



## Bibiana Betancur Corredor

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### WORK EXPERIENCE

[ 01/02/2023 – Current ]

#### Senior Researcher

**Center for Development Research (ZEF) - University of Bonn**

**City:** Bonn

**Country:** Germany

Research on soil biodiversity in agroecosystems. Particular interest on meta-analysis and evidence synthesis methods.

[ 01/02/2023 – Current ]

#### Guest researcher

**Senckenberg – Leibniz Institution for Biodiversity and Earth System Research**

**City:** Görlitz

**Country:** Germany

Research on soil biodiversity in agroecosystems.

[ 15/11/2019 – 31/01/2023 ]

#### Agricultural scientist

**Senckenberg – Leibniz Institution for Biodiversity and Earth System Research**

**Address:** Görlitz, Germany

**City:** Görlitz

**Country:** Germany

Elucidate and quantify the effects of agricultural practices on soil animal communities, through meta-analyses of global data primarily concerning tillage and fertilization regimes.

[ 07/12/2020 – 30/04/2022 ]

#### Associate lecturer - Data analysis and statistical methods

**University of Bonn - Center for Development Research**

**City:** Bonn

**Country:** Germany

Course on data analysis in R, with a special focus on meta-analytical techniques.

[ 01/12/2018 – 20/12/2022 ]

#### Consultant - Business intelligence

**Connect Bogota Region**

**City:** Bogota

**Country:** Colombia

Technological surveillance and competitive intelligence analysis on agricultural-related topics.

[ 01/06/2018 – 15/11/2019 ]

#### Postdoctoral research associate

**University of York**

**Address:** York, United Kingdom

Executed a Syngenta funded project aimed to understand the effects of tillage on soil hydraulic and structural properties. Member of Departmental Research Committee, Equality and Diversity Committee and representative of early career researchers.

[ 12/10/2012 – 30/03/2014 ]

#### Data analyst for technological surveillance

**Tecnova UEE**

**Address:** Medellin, Colombia

- Data and text mining for technological surveillance reports for research groups and industry.
- Support cooperation projects between research groups and the industry.
- Supporting the transformation of research outcomes in actionable intellectual property products.

[ 20/10/2012 – 03/03/2014 ] **Environmental management consultant**

*Mintex S.A.*

**Address:** Medellin, Colombia

Development of waste management plan and environmental policy for the company.

[ 30/08/2008 – 30/07/2010 ] **Environmental projects engineer**

*Water Treatment Plant of Pereira*

**Address:** Pereira, Colombia

Optimization of drinking water treatment through the implementation of new technologies.  
Development of waste management guidelines for sanitation facilities.

[ 01/10/2007 – 20/12/2007 ] **Research assistant**

*National University of Colombia*

**Address:** Manizales, Colombia

Extraction of oil from solid waste of a coffee processing facility to analyze potential biofuel production.

## EDUCATION AND TRAINING

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[ 01/10/2014 – 14/05/2018 ] **PhD. in Agriculture**

*University of Bonn*

**Address:** Center for Development Research, Bonn, Germany

**Final grade:** Magna Cum Laude **Level in EQF:** EQF level 8

**Thesis:** Agroforestry as a post-mining land use approach for waste deposits in alluvial gold-mining areas of Colombia

[ 02/08/2010 – 14/11/2012 ] **Master of Science in Biotechnology**

*National University of Colombia*

**Address:** Medellin, Colombia

**Field(s) of study:** Environmental biotechnology

**Thesis:** Bioremediation of a long-term pesticide-polluted soil through biostimulation and surfactant addition

[ 01/08/2009 – 15/07/2010 ] **Postgraduate Diploma in Environmental Engineering**

*National University of Colombia*

**Address:** Manizales, Colombia

*Specialization:* Design of water supply and sanitation facilities for rural areas.

[ 23/02/2003 – 30/07/2008 ] **Chemical engineer**

*National University of Colombia*

**Address:** Manizales, Colombia

*Scholarship:* National University of Colombia undergraduate scholarship 2003

*Internship:* Management of hazardous waste treatment and elaboration of disposal management plan (6 months).

## LANGUAGE SKILLS

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**Mother tongue(s):** Spanish

**Other language(s):**

**English**

**LISTENING C2 READING C2 WRITING C2**

**SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2**

## German

LISTENING B1 READING B1 WRITING A2

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

## PUBLICATIONS

### Publications

1. Betancur-Corredor, B., Lang, B., & Russell, D. J. (2022). Organic nitrogen fertilization benefits selected soil fauna in global agroecosystems. *Biology and Fertility of Soils*, 1-16.
2. Betancur-Corredor, B., Lang, B., & Russell, D. J. (2022). Reducing tillage intensity benefits the soil micro- and mesofauna in a global meta-analysis. *European Journal of Soil Science*, 73( 6), e13321. <https://doi.org/10.1111/ejss.13321>
3. Bibiana Betancur-Corredor, B., Loaiza-Usuga, J., Denich, M., Borgemeister, C (2020) Changes of Technosol properties and vegetation structure along a chronosequence of dredged sediment deposition in areas with alluvial gold mining in Colombia. Accepted for publication on December 20, 2019 in *Journal of Soils and Sediments*.
4. Betancur-Corredor, B., Brown, C., Greener, M (2019) Effects of pesticide incorporation due to tillage on pesticide transport through heavy clay soils. *Proceedings of XVI Symposium in Pesticide Chemistry*. Piacenza, Italy.
5. Betancur Corredor, Bibiana (2019). Agroforestry as a post-mining land-use approach for waste deposits in alluvial gold mining areas of Colombia. *Ecology and Development Series Bd. 107*.
6. Bibiana Betancur-Corredor, B., Loaiza-Usuga, J., Denich, M., Borgemeister, C (2018) Gold mining as a potential driver of development in Colombia: Challenges and opportunities, *Journal of Cleaner Production*, 199, 538-553.
7. Betancur-Corredor, B., Evia, P., Martini, L (2017). Rural Future Lab. DAAD Newsletter 06-2017.
8. Betancur-Corredor, B. (2016) Novel restoration strategy of gold mining areas in Colombia. *ZEFNews No.34* (p.4).
9. Betancur-Corredor, B., Soltan, J., Peñuela, G.A (2016) Mineralization of Ibuprofen and Humic Acid through Catalytic Ozonation. *Ozone: Science & Engineering*. 38(3):203-210.
10. Betancur-Corredor, B., Pino, N., Peñuela, G. A., Cardona-Gallo, S (2015) Evaluation of biostimulation and Tween 80 addition for the bioremediation of long-term DDT-contaminated soil. *Journal of Environmental Sciences* 27(2).
11. Betancur-Corredor, B., Pino, N., Peñuela, G. A., Cardona-Gallo, S (2013) Bioremediation of a pesticide polluted soil: case DDT. *Gestión y Ambiente* 16(3).
12. Betancur, B., Jimenez, D.M., Linares, B (2012) Zeta potential ( $\zeta$ ) as a criterion for optimization of coagulant dosage in a drinking water treatment plant. *DYNA* 79(175):166-172.

## RECOMMENDATIONS

Prof. Dr. Christian Borgemeister  
Executive Director  
Center for Development Research (ZEF)  
University of Bonn  
E-Mail: [cb@uni-bonn.de](mailto:cb@uni-bonn.de)  
Phone: +49-228-73-1866

Dr. Juan Carlos Loaiza  
Associate Professor  
Faculty of Mines  
National University of Colombia  
E-Mail: [jcloaiza@unal.edu.co](mailto:jcloaiza@unal.edu.co)  
Phone: +57-4-4255101

## HONOURS AND AWARDS

### Honours and awards

- Emerging Leaders in the Americas Program. Funding for research stay. Department of Foreign affairs and International Trade Canada 2011- 2012.
- Emerging Leaders in the Americas Program. Democracy study tour. Department of Foreign affairs and International Trade Canada. February 2012.

## CERTIFICATIONS

### Certifications

- Standard and Advanced Methods for Meta-analysis with R. Queen's University Belfast. October, 2021.
- Python Scripting for Image Analysis. April 2017. Center for Remote Sensing of Land Surfaces (ZFL). University of Bonn, Germany.

- Crop modelling with APSIM. March 13 - 23, 2017. University of Tokyo, Japan.
- Proficient R user online courses. September 2016 - February 2017. DataCamp.
- Questionnaire Design for Social Survey. University of Michigan through Coursera. March, 2016.

## INTERESTS

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### Topics:

- Agricultural management
- Land-use intensification
- Biodiversity protection

## CONFERENCES (RECENT CONTRIBUTIONS)

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### Conferences (selected contributions)

- Betancur Corredor, B., Lang, B., and Russell, D.: Effects of nitrogen fertilization on soil fauna – A global meta-analysis, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-16437, <https://doi.org/10.5194/egusphere-egu21-16437>, 2021.
- "Soil Conservation & Landuse Planning"-Geospatial Applications. Bangalore University, December 2020, online.
- Betancur-Corredor, B., Brown, C., Greener, M. Effects of tillage practices on leaching of pesticide through heavy clay soils.13th Meeting On Environmental Risk Assessment Research (32nd Fate Annual Technical Meeting). June 2019. York, United Kingdom.
- Participation in Global Landscapes Forum as representative of the Youth. December 2017. Bonn, Germany.
- Betancur-Corredor, B., Loaiza-Usuga, J.C., Denich, M., Borgemeister, C. Site-Specific Management Approach for Reclamation of Alluvial Gold-Mining Waste Deposits with Agroforestry Systems in Colombia. Contribution in: Tropentag, September 2017. Bonn, Germany.
- Betancur-Corredor, B., Loaiza-Usuga, J.C., Denich, M., Borgemeister, C. Agroforestry for reclamation of waste generated by alluvial gold mining in Colombia. Contribution in: IUFRO Conference 3rd Restoring Forests: Regeneration and Ecosystem Function for the Future. September 2017. Lund, Sweden.
- Betancur-Corredor, B. Rural future lab. G20 conference "ONE WORLD - No Hunger. Future of the Rural World. April 27-28, 2017. Berlin, Germany.

## REVIEWING SERVICE FOR JOURNALS

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### Reviewing service for journals

Applied Soil Ecology, Waste Management, Universitas Scientiarium, Science of the Total Environment, Environmental Science and Pollution Research, Biotechnology Advances, Journal of Sustainable Forestry.