

# Andres Tangarife-Escobar

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## Personal information

**Date of birth:** 1 March 1991  
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## Education

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- 2021 – Present **TECHNICAL UNIVERSITY BRAUNSCHWEIG in cooperation with MAX PLANCK INSTITUTE FOR BIOGEOCHEMISTRY**, Germany  
 PhD Researcher for the TransTiP project  
*Carbon cycling rates in peatlands on the Tibetan Plateau*
- 2017 – 2020 **TECHNICAL UNIVERSITY OF DARMSTADT**, Germany  
 Tropical Hydrogeology and Environmental Engineering (Master of Science)  
 DAAD Scholarship holder  
**Master thesis:** *Spatial and temporal distribution of stable isotopes and their driving factors in the Upper Claro River Basin, Colombian Andes.*  
**Presented in:** IDEAM (Institute for Hydrology, Meteorology and Environmental Studies of Colombia)
- 2008 – 2012 **NATIONAL UNIVERSITY OF COLOMBIA**, Colombia  
 Geology, (Bachelor of Science)  
**Bachelor thesis:** *Mineralogical and environmental characterization of sediments from the Tequendama Member of the Tilatá Formation, in the Tequendama Falls*

## Relevant research experience

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- Nov. 2018 – Mar. 2020 **IDEAM (Institute for Hydrology, Meteorology and Environmental Studies of Colombia) & Technical University of Darmstadt**  
**Scientific researcher on climate and water systems**  
 Analysis of meteorological, climatic, hydrological and hydrochemical data from national and international database, Support on the construction of the methodology for the *National Isotope Network* and the *Glacier and High Mountain Ecosystem Monitoring Program* led by IDEAM, Creation of a cooperation and knowledge exchange network between the partner institutions.
- Jun. 2018 – Apr. 2019 **SEEUrbain Research Group, Technical University of Darmstadt**  
**Scientific Researcher**  
 Measuring Land Surface Temperature through GIS applications in Costa Rica, Verification of climatic data, Analysis meteorological data from satellite missions.
- Sep. 2015 – Mar. 2016 **EAAB (Water and Sewerage Company) and Julio Fierro Morales**  
**Geoscientist for Climate Change, Hydrochemistry and Hydrogeology**  
 Coordinate the hydrochemistry group (7 people), Carry out XRD, XRF, EPMA and physical-chemical laboratory tests of water, soil and rocks, Manage and execute economical resources for project development, Research

the feasibility of the water supply system expansion, Evaluate the influence of climate change on water resources, Write the final report and presentation to the stakeholders.

Mar. – Nov. 2013 **EAAB (Water and Sewerage Company) and Universidad Nacional**  
**Researcher for climate change and water supply systems**

Develop studies to understand the water cycle in the water supply system, Research the influence of climate change on water systems, Design a hydrogeological model of the basin, Carry out hydrochemical, geochemical (XRD, XRF, EPMA and physical-chemical laboratory tests of water, soil and rocks) and geological analysis, Presentation of the results and recommendations to the stakeholders.

Aug. 2012 – Dec. 2012 **SGC- Colombian Geological Survey**  
**Technical support on coast erosion and territorial planning**

Analyze and process sedimentological data, Provide technical basis for territorial planning of the Caribbean regions, Carry out granulometric and mineralogical tests.

## Additional work experience

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Aug. – Oct. 2018 **Institute of Applied Geosciences, Technical University of Darmstadt**  
**Intercultural advisor and support**

Accompany and advice international students in the adaptation to the German social and education system.

Apr. – Aug. 2017 **Censat – Agua viva, “Friends of the Earth” Confederation**  
**Scientific adviser**

Consolidation of an international cooperation project on climate change adaptation, Integration of the water component to the understanding of the territory in rural communities, Development of water quality and quantity monitoring protocols for the sustainable water resources management, Analysis of alternatives of energy transition, Organization of outreach events on energy and climate change programs.

Jun. – Dec. 2016 **Corp. Geoenvironmental Terrae**  
**Technical support for environmental management and territorial planning**

Support on water resources management in urban and peri-urban areas, Geological and geomorphological mapping, Collection and analysis of environmental data, Advice to communities for the management of natural resources and environmental planning, Presentation of the results and recommendations to the stakeholders.

Mar. 2015 – Feb. 2016 **Secretaria Distrital de Ambiente (Environment Secretary of Bogota)**  
**Technical support for Ecosystems and Rural Areas**

Design of policies for delimitation, monitoring and restoration of the ecological structure of the city, Elaborate and supervise climate change adaptation measures, Identify, propose and advice on the sustainable management of water bodies and protected areas, Evaluate projects, plans a protocols, Constitute inter-institutional relationships for the accomplishment of environmental policies.

## Training and skills

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### Intercultural experience

- Social and Environmental exploration of Colombia, Peru and Bolivia (Dec. 2019 – Feb. 2020)
- Social and Environmental exploration of El Salvador, Honduras, Guatemala and Mexico (Apr. – Jun. 2016)
- Social and Environmental exploration of Brazil, Argentina, Chile and Perú (Dec. 2012 – Feb. 2013)

- Other visits: Germany, Spain, France, Italy, Greece, Netherlands, Iceland, Belgium, Czech Republic, Austria, United States, Hungary

#### **Certificate courses**

- Introduction to pedagogical processes, National Learning Service, Colombia
- Marine and Antarctic science, University of Tasmania
- Water in a thirsty world, University of Western Australia
- Climate Change, University of Macquarie

#### **Presentation in academic events**

- Poster: *Effect of clay mineralogy on the hydrogeochemical behavior of dark Cretaceous lodolites Páramo de Chingaza, Colombia*. Fifth Hydrogeology Congress of Colombia

### Computer skills

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LaTeX	ArcGIS	QGIS	MS Office	XPert HighScore (X-ray
diffraction)	Mendeley	Faultkin	Google Earth Pro	LMWL Freeware
ModFlow	TriDraw	Reflex GPR	Canvas	
Sedlog	DIPS	TriPlot		

### Languages

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- Spanish (Native language)
- English (Advanced level)
- German (Intermediate level)

## Publications, technical reports and research documents

Disclaimer: Upon request due to confidentiality agreement.

Title (Spanish and English)	Year	Type	Remarks and link to consult
<b>Tangarife-Escobar, A., Königer, P., López-Moreno, J., Ceballos, J. and Michelsen, N.: (in preparation),</b> Spatial variability of precipitation and streamflow stable isotopes in the Upper Claro River Basin basin: A high elevation tropical catchment of the Colombian Andes	In preparation	Paper based on the Msc. Thesis results	Intended to be sent to Hydrological Science Journal
<b>Spatial and temporal distribution of stable isotopes and their driving factors in the Upper Claro River Basin, Colombian Andes</b>	2020	MSc. Thesis on climate and water cycle	<a href="http://culturizalarevolucionia.blogspot.com/2020/04/analysis-of-spatial-and-temporal.html">http://culturizalarevolucionia.blogspot.com/2020/04/analysis-of-spatial-and-temporal.html</a>
Use of satellite data for estimation of the Land Surface Temperature and the meteorological behavior in two different regions in Central America: Managua and Quebrada Seca basin	2019	Research document on GIS applications	<a href="http://culturizalarevolucionia.blogspot.com/2020/04/use-of-satellite-data-for-estimation-of.html">http://culturizalarevolucionia.blogspot.com/2020/04/use-of-satellite-data-for-estimation-of.html</a>
<b>Mineralogical and geochemical characterization of the La Playa River Basin, Páramo de Chingaza, Bogotá</b>	2016	Scientific research on climate change and water systems	Upon request
<b>Physical and chemical characterization of soils in La Playa River Basin, Páramo de Chingaza, Bogotá</b>	2016	Scientific research on climate change and water systems	Upon request
Geological map of La Playa river basin, Páramo de Chingaza, Colombia	2016	Map within the framework of climate change and water systems research	Upon request
Geomorphological map of the La Playa river basin, Páramo de Chingaza Colombia	2016	Map within the framework of climate change and water systems research	Upon request
Technical Guide for the delimitation of Ecological Corridors (CER) within the urban perimeter of the Metropolitan area	2015	Design of technical instruments for	<a href="http://culturizalarevolucionia.blogspot.com/2020/04/use-of-satellite-data-for-estimation-of.html">http://culturizalarevolucionia.blogspot.com/2020/04/use-of-satellite-data-for-estimation-of.html</a>

		environmental public policy	<a href="http://0/04/resolucion-03201-de-la-secretaria.html">0/04/resolucion-03201-de-la-secretaria.html</a>
<b>Law 03201 of the District Environment Secretariat (2015), "Through which the Environmental Technical Guide for the delimitation of Ecological Corridors - CER is adopted within the Urban Perimeter of the Capital District and other determinations are made."</b>	2015	Design of environmental public policy for water and ecosystems	<a href="http://culturizalarevolucionia.blogspot.com/2020/04/resolucion-03201-de-la-secretaria.html">http://culturizalarevolucionia.blogspot.com/2020/04/resolucion-03201-de-la-secretaria.html</a>
Special Audit Action Report, Environmental problem presented in the municipality of Paz de Ariporo, Casanare	2014	Technical report on environmental impacts	<a href="http://culturizalarevolucionia.blogspot.com/2020/04/informe-de-actuacion-especial-de.html">http://culturizalarevolucionia.blogspot.com/2020/04/informe-de-actuacion-especial-de.html</a>
Special Action Report to the Quifa Association contract, Hydrocarbon Combustion, Meta	2014	Technical report on environmental impacts	<a href="http://culturizalarevolucionia.blogspot.com/2020/04/informe-de-actuacion-especial-al.html">http://culturizalarevolucionia.blogspot.com/2020/04/informe-de-actuacion-especial-al.html</a>
<b>Effect of clay mineralogy on the hydrogeochemical behavior of dark Cretaceous Iodolites Páramo de Chingaza, Colombia</b>	2014	Poster in the Fifth Hydrogeology Congress	<a href="http://culturizalarevolucionia.blogspot.com/2020/04/efecto-de-la-mineralogia-de-arrellas-en.html">http://culturizalarevolucionia.blogspot.com/2020/04/efecto-de-la-mineralogia-de-arrellas-en.html</a>
<b>Lithological and hydrogeochemical characterization in the Chuza River basin, Páramo de Chingaza</b>	2013	Scientific research on climate change and water systems	Upon request
Geological map of the Chuza river basin, Páramo de Chingaza, Colombia	2013	Map within the framework of climate change and water systems research	Upon request
<b>Mineralogical and environmental characterization of sediments of the Tequendama Member of the Tilatá Formation, in the Salto del Tequendama</b>	2012	BSc. Thesis	<a href="https://culturizalarevolucionia.blogspot.com/2020/04/httpsdrive.html">https://culturizalarevolucionia.blogspot.com/2020/04/httpsdrive.html</a>