

# Diego NAVARRETE

## Carbon Specialist, Science, NASCA, The Nature Conservancy

### *Curriculum Vitae*

#### Personal Details

**Family Name:** NAVARRETE-ENCINALES  
**Other Name(s):** Diego Alejandro  
**Date of Birth:** 07/11/1978  
**Nationality:** Colombian  
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**Skype:** danavarretee

#### Profile

My research has been focused on establishing the effects of land-use change and management on carbon stock changes and greenhouse gas (GHG) emissions and removals within the Agriculture, Forestry and Other Land Use (AFOLU) sector. My 12-year professional career includes the estimation of carbon stock changes and GHG emissions/removals as part of the baselines of deforestation of different Latin American countries, as well as the development of new methodologies to estimate carbon stocks and changes with land-use conversion for the Monitoring, Reporting and Verification systems of Colombia and Peru, based on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. I have extensive experience of working in developing countries including Mexico, Guatemala, Nicaragua, Panama, Colombia, Peru, Bolivia and Brazil, where I have worked with a range of stakeholders and decision makers. My research has been published in high-impact scientific journals, such as *Natures* and *Global Change Biology*, and also in official reports and documents.

#### Educational Background

##### **Doctor of Philosophy (PhD) in Geography**

University of Exeter  
Exeter, United Kingdom  
April 2013 – June 2016

##### **Master of Science (MSc) in Amazonian Studies**

Universidad Nacional de Colombia - Amazonian Research Institute (Imani)  
Bogota, Colombia  
February 2004 – September 2006

##### **Bachelor of Science (BSc) in Biology**

Universidad de los Andes  
Bogota, Colombia  
January 1997 – September 2002

## Work Experience

**Organization:** The Nature Conservancy  
**Type:** International Non-Governmental Organization  
**Address:** Calle 67 No. 7 – 94, piso 3, Bogota, Colombia  
**Position:** Carbon Specialist  
**Dates:** June 2016 – Present  
**Duties:**

- Estimate carbon stocks and changes and GHG emissions/removals with land-use conversion within the AFOLU sector;
- Elaborate new protocols and methodologies mainly focused in non-forests categories;
- Publish and present the results in reports, papers, seminars or congresses;
- Design the carbon monitoring, reporting and verification system for the Northern Andes and South of Central America region of The Nature Conservancy.

**Projects:**

- Sustainable Cattle Ranching in Colombia;
- Green Growth Compacts for the Caquetá and Meta Departments in Colombia;
- Chiribiquete Project (The Nature Conservancy and the Deutsche Gesellschaft für Internationale Zusammenarbeit – GIZ)

**Organization:** University of Exeter  
**Type:** Academic Organization  
**Address:** Department of Geography, College of Life and Environmental Sciences, University of Exeter, Exeter EX4 4RJ, UK  
**Position:** PhD Researcher  
**Dates:** April 2013 – May 2016  
**Duties:**

- Estimate carbon stocks and changes and GHG emissions/removals with forest-to-pasture conversion in the Colombian Amazon aimed to improve the Forest Reference Emission Level of Colombia, as part of the AFOLU sector;
- Publish and present the results in reports, papers, seminars or congresses.

**Projects:**

- Improving Estimations of CO<sub>2</sub> Emissions under REDD+ in the Colombian Amazon: Better Understanding for Climate Change Mitigation. This research includes Tier 3 information about carbon changes associated with land use and forest to pasture conversion

**Organization:** Carbon Decisions International  
**Type:** Private Company  
**Address:** Residencial la Castilla, de la primera entrada, 6ta casa a mano derecha, Paraíso de Cartago, Costa Rica  
**Position:** Carbon Inventory Expert in REDD+  
**Dates:** May 2011 – May 2013  
**Duties:**

- Estimate carbon stock and changes and GHG emissions/removals with land-use conversion within the AFOLU sector;
- Prepare meetings with stakeholders involved in the projects.

**Projects:**

- Reducing Emissions from Avoided Deforestation in the Multiple Use Zone of the Maya Biosphere Reserve in Guatemala;
- Baseline of Emissions Due to Deforestation in San Martín region, Peru;
- Baseline of Emissions Due to Deforestation in Cusco region, Peru;
- Ecuador's Forest Reference Emission Level for Deforestation;
- Technical, Scientific and Institutional Capacity Building to Implement REDD+ in Peru.

**Organization:** Institute of Hydrology, Meteorology and Environmental Studies of Colombia (IDEAM)

**Type:** Government

**Address:** Calle 25D No. 96 – 70, Bogota, Colombia

**Position:** Expert Carbon Component

**Dates:** September 2009 – September 2011

**Duties:**

- Estimate carbon stocks and changes and GHG emissions/removals with land-use conversion within the AFOLU sector;
- Elaborate new protocols and methodologies mainly focused in natural forests categories;
- Publish and present the results in reports, papers, seminars or congresses.

**Projects:**

- Technical, Institutional and Scientific Capacity Building to Support Reducing Emissions from Deforestation and Forest Degradation (REDD) Projects in Colombia.

**Organization:** Fundación Puerto Rastrojo

**Type:** Colombian Non-Governmental Organization

**Address:** Carrera 10 No. 24 – 76, oficina 1201, Bogota, Colombia

**Position:** Researcher

**Dates:** October 2002 – October 2009

**Duties:**

- Ecological analysis;
- Estimate biomass, necromass and carbon stocks

**Projects:**

- Environmental analysis for new protected areas in Bogota, Colombia;
- Environmental study to implement biofuel projects in the Caribbean region of Colombia;
- Plant structure and composition study at La Macarena National Natural Park in the Colombian Amazon;
- Photoperiodic induction of synchronous flowering near the Equator;
- Patterns of flowering and fruiting of plants in Chribiquete National Natural Park in the Colombian Amazon;
- Net primary productivity and decomposition of plants in Chribiquete National Natural Park in the Colombian Amazon.

## Language Ability

**Spanish:** Mother tongue  
**English:** Fluent  
**Portuguese:** Medium  
**French:** Basic

## Computer Knowledge

- Regular use of Microsoft Word, Excel, and PowerPoint.
- User of SPSS, Sigma Plot, Arc GIS and R package.

## List of Publications

### Indexed Publications

- **Navarrete, D.**, Sitch, S., Aragão, L.E.O.C. Pedroni, L., 2016. Conversion from forests to pastures in the Colombian Amazon leads to contrasting soil carbon dynamics depending on land management practices. *Global Change Biology*, 22, 3503–3517.
- **Navarrete, D.**, Sitch, S., Aragão, L.E.O.C. Pedroni, L., Duque, A., 2016. Conversion from forests to pastures in the Colombian Amazon leads to differences in dead wood dynamics depending on land management practices. *Journal of Environmental Management*, 171, 42-51.
- Jiménez, E.M., Peñuela-Mora, M.C., Sierra, C.A., Lloyd, J., Phillips, O.L., Moreno, F., **Navarrete, D.**, Prieto, A., Rudas, A., Álvarez, E., Quesada, C.A., Grande-Ortíz, M.A., García-Abril, A., Patiño, S., 2014. Edaphic controls on ecosystem-level carbon allocation in two contrasting Amazon forests. *Journal of Geophysical Research: Biogeosciences*, 9, 119, 1820-1830.
- Asner, G.P., J.K. Clark, J. Mascaro, G.A. Galindo García, K.D. Chadwick, **D.A. Navarrete-Encinales**, G. Paez-Acosta, E. Cabrera Montenegro, T. Kennedy-Bowdoin, Á. Duque, A. Balaji, P. von Hildebrand, L. Maatoug, J.F. Phillips Bernal, A.P. Yepes Quintero, D.E. Knapp, M.C. García Dávila, J. Jacobson, M.F. Ordóñez, 2012. High-resolution mapping of forest carbon stocks in the Colombian Amazon. *Biogeosciences*, 9, 2683-2696.
- Yepes-Quintero, A., A.J. Duque-Montoya, **D. Navarrete-Encinales**, J. Phillips-Bernal, E. Cabrera-Montenegro, A. Corrales-Osorio, E. Álvarez-Dávila, G. Galindo-García, M.C. García-Dávila, A. Idárraga D. Vargas-Galvis, 2011. Estimación de las reservas y pérdidas de carbono por deforestación en los bosques del Departamento de Antioquia, Colombia. *Actualidades Biológicas*, 33, 193-208.
- Chave, J., **D. Navarrete**, S. Almeida, E. Álvarez, L.E.O.C. Aragão, J.S. Espejo, P. von Hildebrand, E. Jiménez, S. Patiño, M.-C. Peñuela, O. Phillips, P. Stevenson, P. Châtelet, Y. Malhi, 2010. Regional and seasonal patterns of litterfall in tropical South America. *Biogeosciences*, 7, 43-55.
- Aragão, L.E.O.C., Y. Malhi, D.B. Metcalfe, J.E.S. Espejo, E. Jimenez, **D. Navarrete**, S. Almeida, A.C.L. Costa, N. Salinas, O.L. Phillips, L.O. Anderson, T. Baker, A.R. Dávila, P.H. Goncalvez, J.A.S. Junior, P. Meir, A. Monteagudo, J.H. Ovalle, A. Prieto, C.A. Quesada, A. Rudas, M.M. Solórzano, R. Vasquez, 2009. Above- and below-ground net primary productivity across ten Amazonian forests on contrasting soils. *Biogeosciences*, 6, 2759-2778.

- Borchert, R, S. Renner, Z. Calle, **D. Navarrete**, A. Tye, L. Gautier, R. Spichinger, P. von Hildebrand, 2005. Photoperiodic induction of synchronous flowering near the Equator. *Nature*, 433, 627-629.

#### Regarding the REDD+ Strategy of Colombia

- **Navarrete, D.A.**, A.J. Duque, A.P. Yepes, J.F. Phillips, K.R. Cabrera, E.W. López, C.M. Rivera, M.C. García & M.F. Ordóñez. 2011. Madera muerta: un reservorio de carbono en bosques naturales de Colombia. Validación metodológica para su medición en el marco de proyectos REDD+. Instituto de Hidrología, Meteorología y Estudios Ambientales –IDEAM–. Bogotá D.C., Colombia, 29 pp.
- Yepes, A.P., **D.A. Navarrete**, J.F. Phillips, A.J. Duque, E. Cabrera, G. Galindo, D. Vargas, M.C. García & M.F. Ordóñez. 2011. Estimación de las emisiones de dióxido de carbono generados por deforestación durante el período 2005 – 2010. Instituto de Hidrología, Meteorología y Estudios Ambientales –IDEAM–. Bogotá D.C., Colombia, 32 pp.
- Yepes, A.P., **D.A. Navarrete**, A.J. Duque, J.F. Phillips, K.R. Cabrera, E. Álvarez, M.C. García & M.F. Ordóñez. 2011. Protocolo para la estimación nacional y subnacional de biomasa – carbono en Colombia. Instituto de Hidrología, Meteorología y Estudios Ambientales –IDEAM–. Bogotá D.C., Colombia, 162 pp.
- Phillips, J.F., A.J. Duque, K.R. Cabrera, A.P. Yepes, **D.A. Navarrete**, M.C. García, E. Álvarez, D. Cabrera, D. Cárdenas, G. Galindo, M.F. Ordóñez, M.L. Rodríguez & D.M. Vargas. 2011. Estimación de las reservas potenciales de carbono almacenado en la biomasa aérea en bosques naturales de Colombia. Instituto de Hidrología, Meteorología y Estudios Ambientales –IDEAM–. Bogotá D.C., Colombia, 32 pp.
- Phillips, J.F., A.J. Duque, A.P. Yepes, K.R. Cabrera, M.C. García, **D.A. Navarrete**, E. Álvarez, E. Cárdenas. 2011. Estimación de las reservas actuales de carbono almacenado en la biomasa aérea en bosques naturales de Colombia. Estratificación, alometría y métodos analíticos. Instituto de Hidrología, Meteorología y Estudios Ambientales –IDEAM–. Bogotá D.C., Colombia, 68 pp.
- Arango Castro, G.L., L.M. Arévalo Sánchez, A.P. Barbosa Herrera, A. Beltrán Guerrero, E. Cabrera Montenegro, M.C. Cardona Ruiz, I.M. Casallas Martínez, S.P. Cruz Argüello, M. Cuellar Buraglia, A.J. Duque Montoya, G. Galindo García, A.F. García Azuero, M.C. García Dávila, R. León Cruz, M.P. León Poveda, M.M. Medina Muñoz, **D.A. Navarrete Encinales**, C.P. Olarte Villanueva, V.A. Peña Bohórquez, J.F. Phillips Bernal, A. Prieto Cruz, A. Ruiz Díaz, D. Vargas Galvis & A.P. Yepes Quintero. 2010. Informe anual sobre el estado del medio ambiente y los recursos naturales renovables en Colombia. Bosques – 2009. IDEAM. Bogotá D.C., 236 pp.

#### Awards and Scholarships

- AXA Research Fund – PhD Research Project Scholarship. May 2013 – April 2016.
- Scholarship. Tropenbos – Hyugens Scholarships Programme. Nuffic. The Netherlands. September 2007 – December 2007
- Studentship. Project for the Advancement of Networked Science in Amazonia (PAN-AMAZONIA). Advisor: Jerome Chave. CNRS, Toulouse, France. November 2004 – November 2006.
- Scholarship for Post-Graduate Outstanding Students. Universidad Nacional de Colombia. August 2004 – January 2006.

## Referees

Professor Stephen Sitch  
Chair in Climate Change  
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