

# CURRICULUM VITAE

## 1. PERSONAL INFORMATION

- Name Daniel Callo-Concha
- Birth place Cusco, Peru
- Birth date April 09, 1972
- Civil status Married, one son
- Nationality Peruvian
- Address Lotharstr. 2, 53115, Bonn, Germany
- E-mail [callo-concha@uni-landau.de](mailto:callo-concha@uni-landau.de) , [d.callo-concha@uni-bonn.de](mailto:d.callo-concha@uni-bonn.de)



## 2. CURRENT POSITIONS

- Scientist at the Institute for Environmental Sciences (iES; <https://www.uni-koblenz-landau.de/en/campus-landau/faculty7/environmental-sciences>), University of Landau  
Team coordinator, researcher and supervisor of doctoral students at the BMBF project Process-based & Resilience-Oriented management of Diversity Generates sustainability (PRODIGY; <https://prodigy-biotip.org/>), duty stations in Bolivia, Brazil, Peru and Germany.  
Team member at the BMBF project Bioeconomy and Territorial Development in Cuba 'Cuban Bioeconomy' (CuBE), duty stations in Cuba and Germany.
- Associated researcher at the Center for Development Research (ZEF, <https://www.zef.de/>), University of Bonn  
Lecturer and mentor of doctoral candidates of the Bonn International Graduate School on Development Research (BIGS-DR), University of Bonn.

## 3. STUDIES, ACADEMIC DEGREES AND DISTINCTIONS

- Doktor der Agrarwissenschaften (Ph.D.). Universität Bonn. Bonn, Germany. 2004-2009. Dissertation: Functional Biodiversity in Tropical Agroforestry Systems: an Approach to Environmental Services by Land-Use Systems Assessment (The Case of Tomé-Açú, Northern Brazil). "Magna cum Laude".
- Maestro en Agroforestería para el Desarrollo Sostenible (M.Sc.). Universidad Autónoma Chapingo. Mexico State, Mexico. 1999-2001. Dissertation: Carbon sequestration by agroforestry systems and controls in three ecological stages of Peruvian Amazon. "Mejor tesis de Maestría" (finalist).
- Ingeniero Agrónomo (Ing.Agr.). Universidad Nacional de San Antonio Abad, Cusco, Peru. 1996-1997. Dissertation: Structural Analysis of cost-of-production of maize *Blanco Urubamba* in Huayllabamba. "Graduado con excelencia".
- Bachiller en Ciencias Agrarias (B.Sc.). Universidad Nacional de San Antonio Abad, Cusco, Peru. 1990-1995.

## 4. LANGUAGES

- Spanish (maternal), English (fluent), Portuguese and German (good), French (limited) and Quechua (poor).

## 5. SOFTWARE PROFICIENCY

- General: Windows and Linux-based (operating systems); Microsoft Office and Open-office (working platforms); Firefox, Chrome, Internet Explorer (web-browsers); Essential PIM, Thinking Rock (personal information managers).
- Specialized: SAE v. 1.0, FAUANL v. 2.0, EPI-Info, SPSS, R (statistics); Biodiversity-Pro 2 (biodiversity); MiraSilv, Inspire, SCUAF, FBA, HYPAR, WaNuLCAS (agroforestry modeling); CO2Fix, LEAP (carbon sequestration); CIMAT 2.0, MCAT, Visual PROMETHEE (multicriteria analysis); ZOTERO (literature management); The Brain and FreeMind (Mind mapping); UCINet & NetDraw (network analysis); VESTER, Vensim, Heraklit, Gamma, iMODELER (systems analysis).

## 6. ACADEMIC INTERESTS

- Systems thinking for handling complexity
- Interface agricultural systems/environment: climate change and biodiversity
- Disturbance and change: resilience, vulnerability and adaptability
- Agroforestry, agriculture and rural development
- Food and nutrition security in the global south
- Urbanization in developing countries

## 7. WORK EXPERIENCE (recent positions)

- Center for Development Research (ZEF; <https://www.zef.de/>), University of Bonn  
Position: Senior researcher  
Activity: Team leader and researcher at the *West African Science Service Center on Climate Change and Adapted Land Use* (WASCAL; <http://www.wascal.org/>); Co-coordinator, team leader and researcher of the project *Improving food security in Africa through increased system productivity of biomass-based value webs* (BiomassWeb; <http://biomassweb.org/>); Mentor and lecturer at the Bonn International Graduate School on Development Research (BIGS-DR), University of Bonn.  
Location: West Africa, East Africa, Latin America, Germany  
Period: April 2011 to December 2018
- Institute of Crop Science and Res. Conservation (INRES), Center for Development Research (ZEF) University of Bonn  
Position: Postdoctoral research fellow  
Activity: Participation in the drafting of the project proposal 'West African Science Service Center on Climate Change and Adapted Land Use' (WASCAL). Work Package: Farmers perception and adaptation strategies.  
Location: Germany, West Africa  
Period: April 2010 to March 2011
- Institute of Crop Science and Resource Conservation (INRES), University of Bonn  
Position: Postdoctoral research fellow  
Activity: Development of the research concept: Resilience, vulnerability and adaptability (RVA) in Agricultural Land-use systems using participation and systems-based approaches.  
Location: Germany  
Period: April 2009 to March 2010
- Center for Development Research (ZEF), University of Bonn  
Position: PhD fellow - Junior researcher  
Activity: Development of the doctoral dissertation 'An Approach to Environmental Services Assessment: Functional Biodiversity in Tropical Agroforestry Systems: The Case of Tomé-Açú, Northern Brazil'.  
Location: Germany and Brazil  
Period: August 2004 to April 2009
- Project: Land-Use, Land-Use Change and Forestry: climatic change in Mexico. Colegio de la Frontera Sur  
Position: Associated researcher  
Activity: Calibration and modeling of the carbon sequestration by forestry and agroforestry systems of Southern Mexico.  
Location: Tabasco, Mexico  
Period: March 2004 to July 2004
- Proyecto de rehabilitación de suelos volcánicos. EU consortium: Germany-France-Mexico-Chile  
Position: Agroforestry team leader  
Activity: Design of agroforestry practices and selection of multipurpose tree species as soil conservation in volcanic soils of the Mexican central plateau.  
Location: Tlaxcala, Mexico  
Period: August 2003 to August 2004
- Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias (INIFAP)  
Position: Consultant  
Activity: Planning, coordination and implementation of training courses in the project: 'Agroforestry for Mexican tropics, promissory alternative techniques of production to guarantee sustainable development'  
Location: Chapingo and Hidalgo, Mexico  
Period: July to December 2003
- División de Ciencias Forestales and Universidad Autónoma Chapingo  
Position: Guest lecturer  
Activity: Lecturing and seminars coordination of the course Agroforestry Systems for BSc Forestry students  
Location: Chapingo, Mexico

Period: February to June 2003

- Centro de Agroforestería para el Desarrollo Sostenible and Universidad Autónoma Chapingo  
Position: Associated researcher  
Activity: Modeling and simulation at tree and system level of the carbon sequestration by agroforestry systems in Mexican tropics  
Location: Chapingo and Veracruz, Mexico  
Period: June 2001 to June 2003

## **8. CONFERENCES, ACADEMIC EVENTS**

### ***Organization***

- Farmers' climate change adaptation on West African Sudanian Savannah: WASCAL 5 years of scientific research (workshop organization). Tropentag 2016. Universität für Bodenkultur (BOKU). 19-21 September. Vienna, Austria.
- Bridging science and development. Session organized by Daniel Callo-Concha and Anna Schwachula at the World Congress on Agroforestry. World Agroforestry Centre, Indian Council of Agricultural Research and the Indian Society of Agroforestry. February 10-14, 2014. Delhi, India.
- At loggerheads forever? Three tales about forests and people. Joint session by Daniel Callo-Concha: Coping with deforestation: 'on the ground' management options; Till Stellmacher: Protected Areas and Poverty Mitigation: Lessons from Ethiopia and Jan Börner: Carrots, sticks, and beyond: How to promote conservation? Dies Academicus University of Bonn. December 4, 2013. Bonn, Germany.

### ***Presentations (selected)***

- Introduction to complex systems analysis. Massive online course: How diversity regulates soil health, livelihood security, social cohesion and regional climate change. Soil Biodiversity Governing Tipping Points in the Amazon (PRODIGY) project team. January 28, 2021. Germany and Latin America.
- Enfoque de sistemas, breve introducción y estudio de caso en agroforestería. XXIX Curso Internacional de Agroforestería para el Desarrollo Sostenible (virtual). Centro de Agroforestería para el Desarrollo Sostenible de la Universidad Autónoma Chapingo. November 16-18, 2020. Mexico.
- Challenges of Participatory Tree Domestication Programs: Lessons from the Peruvian Amazon case. 4th World Congress on Agroforestry. May 20-22, 2019. Montpellier, France.
- Operationalizing systems thinking in research for development: the path of the Center for Development Research (ZEF). Leverage Points 2019: International conference on sustainability, research and transformation. Leuphana University. February 06-08, 2019. Lüneburg, Germany.
- Farmer climate change adaptation in the West African Sudan Savannah: reality check and feasible approaches. World Conference on Climate Change. Climate Change Conference Series. October 24-26, 2016. Valencia, Spain
- Is it as everyone says? Misconceptions on farming climate change adaptation in the West African Sudan Savannah. Fifth International Conference on Climate Change Adaptation 2016 (CCA2016). Unique Conferences Canada. 15-16 October, 2016. Toronto, Canada.
- Local Alternatives to Local Problems: Agroforestry Systems' Byproducts Contribution to Communities' Food and Nutrition Security in Southwestern Ethiopia. Sixth International Conference on Food Studies 'Food Systems in an Age of the Anthropocene: Addressing Demands for Change' University of California at Berkeley. Food Studies at Common Ground Publishing. 12-13 October 2016. Berkeley, USA.
- A participatory framework to assess multifunctional agriculture: case study agrobiodiversity in agroforestry systems of Tome Acu in northern Brazil. 27<sup>th</sup> International Congress for Conservation Biology – 4<sup>th</sup> European Congress for Conservation Biology (ICCB-ECCB 2015). Society for Conservation Biology. August 2-6, 2015. Montpellier, France.
- West African farmers' climate change adaptation: from technological change towards transforming institutions. World Symposium on Climate Change Adaptation (WSCCA- 2015). International Climate Change Information Programme, University of Manchester. September 2-4, 2015. Manchester, UK.
- Climate change adaptation strategies of West African Sudan Savannah farmers: from causal responses to the increase of socio-ecological resilience. 2nd International Conference on Evaluating Climate Change and Development. Independent Evaluation Office of the Global Environment Facility (GEF). November 4-6, 2014. Washington D.C., US.

- Cambio climático, concepción y desarrollo de enfoques locales: de la Sabana Africana a los Andes Americanos. Opening speaker. Congreso Internacional Cambio Climático y Biodeterioro en el Patrimonio Pétreo de Machupicchu. Ministerio de Cultura del Perú. May 14-18, 2012. Cusco, Peru.
- Resilience/vulnerability & adaptability (RVA) a joint approach for handling complex phenomena in agricultural land-use systems. Joint Seminar on topics in tropical and subtropical agriculture and forestry and on development and decent work. Geurg-August-Universität Göttingen and Universität Kassel. December 8, 2010. Witzenhausen, Germany.
- Environmental Services by Agroforestry Systems: How to Operationalize It? Functional biodiversity in Tomé-Açú, Northern Brazil. II World Congress of Agroforestry. World Agroforestry Center and United Nations Environment Program (UNEP). August 23-28, 2009. Nairobi, Kenya.
- An approach to Environmental Services Assessment: Functional Biodiversity in Tropical Agroforestry Systems (The case of Tomé-Açú, Northern Brazil). World Biodiversity Congress. Century Foundation. March 10-14, 2009. Chiang Mai, Thailand.
- A Biophysical Approach to the Environmental Services by Land-Use Systems; Functional Biodiversity in Tropical Agroforestry Systems (The case of Tomé-Açú municipality, Northern Brazil). Tropentag 2007 Utilization of diversity in land use systems: Sustainable and organic approaches to meet human needs. University of Witzenhausen. October 9-11, 2007. Witzenhausen, Germany.
- Agroforestry and Environmental Services. Conference and conversation. Red Agroforestal Ecuatoriana. December 11, 2003. Quito, Ecuador.
- Carbon Sequestration by Agroforestry Systems. XII International Course of Agroforestry for Eco-development. Centro de Agroforestería para el Desarrollo Sostenible, Universidad Autónoma Chapingo. September 1-21, 2003. Chapingo, Mexico.
- Environmental issues in a globalized system. I Forum about Natural Resources and Sustainable Development. División de Estudios de Postgrado. Escuela Nacional de Estudios Profesionales Aragón. Universidad Nacional Autónoma de México. July 4, 2002. Mexico city, Mexico.
- Estimation of Carbon Sequestered by some Agroforestry Systems and Controls in Three Ecological Stages of Peruvian Amazon. International Symposium about carbon Sequestration in Forestry Systems. Universidad Austral de Chile. October 18-20, 2001. Valdivia, Chile.

#### **Posters (selected)**

- Callo-Concha D., Harou L. and L. Krings. The limits of firewood collection in the West African savannah agroforestry parklands. 4th World Congress on Agroforestry. May 20-22, 2019. Montpellier, France.
- Jara-Alvear J., Callo-Concha, D. Denich, and M. Greve, K. Modelling the spatio-temporal complexity of rural solar electrification in traditional communities of the Amazon. Systems Analysis 2015. International Institute for Applied Systems Analysis (IIASA). November 11-13, 2015. Vienna, Austria.
- Callo-Concha D., Eguavoen I. and Wünscher T. Disclosing West African farmers' adaptation strategies: interlacing perceptions – innovations – coping measures. European Climate Change Adaptation Conference (ECCA) 'Integrating Climate Change into Action'. Federal Ministry of Education and Research, European Commission. March 18-20, 2013. Hamburg, Germany.
- Callo-Concha D. and Denich. M. An Approach to Environmental Services Assessment: Functional Biodiversity in Tropical Agroforestry Systems (The Case of Tomé-Açú, Northern Brazil). Argentinian Ministry of Agriculture, United Nations Food and Agriculture Organization (FAO). XIII World Forestry Congress. October 18-23, 2009. Buenos Aires, Argentina.
- Callo-Concha D. and Ewert, F. Operationalizing resilience-vulnerability-adaptation (RVA) analysis in agricultural land-use systems. 39th annual conference of the Ecological Society of Germany, Austria and Switzerland. September 14-18, 2009. Bayreuth, Germany.
- Callo-Concha D., Denich. M. and Vlek, P. A biophysical approach to the environmental services by land use systems; Functional biodiversity in tropical agroforestry systems (The case of Tomé-Açú community, Northern Brazil). Ecology in an era of Globalization. The Ecological Society of America (ESA). January 8 to 12, 2006. Merida, Mexico.

## **9. PUBLICATIONS**

### **Editor**

- Callo-Concha D., Denich D., Jaenicke H. and C. Schmidt. 2020. Special issue: Advances in Food and Non-Food Biomass Production, Processing and Use in Sub-Saharan Africa: Towards a Basis for a Regional Bioeconomy. Sustainability. MDPI. <[link](#)>
- Callo-Concha D., Denich M., Mehmood M.H., Place F. and A. Wardell. 2017. Special Issue: Lessons for research, capacity development and policy in agroforestry for development. Agroforestry Systems. Vol 91, Issue 5. Springer <[link](#)>

### **Peer reviewed papers**

- Usman, M.A., and D. Callo-Concha. 2021. The Role of Market Access and Household Dietary Diversity and Food Security in the Yayu Agroforestry Systems, Southwestern Ethiopia. Agricultural and Food Economics. In press.
- Aragaw S.H., Nohr D. and D. Callo-Concha. 2021. Nutritional potential of underutilized edible plant species in coffee agroforestry systems of Yayu, southwestern Ethiopia. Agroforestry Systems. <[link](#)>.
- Callo-Concha, D., Jaenicke, H., Schmitt, C., Denich, M. 2020. Food and Non-Food Biomass Production, Processing and Use in sub-Saharan Africa: Towards a Regional Bioeconomy. Sustainability 2020 12(5) <[link](#)>.
- Badmos, O.S., Callo-Concha, D., Agbola, B., Rienow, A., Badmos, B., Greve, K., Jürgens, C. 2020. Determinants of residential location choices by slum dwellers in Lagos megacity. Cities 98, 102589 <[link](#)>.
- Quispe-Zuniga M.R., Santos F., Callo-Concha D., Greve K. 2019. Impact of Heavy Metals on Community Farming Activities in the Central Peruvian Andes. Minerals, 10 (9): 647 <[link](#)>
- Badmos, O. S., Rienow A., Callo-Concha D., Greve K., Jürgens C. 2019. Simulating slum growth in Lagos: An integration of rule based and empirical based model. Computers, Environment and Urban Systems, 77 (101369) <[link](#)>
- Callo-Concha, D., Jemal O. and H. Seyoum. 2019. Local Alternatives to Local Problems: The Contribution of Agroforestry System By-products to Food and Nutrition Security of Communities in Southwestern Ethiopia. Food Studies 9(1), 29-42. DOI: 10.18848/2160-1933/CGP/v09i01/29-42 <[link](#)>
- Callo-Concha, Daniel. 2018. Optimizando la producción agrícola: análisis de sistemas para operacionalizar la agricultura multifuncional. Gestión y Ambiente, 21, 137–43. DOI: 10.15446/ga.v21n2supl.77912. <[link](#)>
- Callo-Concha, D. 2018. Farmer Perceptions and Climate Change Adaptation in the West Africa Sudan Savannah: Reality Check in Dassari, Benin, and Dano, Burkina Faso. Climate, 6(2) 44. DOI: 10.3390/cli6020044 <[link](#)>
- Badmos, O.S., Rienow, A., Callo-Concha, D., Greve, K., Jürgens, C., 2018. Urban Development in West Africa—Monitoring and Intensity Analysis of Slum Growth in Lagos: Linking Pattern and Process. Remote Sensing 10, 1044. DOI: 10.3390/rs10071044 <[link](#)>
- Jemal, O., Callo-Concha, D., van Noordwijk, M., 2018. Local Agroforestry Practices for Food and Nutrition Security of Smallholder Farm Households in Southwestern Ethiopia. Sustainability 10, 2722. DOI:10.3390/su10082722 <[link](#)>
- Nero, B., Callo-Concha, D., Denich, M., 2018. Structure, Diversity, and Carbon Stocks of the Tree Community of Kumasi, Ghana. Forests 9, 519. DOI: 10.3390/f9090519 <[link](#)>
- Nero B., Callo-Concha D., Anning A.K. and M. Denich. 2017. Urban Green Spaces Enhance Climate Change Mitigation in Cities of the Global South: The Case of Kumasi, Ghana. Procedia Engineering 198, 69-83. DOI: 10.1016/j.proeng.2017.07.074 <[link](#)>
- Nero B., Campion B., Agbo N., Callo-Concha D. and M. Denich. 2017. Tree and Trait Diversity, Species Coexistence, and Diversity-functional Relations of Green Spaces in Kumasi, Ghana. Procedia Engineering 198, 99-115. DOI: 10.1016/j.proeng.2017.07.164 <[link](#)>
- Callo-Concha, D., Denich, M., Ul Hassan, M.M., Place F., and Wardell D.A. 2017. Lessons for research, capacity development and policy in agroforestry for development. Agroforestry Systems, 91(5), pp. 795–798. DOI:10.1007/s10457-017-0085-6 <[link](#)>
- Callo-Concha D., Denich M., Lamers J.P.A., Schwachula A., Hornidge A.-K., Khamzina A. and C. Borgemeister. 2016. Bridging science and development: lessons learnt from two decades of development research. Agroforestry Systems 91(5), pp. 799–810, DOI: 10.1007/s10457-016-0008-y <[link](#)>
- Wiersberg T., Callo-Concha D., F. Ewert. 2016. Pitfall or Priority Drift? Participatory Tree Domestication Programs: The Case of Agroforestry in the Peruvian Amazon. Journal of Sustainable Forestry 35(7), pp. 486–499. DOI: 10.1080/10549811.2016.1213641 <[link](#)>

- Callo-Concha D. and M. Denich. 2014. A participatory framework to assess multifunctional land-use systems with multicriteria and multivariate analyses: A case study on agrobiodiversity of agroforestry systems in Tomé Açú, Brazil. *Change Adaptation Socioecol. Syst.*, 1(1): 40-50. <[link](#)>
- Callo-Concha, D. and F. Ewert. 2014. Using the concepts of resilience, vulnerability and adaptability for the assessment and analysis of agricultural systems. *Change and Adaptation in Socio-Ecological Systems*. Vol 1. pp. 1-11. <[link](#)>
- Callo-Concha D., Gaiser T., Webber, H., Tischbein B., Müller M. and F. Ewert. 2013. Farming in the West African Sudan Savanna: Insights in the context of climate change. *African Journal of Agricultural Research*. Vol.8 (38), pp. 4693-4705. <[link](#)>
- Callo-Concha. 2013. Prácticas agroforestales y especies de uso múltiple para la rehabilitación y conservación de suelos volcánicos en López Mateos, Tlaxcala: percepción de los agricultores. *Sociedades Rurales, Producción y Medio Ambiente*. Vol. 13, N° 26, pp. 120-134. <[link](#)>
- Callo-Concha, D., Rajagopal, I. y L. Krishnamurthy. 2004. Secuestro de Carbono por Sistemas Agroforestales en Veracruz. *Universidad Autónoma de Nuevo León. Ciencia UANL*. Monterrey, México. Vol. VII, N° 2, abril-junio 2004. pp. 60-65. <[link](#)>
- Callo-Concha, D., Krishnamurthy, L. y J. Alegre. 2002. Secuestro de Carbono por Sistemas Agroforestales Amazónicos. *Revista Chapingo: Ciencias Forestales y Medio Ambiente*. Universidad Autónoma Chapingo. Chapingo, México. Vol. VIII, Num. 2. pp. 101-106. <[link](#)>

#### **Books**

- Callo-Concha, D., Denich M., Jaenicke H. and C.B. Schmitt (Eds.). 2020. *Advances in Food and Non-Food Biomass Production, Processing and Use in Sub-Saharan Africa*. MDPI. Basel, Switzerland. 446 p. <[link](#)>
- Callo-Concha D. 2009. *An Approach to Environmental Services Assessment: Functional Biodiversity in Tropical Agroforestry Systems: The Case of Tomé-Açú, Northern Brazil*. Band 65 von *Ecology and Development series*. 181 p. <[link](#)>
- Callo-Concha D. 2002. *Biocolonialismo, una aproximación*. Centro de Investigaciones Económicas, Sociales y Tecnológicas de la Agroindustria y la Agricultura Mundial y Universidad Autónoma Chapingo. Chapingo, México 45 p. <[link](#)>

#### **Book chapters**

- Quispe-Zuniga, M., Callo-Concha D., Plasencia R., Greve K. 2020. Implementing Environmental Reforms in the Central Peruvian Andes: Socio-Economic and Institutional Aspects of Campesino Communities Affected by Mining. In Laube W. and Pereyra A.R.B. (Eds.). *'Civilizing' Resource Investments and Extractivism*. ZEF Development Studies. LIT Verlag. Pp. 209-251. <[link](#)>
- Nero, Bertrand F., Daniel Callo-Concha, and Manfred Denich. 2019. Increasing Urbanisation and the Role of Green Spaces in Urban Climate Resilience in Africa. In: Haltermann I., Tischler J. (Eds.). *Environmental Change and African Societies*. Brill. Pp. 265-296. <[link](#)>
- Callo-Concha, D., Harou L., Krings L., Ngonjock J. and Ziemacki J. 2019. Farming adaptation in the West African Sudan Savannah: lessons learnt and challenges ahead. In: Senapkon K., Yegbemey R and Awoye H. (Eds). *Advancing Climate Change Research in West Africa: Trends, Impacts, Vulnerability, Resilience Adaptation and Sustainability Issues*. Nova Publishers. Pp. 95-131. <[link](#)>
- Callo-Concha, D. 2016. West African farmers' climate change adaptation: from technological change towards transforming institutions. In Leal Filho, W., Adamson K., Dunk, R. Azeitero, U. Illingstworth, S. and Alves F. (Eds). *Implementing Climate Change Adaptation in Cities and Communities*. Springer, Berlin. Pp. 253-265. <[link](#)>
- Callo-Concha D., Sommer, J.H., Kleemann J., Gatzweiler F. and M. Denich. 2014. Marginality from a socioecological perspective. In von Braun J. and F. Gatzweiler (Eds.). *Marginality: Addressing the Nexus of Poverty, Exclusion and Ecology*. Springer. Pp. 57-65. <[link](#)>
- Callo-Concha D. and M. Denich. 2010. Operationalizing environmental services of agroforestry systems: Functional biodiversity assessment in Tomé-Açú, Pará, Brazil. In Montagnini F. (ed.) *Agroforestry as a Tool for Landscape Restoration: challenges and opportunities for success*. Nova Science Publishers, New York. pp. 143-156. <[link](#)>

- Callo-Concha D. 2008. Servicios ambientales por sistemas agroforestales; una aproximación. In: Quintero, M.L. and C. Fonseca H. (coordinadores) Desarrollo sustentable: aplicaciones e indicadores. Cámara de Diputados LX legislatura y Editorial Porrúa. México D.F., México. pp. 223-248. [<link>](#)
- Callo-Concha D. 2004. Alcances ambientales del sistema global. In Saldívar, A., Ríos-Gómez, R., Garrido R.C., Cruz A.R., Callo-Concha, D. Toledo M.C., Chapela, G., Ramírez M.C., Quintero S. M., Rocha, S.M. Recursos naturales y desarrollo sustentable: reflexiones en torno a su problemática. Cámara de Diputados, LIX Legislatura y la Escuela Nacional de Estudios Profesionales, Aragón de la Universidad Nacional Autónoma de México. México D.F., México. pp. 65-85. [<link>](#)
- Callo-Concha D., Krishnamurthy L. y J. Alegre. 2002. Estimación del Carbono Secuestrado por algunos Sistemas Agroforestales y testigos en tres pisos ecológicos de la Amazonía del Perú. En: Krishnamurthy, L. y M. Uribe (Editores). Tecnologías Agroforestales para el Desarrollo Sostenible. Secretaría de Medio Ambiente y Recursos Naturales y Programa de Naciones Unidas para el Medio Ambiente. Chapingo, México. pp. 159-182. [<link>](#)

#### ***Discussion, working and other papers***

- Jemal O. and D. Callo-Concha. 2017. Potential of Agroforestry for Food and Nutrition Security of Small-scale Farming Households. ZEF working paper series 161. 46 p. DOI: 10.13140/RG.2.2.34833.74086 [<link>](#)
- Callo-Concha D. 2014. Approaches to managing disturbance and change: Resilience, vulnerability and adaptability. ZEF Working Paper Series 133. 33 p. [<link>](#)
- Callo-Concha D. 2013. Roger Leakey. Living with the trees of life: Towards the transformation of tropical agriculture. Book review. Journal of Agriculture and Rural Development in the Tropics and Subtropics. Vol. 114, No 1. pp. 77–78. [<link>](#)
- Pütter, F. et al. 2012. White paper of the 2012 winter school on Limits to Growth Revisited. Volkswagen Foundation. 18 p. [<link>](#)
- Callo-Concha D., Gaiser T. and F. Ewert. 2012. Farming and cropping systems in the West African Sudanian Savanna WASCAL research area: Northern Ghana, Southwest Burkina Faso and Northern Benin. ZEF Working Paper Series 100. 35 p. [<link>](#)
- Callo-Concha, D. 2005. Uma Abordagem Biofísica aos Serviços Ambientais dados pelos Sistemas de Uso da Terra: Biodiversidade Funcional pelos Sistemas Agroflorestais Tropicais (O caso de Tomé-Açu no Norte do Brasil). Acai.com Publicação dos Projetos Gestão Sustentável do Desenvolvimento Local e Regional nos Estados de Pará e Amapá. Belém, Brasil. pp. 36, 37.
- Callo-Concha, D. 1998. Producción, Economía y Ecología. Opciones, Economía Medio Ambiente y Desarrollo. Universidad Nacional de San Antonio Abad del Cusco e Instituto Andino de Ecología y Desarrollo INANDES. Cusco, Perú. N° 2. pp. 28-32.

#### ***Conference proceedings (selected)***

- Ziemacki J., Callo-Concha D. and M. Thiel. 2018. The residual effect of fertilizer in soil: Can crop rotation practices combat soil fertility loss and increase crop yield? 5<sup>th</sup> European Congress of Conservation Biology. June 12-15, 2018. Jyväskylä, Finland. [<link>](#)
- Jemal O.M., Callo-Concha D. and H. Aragaw. 2017. Contribution of local Agroforestry Systems to Food and Nutrition Security of Small Farming Households in Yayu, Southwestern Ethiopia. Tropentag 2017. Future Agriculture: Socioecological transitions and bio-cultural shifts. Tielkes E. (Ed.). September 20-22, 2017. Bonn, Germany. [<link>](#)
- Aragaw H., Jemal O.M., Wald J.P., Nohr D. and D. Callo-Concha. 2017. Nutritional Potential of Underutilised Edible Plants in Agroforestry Systems of Yayu, Southwestern Ethiopia. Tropentag 2017. Future Agriculture: Socioecological transitions and bio-cultural shifts. September 20-22, 2017. Bonn, Germany. [<link>](#)
- Nero B., Callo-Concha D. and M. Denich. 2016. Urban Green Spaces Enhance Climate Change Mitigation in Cities of the Global South: The Case of Kumasi, Ghana. Tropentag 2016. Solidarity in a competing world - fair use of resources. September 19-21, 2016. Vienna, Austria, [<link>](#)
- Callo-Concha D. 2013. Enfoque resiliencia/vulnerabilidad-adaptabilidad (RVA): aplicaciones en a) sistemas agroforestales multifuncionales y b) adaptación al cambio climático de sistemas de uso de la tierra. Desafíos de los Estudios del Desarrollo: Actas del I Congreso Internacional de Estudios del Desarrollo. Rafael Domínguez Martín y Sergio Tezanos Vázquez (Eds.). Red Española de Estudios del Desarrollo (REEDES). November 14-16, 2012. Santander, Spain. [<link>](#)

- Callo-Concha D. and F. Ewert. 2011. Assessing Multifunctional Agroforestry Systems applying the Resilience/Vulnerability and Adaptability (RVA) Approach (abstract). Tropentag 2011. Development on the Margin. University of Bonn. October 5-7, 2011. Bonn, Germany. pp 256. <[link](#)>
- Wiersberg T. and D. Callo-Concha. Impact of the ICRAF Tree Domestication Program in the Peruvian Amazon: A System and Participatory-based Approach (abstract). Tropentag 2011. Development on the Margin. University of Bonn. October 5-7, 2011. Bonn, Germany. pp. 193. <[link](#)>
- Callo-Concha D. and M. Denich. 2011. Assessing social-ecological sustainability of agroforestry systems: functional biodiversity in Tomé-Acú, northern Brazil. International Workshop on Agroforestry “Ecological Benefits of Agroforestry”. Cottbus University, Cottbus, Germany. Pp. 31. <[link](#)>
- Callo-Concha D. and F. Ewert. 2009. Operationalizing Resilience-Vulnerability-Adaptation (abstract). 39<sup>th</sup> Annual Conference “Dimensions of Ecology: from Global Change to Molecular Ecology”. Ecology Society of Germany, Austria and Switzerland (GfÖ). University of Bayreuth 14<sup>th</sup>-18<sup>th</sup>September 2009. Bayreuth, Germany. pp 96. <[link](#)>
- Callo-Concha D., Denich, M. and P. Vlek. 2009. Environmental services by Agroforestry Systems: how to operationalize them? (abstract). II World Congress of Agroforestry. Agroforestry – The Future of Global Land Use. August 23 - 28. Nairobi, Kenya. pp. 124. <[link](#)>
- Callo-Concha D., Denich, M. and P. Vlek. 2008. Evaluation of Functional Biodiversity in Tropical Agroforestry Systems - The Case of Tomé-Açú, Northern Brazil (abstract). Biodiversity Research – Safeguarding the Future. Pre COP-9. Universität Bonn, Museum König. May 12-16, 2008. Bonn, Germany. pp. 68. <[link](#)>
- Callo-Concha D, Denich M. and P. Vlek. 2006. A biophysical approach to the environmental services by land use systems; Functional biodiversity in tropical agroforestry systems (The case of Tomé-Açú community, Northern Brazil) (abstract). Proceedings Ecology in an era of Globalization. The Ecological Society of America (ESA). January 8 to 12. Merida, Mexico. pp. 24.
- Callo-Concha, D. 2004. Environmental Services by Agroforestry Systems: A Local Approach (abstract). Proceeding 1st Congress of Agroforestry: Working together for Sustainable Land-Use Systems. June 27-July 2. University of Florida. Orlando, Florida. pp. 172. <[link](#)>
- Alegre, J., Arévalo, L., Ricse, A., Callo-Concha, D. y C. Palm. 2004. Secuestro de Carbono con sistemas alternativos en el Perú. Memorias IV Congreso Brasileiro de Sistemas Agroflorestais. Sistemas Agroflorestais: Tendencias da Agricultura Ecologica nos Tropicos, Sustento da Vida. Muller, M., da Gama, A., Fontes, I. E M. Fernandez (eds). Empresa Brasileira de Pesquisa Agropecuaria. Bahía, Brasil. pp. 27-32.
- Callo-Concha D., Krishnamurthy L. and J. Alegre. 2001. Simposio Internacional Medición y Monitoreo de la Captura de Carbono en Ecosistemas Forestales. 18 al 20 de Octubre 2001. Universidad Austral de Chile. Valdivia, Chile. <[link](#)>
- Alegre J. C., Arévalo, L., Ricse, A., Callo-Concha, D. and C. Palm. 2001. Carbon Sequestration for different Land use Systems in the Humid Tropics of Peru (abstract). Annual Meeting of American Society of Agronomy, Crop Science Society of America and Soil Science Society of America. North Carolina, USA.

## 10. EDITORIAL ASSIGNMENTS

### **Guest editor**

- Agroforestry systems. Ecology and Society (E&S). Springer Nature
- Sustainability. MDPI

### **Reviewer**

- Ecology and Society (E&S). Resilience Alliance, open access
- Sustainability (SUSTDE). MDPI, open access
- Social Sciences (SocSci). MDPI, open access
- Journal of Agricultural Science (JAS). Canadian Center of Science and Education, open access
- Journal of Sustainable Development (JSD). Canadian Center of Science and Education, open access
- Change and Adaptation in Socio-Ecological Systems (CASES). Versita, open access
- Journal of Agriculture and Rural Development in the Tropics and Subtropics (JARTS). Univ. of Kassel, open access
- African Journal of Agricultural Research (AJAR). Academic Journals, open access



- International Journal of Livestock Production (IJLP). Academic Journals, open access
- Agronomy for Sustainable Development (ASDE). Springer, free access
- Environment Science and Policy (ESP). Elsevier
- Ecological Indicators (ECOLIND). Elsevier
- Proceedings of the National Academy of Sciences of the USA (PNAS). National Academy of Sciences of the USA
- Environmental Development (ENVDEV). Elsevier
- Agriculture, Ecosystems and Environment (AEE). Elsevier
- Agroforestry Systems (AFS). Springer
- GeoJournal (GEJO). Springer
- Environment, Development and Sustainability (Envi). Springer
- Biodiversity and Conservation (BioC). Springer
- Regional Environmental Change (REEC). Springer
- Environmental Management (EMVM). Springer
- Global Change Biology (GCB). Wiley
- Heliyon. Cell Press
- Agriculture and Bioscience. Springer Nature

#### **11. HONORARY AFFILIATIONS AND TEACHING**

- Docente-investigador internacional at the Centro de Estudios Estratégicos para el Desarrollo of the Universidad de Guadalajara, Mexico.
- Lecturer at the Bonn International Graduate School on Development Research (BIGS-DR), University of Bonn. Bonn, Germany.
  - Scientific writing. Interdisciplinary (three departments) modular course (2011-2020).
  - Complex systems analysis. Interdisciplinary/disciplinary course (department of Natural Resources Management) (2011-2017, 2020).
  - Agroforestry. Disciplinary course for the department of Natural Resources Management (2011-2015).
  - Time management. Open seminar (2014-2016, 2020).
- Guest professor at the Programa de Doctorado en Agricultura Sustentable de Universidad Nacional Agraria La Molina, Lima, Peru (2016-2020).
- Guest lecturer. Complex systems analysis. Modular course for the Graduate School (PhD) on Climate Change and Agriculture of the West African Science Service Center on Climate Change and Adapted Land use (WASCAL). Koulikouro, Bamako, Mali (2017, 2020).
- Guest lecturer. Complex systems analysis. Modular course for the Cuban-German School (PhD) for Interdisciplinary Development Studies (CG-SIDS) (2017). Santa Clara, Cuba.
- Lecturer. How to conceive and write a scientific manuscript? Seminar at the Institute for Environmental Science (iES) at the University of Koblenz-Landau. (2020, 2021). Landau, Germany.

#### **12. TUTORING**

##### ***Doctoral students***

- Elisabeth Lagneaux. Developing a game-based approach to explore smallholder farmer's decision-making regarding land-use in the South-Western Amazon. Wageningen University and University of Koblenz-Landau. Ongoing
- Solomon Benti. Developing nature induced urban planning strategies for small urban areas in Ethiopia: Case studies from small towns nearby Oromia special zones surrounding Addis Ababa, Ethiopia. Addis Ababa University, Ethiopia. Ongoing.
- Koissi Savi. Host-Vector-Parasite System Dynamics Analysis for Enhancing Malaria Control in Accra (Ghana). University of Bonn. Ongoing.
- Melissa Quispe. Harmonizing mining activities with the agriculture of local communities in Peru. University of Bonn, Germany. 2020.

- Olabisi Badmos. Curbing slum formation: A case study of a megacity in Nigeria (Lagos). University of Bonn/Wuppertal, Germany. 2019.
- Omarsherif Mohamed Jemal. Enhancing food security through agroforestry systems while improving households' biomass webs in Southwestern Ethiopia. University of Bonn, Germany. 2018.
- Jose Jara-Alvear. GIS-based sustainability assessment of rural electrification in the Amazon Basin (Case study Ecuador). University of Bonn, Germany. 2017.
- Bertrand Festus Nero. Urban Green Space Management Enhances Carbon Sequestration and Conserves Biodiversity in Developing Countries – Case of Ghana. University of Bonn, Germany. 2016.

#### **Master students**

- Andrea Arancibia. High potential Non-timber forest products for sustainable use and commercialization in Pando, Bolivia. University of Natural Resources and Life Sciences, Austria. Ongoing
- Paul Mathaess. Extractivism and infrastructure of non-timber forest products in the southwestern Amazon. University of Hohenheim, Germany. Ongoing
- Habtamu Seyoum. Nutritional potential analysis of underutilized wild and semi domesticated tree/plant species from Yayu, south western Ethiopia. University of Bonn, Germany. 2017.
- Laura Krings. Woodfuel scarcity, resilience and social institutions in the Dagara society - A case study in South West Burkina Faso-. Albert-Ludwigs-Universität Freiburg, Germany. 2016.
- Benjamin Graf. Livestock ownership, climate change, and sustainable livelihoods in Ioba Province, Burkina Faso. Technical University Dresden, Germany. 2016.
- Jasmin Ziemacki. Identifying cotton-based crop rotation practices as an agricultural adaptation strategy of smallholder farmers to effects of global change via satellite imagery and field data. A case study of Dassari, Benin. University of Bonn, Germany. 2016.
- Jane Maureen Ngonjock Ebako. Subsidized cotton and climate change adaptation: case study of Dassari, Benin. University of Cologne, Germany. 2015.
- Liman Harou. Agroforestry Parklands of the Sudan Savanna in the Context of Climate Change: Firewood Energy in North-western Benin, West Africa. University of Lome, Togo. 2015.
- Thorsten Weisberg. 'Transforming lives and landscapes' Politische Ökologie von Entwaldung und nachhaltiger Entwicklung im peruanischen Amazonasgebiet: ICRAFs Tree Domestication Program als Fallbeispiel. University of Bonn, Germany. 2011.

#### **13. RESEARCH GRANTS**

- Federal Ministry of Education and Research (BMBF). Research project: Bioeconomy and Territorial Development in Cuba 'Cuban Bioeconomy (CuBE), 75 000 € (seed money). Team member. 2021-2023.
- Federal Ministry of Education and Research (BMBF). Research project: Soil Biodiversity Governing Tipping Points in the Amazon (PRODIGY), c.a. 8 mill. €. Team member, 2019-2023.
- German Academic Exchange Service (DAAD). Graduate school. Cuban-German School for Interdisciplinary Development Studies (CG-SIDS). 2.2 mill. €. Writing team 2017-2020.
- Federal Ministry of Food and Agriculture (BMEL). Research project: Diversifying agriculture for balanced nutrition through vegetables in multi-storey cropping systems (NutriHAF). 1.2 mill. €. Writing team 2015-2018.
- Federal Ministry of Education and Research (BMBF). Research project: Improving food security in Africa through increased system productivity of biomass-based value webs (BiomassWeb), c.a. 6 mill. €. Writing team, 2013-2018.
- Federal Ministry of Education and Research (BMBF). Research project: West African Science Service for Climate Change and Adapted land Use (WASCAL), c.a. 50 mill. €. Writing team, 2010-2016.
- Federal Ministry of Cooperation and Development (BMZ), c.a. 12 000 €. Individual grant, PhD research, 2004.
- The International Centre for Research in Agroforestry (ICRAF WAC) Latin-American Regional Office, c.a. 3000 €. Individual grant, MSc thesis, 2000.

#### **14. AWARDED SCHOLARSHIPS**

- Global Environment Facility (GEF) and World Bank. 2nd International Conference on Evaluating Climate Change and Development. November 4-6, 2014. Washington D.C., US.

- International Food Policy Research Institute (IFPRI). Building Resilience for Food and Nutrition Security may 15-17, 2014, Addis Ababa, Ethiopia.
- World Agroforestry Center (ICRAF) and University of Bonn. II World Congress of Agroforestry. August 23-28, 2009. Nairobi, Kenya.
- An international programme of biodiversity science (DIVERSITAS) and U.S. National Science Foundation (NSF). Biodiversity Information and Community-Based Use of Natural Resources (BESTNet). June 11-18, 2009. Oaxaca and Mexico City, Mexico.
- European Union 6th Framework Programme. ALTER Net Summer School, Trends in Biodiversity: Europeans Ecosystems and Policy. A Long-Term Biodiversity, Ecosystem and Awareness Research Network. September 1-13, 2007. Peyresq, France.
- German Academic Exchange Service (DAAD). Doctoral studies at the Center for Development Research (ZEF), University of Bonn. August 2004-January 2008. August 2004-January 2008. Germany & Brazil.
- Ecological society of America (ESA). Ecology in an Era of Globalization. Ecological Society of America. January 8-12, 2006. Yucatan, Mexico.
- The International Centre for Research in Agroforestry (ICRAF), Empresa Brasileira de Pesquisa Agropecuaria (EMBRAPA). International Workshop Agroforestry Systems Model and Simulation. November 5-11, 2001. Curitiba, Brazil.
- Centro de Agroforesteria para el Desarrollo Sostenible (CADS), Universidad Autónoma Chapingo (UACH). Master Program in Agroforestry for Sustainable Development. Universidad Autónoma Chapingo. January 1999-May 2001. Mexico & Peru.
- United Nations Environmental Program (UNEP). Red de Formación Ambiental. VII International Course Agroforestry for Eco-development. September 6-26, 1998. Chapingo, Mexico.
- Agroecología Universidad Cochabamba (AGRUCO), Universidad Mayor de San Simón. XVIII Intensive National Course-Workshop Level 1 (basic). August 29-September 3, 1997; X Intensive National Course-Workshop Agroecology and Sustainable Development Level 2 (advanced). September 26-October 1, 1997; VII Intensive National Course-Workshop Agroforestry and Soil Conservation Level 3 (advanced). November 24-29, 1997. Cochabamba, Bolivia.

#### **15. PERSONAL NON-ACADEMIC INTERESTS**

- Leisure: literature, cooking, cinema, traveling
- Sports: running, swimming, route cycling, football (soccer), basketball
- Other activities: freelancing journalism, networking
- Blog on science divulgation: <https://cienciaetal.lamula.pe/> –in Spanish language-

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