings and different research and extension projects. Another objective is to include farmers and the broader society in the discussion of how are our agricultural production systems now and how can we redesign them in more sustainable systems by using agroecological principles. One example of my engagement is being part of the organization committee of the next European Congress in Agroecology that will be held in Barcelona.

By being part of the board, my objective is to contribute to make Agroecology Europe a platform in which students, professionals and practitioners can join forces to develop and exchange knowledge for the promotion of agroecology, especially among young farmers, students and professionals.

Sincerely

Marcos A. Lana

Uppsala, 24th September 2021

Résumé

*Dr. sc. agr. Marcos Alberto Lana*

**Birth date and place:** 25/05/1981, Blumenau, SC, Brazil.

**Professional address**

Swedish University of Agricultural Sciences  
Department of Crop Production Ecology; Agricultural cropping systems  
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**Education**

- 2015 – 2016 Senior Teaching Professional Program. Competence Orientation in Teaching and Study, didactic training in academic teaching principles. University of Potsdam.
- 2010 – 2013 PhD in Agricultural Sciences (*Dr. sc. agr.*). Christian-Albrecht University, Kiel, Germany. *Regionalization of climate change impacts and adaptation strategies for maize in Santa Catarina State, Brazil*. Funding: CLARIS-LPB Project, European Commission Project – FP7.
- 2005 – 2007 Master in Agroecosystems. Federal University of Santa Catarina (UFSC), Florianópolis, Brazil. *Cover crops use for weed management: agroecological strategy for agroecosystems re-design*. Consortium in Agroecology and Sustainable Rural Development (UFSC + UC Berkeley), funded by Organic Farming Research Foundation (OFRF/USA), CS Fund/Warsh-Mott Legacy (USA) and CAPES – ProFor (Brazil).
- 2003 – 2004 University of California at Berkeley, CA, USA. *Consortium on Agroecology and Sustainable Rural Development*. CAPES-FIPSE Exchange Program.
- 2000 – 2005 Graduation in Agronomy (Agronomist, Agr. Engineer). Federal University of Santa Catarina, Florianópolis, Brazil. *The revolution of Cuban agriculture: from the conventional to the agroecological model: 1989-2004*. Supported by CAPES (Brazil), FIPSE (USA).

**Professional experience**

- 2017 – present Associated Professor in Cropping Systems (Docent/Habil) at the Department of Crop Production Ecology/Crop Systems Platform of the Swedish University of Agricultural Sciences (SLU) Uppsala, Sweden. Topics: *Agroecology, cropping systems, crop modelling, landscape analysis, climate change*.
- 2013 – present Researcher (2013 – 2017) and visiting scientist (2017-2019) at the Institute of Land Use Systems and Institute of Landscape Analysis, Leibniz Centre for Agricultural Landscape Research (ZALF) Müncheberg, Germany.  
Topics: *Crop modeling, agroecology, food security, climate change, adaptation strategies, resource use efficiency*. Activities mainly carried out in Europe, West Africa, Brazil, Argentina and Colombia.

- 2016 – 2017 (Consulting activity) Agrica Agribusiness (<http://www.agrica.com/indexflash.html>), KPL farm. Consulting on the adaptation of agroecological and agroforestry principles over >5000 ha farmland in Tanzania. Private investment resources.
- 2015 – 2017 (Consulting and policy development activity) European Parliament: contract IP/B/AGRIC/IC/2016-56: Productivity vs sustainability: towards better support of viable and sustainable EU farms. Precision farming and ecosystem services: provisioning, regulation and maintenance possibilities.
- 2013 – present Invited lecturer: Humboldt University, Berlin, Germany. Topics: *Agroecology, Tropical farming systems, Agroforestry, agroecological soil management*. Master's Program in Integrated Natural Resources Management.
- 2016 – 2017 Lecturer – Humboldt Universität-Berlin, Germany. *Methods in Agricultural Research* (summer semester, 3 credit points).
- 2015 – 2016 Lecturer – Potsdam University, Potsdam, Germany. *Agroecology* (2 hours/week/winter semester).
- 2011 – 2012 Visiting scholar – University of West Santa Catarina State (UNOESC), Brazil. Graduation courses: *Agrometeorology* (8 hours/week, condensed in two months), *Principles of Agricultural Experimentation* (8 hours/week, condensed in two months).
- 2009 – 2013 Assistant researcher (PhD candidate) at Institute of Land Use Systems, Leibniz Centre for Agricultural Landscape Research (ZALF) Müncheberg, Germany. Topics: Climate change, agricultural land use, adaptation strategies. Project CLARIS-LPB.
- 2008 – 2009 Assistant researcher: CLARIS LPB – Federal University of Santa Catarina (UFSC), Florianopolis, Brazil. Topics: Climate change, agricultural land use, adaptation strategies.
- 2008 Organizer and instructor of specialized training for technicians from the State Agricultural Extension Service in Southern Brazil: *Agroecology and Soil Management* (120 hours) and *Agroecology* for technicians working with afro-descent communities (80 hours). Funded by the Brazilian Ministry of Agrarian Development.
- 2007 – 2008 Lecturer – Federal University of Santa Catarina, Florianopolis, Brazil. Courses: *Mechanization for aquaculture engineering* (12 hours/week, four semesters), *Soil Management and Conservation* (6 hours/semester, as invited lecturer).
- 2006 – 2008 Volunteer instructor in several trainings and workshops at:  
Latin American School of Agroecology – Lapa, PR;  
Center of Sustainable Development and Agroecology – Cantagalo, PR;  
Center for Rural Youth Development – Lauro Müller, SC.  
Subjects: *agroecology, agroforestry, soil management, soil ecology, weed management*.
- 2006 – 2008 Volunteer lecturer – Federal University of Santa Catarina, Florianopolis, Brazil. Graduation course: *Introduction to Agronomy* (2 hours/week, six semesters).
- 2005 – 2008 Project participation (UFSC/UC Berkeley): *Soil conservation tillage systems for family farmers in Southern Brazil: understanding agroecological mechanisms for scaling up the technology*.
- 2002 – 2003 Volunteer in the several extensions projects (UFSC/Universidade Solidária): *Economic and social development of poor rural communities*.

2001 – 2003 University extension project (UFSC): *Perennial pastures management for agroecological milk and beef production in small farmers associations from West Santa Catarina State, Brazil.*

## Grants

2020 – 2022 Building resilience for Swedish food production under increasing risk of extreme weather. FORMAS (Total funding: 3.690 M SEK. Role: applicant, principal scientist (equiv. 25% position) and WP leader).

2019 – 2020 Agriculture and extreme weather in Sweden: developing a better understanding of heat and drought stress on malting barley protein level. Swedish farmers' foundation for agricultural research (Total funding: 50 k SEK). Role: applicant.

2019 – 2021 Fostering organic cultivation of grain legumes; a multi-scale feasibility study for soybean and lupin production in Sweden. FORMAS (Total funding: 11.861 M SEK. Role: co-applicant, principal scientist (equiv. 15% position) and WP leader).

2019 – 2022 IKI Colombia- Implementing sustainable agricultural and livestock systems for simultaneous targeting of forest conservation for climate change mitigation (REDD+) and peace-building in Colombia (2018-2022) (Europe). German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) (Total funding: 6.43 M EUR. Role: Applicant and coordinator from the German side and principal scientist).

2015 – 2017 MACSUR - Modelling European Agriculture under Climate Change for Food Security (2015-2017) (Europe). Focus: multi-model assessment and comparison for improvement (Grant: EU Commission, two years of salary, 50% research position).

2014 – 2017 PURESbio - Process understanding and usage of sugar cane residues for sustainable plant biomass production (Germany/Brazil). Funding: German Ministry of Education and Research (Grant: three years of salary, 50% research position).

2013-2018 Trans-SEC: Innovating Strategies to safeguard Food Security using Technology and Knowledge Transfer (2013-2018, Tanzania) and Scale-N: Nutrition - Diversified Agriculture for a Balanced Nutrition in Sub - Saharan Africa (2016-2018). Funding: German Ministry of Education and Research and German Ministry of International Cooperation (Total: 7.3 M EUR. Role: researcher, four years of salary, 80% research position).

2012-2015 ZALF cross-sectional project "Food Security Africa (FSA)" (Germany). Funding: ZALF (Total: 100k EUR).

2015 Research and Development of Indigenous Food crops to address community well-being, food security and climate change. Pacific-Europe Network for science, technology and innovation (Papua New Guinea). Funding: ERA-NET (10k EUR. Role: participant).

## Membership

European Society of Agroecology – Agroecology Europe (founding member, 2016; elected member of the board, 2020).

Latin American Scientific Society of Agroecology (since 2012).

## Awards

- 2012, 2015      Young scientist, Berlin Falling Walls conference and Berlin Falling Walls Lab.
- 2006              Ecological Society of America. Cover crops use in the management of weed communities: a strategy for agroecological transition.

## Reviewer of Scientific Journals

Agronomy for Sustainable Development;  
Annals of Botany;  
Computer and Electronics in Agriculture;  
Environment, Development and Sustainability;  
European Journal of Agronomy;  
Field Crops Research;  
Food Policy;  
Food Security;  
Global Food Security;  
Journal of Agriculture and Rural Development in the tropics;  
Regional Environmental Change;  
Soil and Tillage research;  
Water.

## Editorial board member

Food Security (Springer).  
PLOS ONE  
Scientia Agraria

## Students and professionals supervision

- 2020 – present      Yanzhe Hu, PhD in Agriculture, in partnership with the Chinese Agricultural University. *Response of alfalfa growth to coupling water and salt stress and its simulation*. Role: co-advisor and host.
- 2020 – present      Miguel Romero Sanchez, Swedish University of Agricultural Sciences. PhD in Crop Production Science. Working title: *Contribution of sustainable agricultural practices at the farm level to reduce the carbon footprint of cocoa, dairy and cattle-related value chain in Colombia*. Role: advisor.
- 2019 – present      Tatiana Rodriguez, Humboldt University – Berlin, Germany, PhD in Agricultural sciences. Working title: *Monitoring sustainable land use systems in Colombia by piloting experiences and specific metrics from the SCALA tool and Gibson's Sustainability indicators*. Role: co-advisor.
- 2019 – present      Martha Torres, Humboldt University – Berlin, Germany, PhD in Agricultural sciences. Working title: *Scaling-out of sustainable agricultural practices to ensure coexistence of forest, crops and livestock systems in post-conflict areas in Colombia*. Role: co-advisor.
- 2019 – present      Steffen Dahlke, Swedish University of Agricultural Sciences. PhD in Crop Production Science. Working title: *Fostering organic cultivation of grain legumes in northern latitudes - A feasibility study for soybean and lupine cultivation in Sweden*. Role: co-advisor.

- 2019 – 2020 Mariane Porto Muniz, Federal Institute of Goias, Brazil, Master in Agricultural Sciences. Working title: *Biomass production and livestock performance in a soybean-pasture rotation*. Role: co-advisor.
- 2018 – 2019 Karin Holmstrand, Swedish University of Agricultural Sciences, Kandidatprogram (Bachelor) i biologi och miljövetenskap. Working title: *The Ecological Footprint of Swedish Sugar Consumption*. Role: advisor.
- 2017 – 2019 Luca Eufemia, Humboldt University – Berlin, Germany, PhD in Agricultural sciences. Working title: *Governance in grasslands and wetlands in South America: Investigating the existence and assessing effectiveness of community-based and natural resource-based models*. Role: co-advisor.
- 2017 – present Elsa Lagerquist, Swedish University of Agricultural Sciences, Uppsala, Sweden, PhD in Crop Production Science. Working title: *Under-sown leguminous forage crops and reduced tillage in organic farming – the design and evaluation of an innovative cropping system*. Role: deputy supervisor, co-advisor.
- 2016 – 2019 Richard Festo<sup>1</sup>, Humboldt University – Berlin, Germany, PhD in Agricultural sciences. Working title: *Unlocking the potential in assessing cropping upgrading strategies for food security in Dodoma, Tanzania (FS-Do)*. Role: Thesis advisor.
- 2017 – 2018 Therese Strimell Flodqvist, Swedish University of Agricultural Sciences, Uppsala, Sweden, Masters in Rural Development and Natural Resource Management. Title: *Knocking on the door – A study on nutritional education and women’s empowerment on household level in rural Tanzania*. Role: advisor (shared with J. Lodin).
- 2017 – 2018 Charles Ndimbwa, Swedish University of Agricultural Sciences, Uppsala, Sweden, Masters in Rural Development and Natural Resource Management. Title: *Crop production upgrading strategies and their role for household food security in Chamwino District, Tanzania*. Role: advisor (shared with J. Lodin).
- 2016 – 2018 Sonja Hölzl, Humboldt University – Berlin, Germany, Masters in Integrated Natural Resource Management. Title: *Exploring Environmental Justice for agricultural systems: where are hotspots of injustice through sugarcane cultivation in São Paulo, Brazil?* Role: co-advisor.
- 2016 – 2018 Fikadu Getachew Welidehanna, Ethiopian Institute of Agricultural Research, Addis Ababa, Ethiopia. Professional interchange sponsored by the Alexander von Humboldt Scholarship, International Climate Protection Fellowship. Title: *Impacts of climate change on Ethiopian sorghum production*. Role: Host (at ZALF) and advisor.
- 2016 – 2018 Charlotte Rapp, University of Kassel, Germany, Master program in Sustainable International Agriculture. Title: *Assessing species richness and ecological resources as a basis to design long-term management strategies to promote biodiversity and ecosystem functioning on farmland - the example of “Froide Fontaine, Belgium”*. Role: Thesis advisor.
- 2016 – 2017 Johanna Volk, Freie Universität – Berlin, Bachelor in Geography. Title: *Impacts of climate change scenarios on maize in Singida (Tanzania) and consequences for local food security*. Role: advisor.
- 2015 – 2017 Alejandra Mendizabal Cortes, Sao Carlos University – Brazil, PhD Program in Geography. Title: *Development of a Sustainability atlas for the bio-ethanol sugar cane production in the Sao Paulo State, Brazil*. Role: Thesis co-advisor.

- 2014 – 2015 Katrin Reincke, Humboldt University – Berlin, Germany, Master in Integrated Resources Management. Title: *The importance of cassava to improve household food security in Tanzanian rural areas*. Role: Thesis advisor.
- 2013 – 2017 Clerio Hickmann, Lavras University – Brazil, PhD Program in Soil Science. Title: *Nitrogen dynamics and adjustment of NPK fertilization in a corn-soybean-corn rotation in the Campos das Vertentes Region, Minas Gerais, Brazil*. Role: Thesis co-advisor.
- 2008 – 2008 Cristina Eberhardt Francisco, Federal University of Santa Catarina State – Brazil, Bachelor in Agronomy. Title: *The theory and praxis of agroecology adopted by the Brazilian Landless Workers Movement rural technicians (MST)*. Role: Final Thesis advisor.

## Languages

- Portuguese very good written and very good oral skills (native);
- English very good written and very good oral skills;
- German medium written and very good oral skills;
- Spanish medium written and very good oral skills;

## Participation in training programs

- Jan 2015 *Workshop on inter-cultural conflict prevention awareness*. Hannover, Germany.
- Jan 2015 *Conflict contact point training for conflict prevention and management systems in international cooperation projects*. Hannover, Germany.
- Sep 2014 *Workshop on inter-cultural conflict prevention awareness*. Morogoro, Tanzania.
- May 2014 *Working with dynamic crop models*. ZALF, Müncheberg, Germany.
- Jun 2012 *Theory and models of integrated evaluation of land use*. ZALF, Müncheberg, Germany.
- May 2012 *ArcGIS Desktop II: tools and functionality*. Environmental Systems Research Institute. ZALF, Müncheberg, Germany.
- May 2011 *Assessing Crop Production, Nutrient Management, Climatic Risk and Environmental Sustainability with Crop Simulation Models (DSSAT)*. ICASA and International Fertilizer Development Center. Muscle Shoals, USA.
- Sep 2010 *Publishing in peer-reviewed journals*. ZALF, Müncheberg, Germany.
- Aug 2009 *DSSAT (Decision Support System for Agrotechnology Transfer) and SUR (translated from Spanish: Analysis system for decision making)*. INTA, Argentina.
- Aug – Sep 2006 *Youth Encounter on sustainability*. ETH Zurich, Switzerland.
- Jan 2006 *Developing ecologically appropriate agricultural systems to mitigate human migration from rural communities*. Merida, Mexico.
- Jan – Feb 2004 *Experiences and alternatives of sustainable agriculture in Cuba: agroforestry and urban farming*. Cuban Ministry of Agriculture. La Habana, Cuba.

- Dec 2003      *Sustainable livestock production*. EEPF Indio Hatuey. Ministry of Superior Education of Cuba. Matanzas, Cuba.
- Oct 2002      *Education, small farms and sustainable rural development*. Organized by Universidade Federal da Paraíba. Brazil.

### **Organization of scientific and technical events**

- 2016      iCROP2016: International Crop Modelling Symposium – Berlin. Role: General Secretary of the symposium. >300 participants.
- 2015      TROPENTAG - Management of land use systems for enhanced food security: conflicts, controversies and resolutions – Berlin. Role: member of the scientific board, organizer, chair of the sessions a) Climate change, carbon sequestration and greenhouse gases and b) Soil management and crop nutrition. >1000 participants.
- 2008      Organizer and instructor of specialized training for technicians from the State Agricultural Extension Service in Southern Brazil: Agroecology and Soil Management (120 hours) and Agroecology for technicians working with afro-descent communities (80 hours). Funded by the Brazilian Ministry of Agrarian Development. Role: coordinator.
- 2004 – 2006      Organizer of five seminars and trainings in Agroecology for agricultural sciences students and rural extension service technicians (300 participants). Funded by CAPES-FIPSE and CS Fund/Warsh-Mott Legacy Fund. Role: coordinator.
- 2001      Coordination of the XXVIII Regional meeting of Agronomy students – Southern Brazil. Role: coordinator.