

## **DOLORS ARMENTERAS**

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Department of Biology

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### **SUMMARY OF EXPERTISE**

Conservation biology, biodiversity, modelling; landscape ecology and management, fire ecology, ecosystem services, ecosystem assessments, GIS. Other: International environment project development, national and global assessments of environment, multi-cultural and foreign language skills.

### **EDUCATION**

Universidad de Barcelona (Spain)	Biology	B.S. (Hons), 1989-1994
University of Wales (UK)	Environmental Forestry	M.S. (Distinction), 1995-1996
King's College London (UK)	Geography	Ph.D., 1998-2003

### **PROFESSIONAL EMPLOYMENT & AFFILIATIONS**

2007-	Associate Professor in Landscape Ecology, Universidad Nacional de Colombia, Colombia
2004-2007	Visiting Research Fellow, King's College London, UK
1998-2007	Researcher and Coordinator GIS Unit and Conservation Biology Program, Instituto de Investigación de Recursos Biológicos Alexander von Humboldt, Colombia
1997	Research Assistant, School of Agricultural and Forest Sciences, University of Wales, UK
1996	Technician, School of Agricultural and Forest Sciences, University of Wales, UK
1994	Technician, Centre for Ariz Zones Studies, Bangor, UK

### **FELLOWSHIPS**

2014-2016	Fulbright Regional Network for Applied Research (NEXUS) Scholar
1998-2003	UK DFID British Council Link "New technologies for rapid biodiversity assessment"
1994-1995	Postgraduate grant Banc de Sabadell
1993-1994	EU-ERASMUS undergraduate Grant at University of Wales (UWB), Bangor, UK

### **FUNDING**

2016-2017	PEER Cycle 5. USAID 80,000 USD. Forest degradation in Colombia: impact of fire
2016	FAO Colombia. \$25,000 USD Consultancy for the characterization of drivers of forest degradation in Colombia
2013-2016	Colciencias-Colombia 150,000 USD. Effect of the presence of natural salt licks on the distribution and use of habitat by the lowland tapir ( <i>Tapirus terrestris</i> ) in the Colombian Amazon.
2014-2016	Fulbright. 35,000 USD. Nexus scholar.
2011-2015	Cyted 120,000 USD. Network for monitoring the state of conservation of humid and dry forest in Latin America in the context of avoided deforestation.
2015	Ideam-Colombia 100,000 USD. Validation of the national ecosystem map.
2014	Ideam-Colombia 50,000 USD. Development of a methodology for validation of ecosystem maps.
2014	Ideam-Colombia 25,000 USD. Proposal for incorporating fire monitoring into the deforestation early warning and forest monitoring system (REDD program)
2013	Ministry of Environment, 50,000 USD. Integrating ecosystem services and forest ecological networks into state planning, revision of the principal ecological structure at multiple scales.

2010-2012	UN internal grants for strengthening research groups. Aprox. 50.000 USD
2010	UNEP-ROLAC. Development of the guide for Application of the ecosystem approach in integrated environmental assessments. 8,000USD
2008-2010	Spanish cooperation agency (AECI). Colombia cloud forests: a proposal for their conservation. PCI Iberoamérica 2008, Agencia Española de Cooperación. 25,000 USD
2008-2010	Spanish cooperation agency (AECI). Study of forest fire regimes in Colombia from satellite thermal anomalies. PCI Iberoamérica 2008, Agencia Española de Cooperación. 25,000 USD
2007- 1998	Several projects funded by different funding bodies for research group at Humboldt Institute (GEF World Bank, IAB, CAF, Ministries, local environmental agencies, municipalities, Colciencias and NGOs) Between 25.000 USD and 250.000 USD

### **PEER-REVIEWED PUBLICATIONS (last 25)**

1. **Armenteras, D.**, Gibbes, C., Anaya, L, Dávalos, L.L. (2017) Integrating remotely sensed fires for predicting deforestation for REDD+. Ecological Applications doi: 10.1002/eap.1522.
2. Dávalos, L.M., Sanchez, K.M., **Armenteras, D.**, 2016. Deforestation and Coca Cultivation Rooted in Twentieth-Century Development Projects. *Bioscience* 66 (11) 974-982, biw118. doi:10.1093/biosci/biw118
3. **Armenteras, D.**, González, T., Luque, F., López, D., Rodríguez, N., 2016. Methodology for Evaluating the Quality of Ecosystem Maps: A Case Study in the Andes. *ISPRS Int. J. Geo-Information* 5, 144. doi:10.3390/ijgi5080144
4. **Armenteras, D.**, Gibbes, C., Vivacqua, C., Espinosa, JS, Dulba, W., Goncalves, F. Castro, C. (2016). Interactions between climate, land use and vegetation fire occurrences in El Salvador. *Atmosphere*. 7, 26; doi:10.3390/atmos7020026
5. **Armenteras, D.**, González, T.M., Vergara, L.K., Luque, F.J., Rodríguez, N., Bonilla, M.A., 2016. Revisión del concepto de ecosistema como “unidad de la naturaleza” 80 años después de su formulación. *Ecosistemas* 25, 83–89. doi:10.7818/ECOS.2016.25-1.12
6. Cabrera, J.A., Molina, E., González, T., **Armenteras, D.**, 2016. Does Plan B work ? Home range estimations from stored on board and transmitted data sets produced by GPS-telemetry in the Colombian Amazon. *Int. J. Trop. Biol.* 64, 1441–1450.
7. Parra, E, **Armenteras, D**, Retana, J (2016). Edge Influence on Diversity of Orchids in Andean Cloud Forests. *Forests* 2016, 7, 63; doi:10.3390/f7030063
8. **Armenteras, D**, Rodríguez, N, Retana J (2015). National and regional relationships of carbon storage and tropical biodiversity. *Biological Conservation* 10/2015; 192:378.
9. Chadid, MA, Dávalos, LM, Molina, J, **Armenteras, D** (2015) A Bayesian Spatial Model Highlights Distinct Dynamics in Deforestation from Coca and Pastures in an Andean Biodiversity Hotspot. *Forests* 6(11):3828-3846
10. Rodríguez, N, **Armenteras D**, Retana, J (2015) National ecosystems services priorities for planning carbon and water resource management in Colombia. *Land Use Policy* 42: 609-618
11. Borrelli, P., **Armenteras, D**, Panagos, P., Modugno, S., Schütt, B (2015) The Implications of Fire Management in the Andean Paramo: A Preliminary Assessment Using Satellite Remote Sensing. *Remote Sensing* 08/2015; 2015(7):11061-11082.
12. Zamorano-Elgueta, C., Rey Benayas, J.M., Cayuela, L., Hantson, S., **Armenteras, D.**, (2015). Native forest replacement by exotic plantations in southern Chile (1985–2011) and partial compensation by natural regeneration. *For. Ecol. Manage.* 345, 10–20. Doi:10.1016/j.foreco.2015.02.025

13. Dávalos, L.M., Holmes, J.S., Rodríguez, N., **Armenteras**, D (2014) Demand for beef is unrelated to pasture expansion in Northwestern Amazonia. *Biological Conservation* 170:64-73.
14. **Armenteras**, D, Rodríguez, N, Retana J (2013) Landscape Dynamics in Northwestern Amazonia: An Assessment of Pastures, Fire and Illicit Crops as Drivers of Tropical Deforestation. *PLoS ONE* 8(1): e54310.
15. **Armenteras**, D, González, TM, Retana, J (2013) Forest fragmentation and edge influence on fire occurrence and intensity under different management types in Amazon forests. *Biological Conservation* 159:73-79.
16. **Armenteras**, D., Cabrera, E., Rodríguez, N., Retana J (2013) National and regional determinants of tropical deforestation in Colombia *Reg Environ Change* Vol 13 (6) 1181–1193
17. Molina, E., León, T., **Armenteras**, D. (2013) Characteristics of natural salt licks located in the Colombian Amazon foothills. *Environ Geochem Hlth* Doi: 10.1007/s10653-013-9523-1
18. **Armenteras**, D, Retana, J (2012) Dynamics, patterns and causes of fires in Northwestern Amazonia. e35288. *PloS One* 7
19. Rodríguez, N., **Armenteras** D, Retana, J. (2012) Effectiveness of protected areas in the Colombian Andes: deforestation, fire and land-use changes. *Reg Environ Change* Doi 10.1007/s10113-012-0356-8
20. Rodríguez Eraso, N, **Armenteras**, D, Retana, J (2012) Land use and land cover change in the Colombian Andes: dynamics and future scenarios. *Journal of Land Use Science* Jan. 1-21
21. **Armenteras**, D., Retana, J., et al (2011) Characterization of fire spatial patterns interactions with climate and vegetation in Colombia. *Agricultural and Forest Meteorology* 151: 279–289
22. Merino-de-Miguel, S., F.González-Alonso, M. Huesca, D **Armenteras** &C. Franco. (2011) MODIS Reflectance and Active Fire Data for Burn Mapping in Colombia. *Earth Interactions – Fire in the Earth System* special issue . Vol. 15 (10):1-17
23. Rodríguez, N., **Armenteras**, D., Retana, J. & Molowny-Horas, R. (2011). Patterns and trends of forest loss in the Colombian Guyana. *Biotropica* 44 (1)
24. **Armenteras**, D., Rodríguez, N, Retana, J & Morales, M. (2010) Understanding deforestation in montane and lowland areas of the Andes in Colombia. *Reg Environ Change* 1:693-705
25. **Armenteras**, D., Rodríguez, N. y Retana, J. (2009) Are national parks and indigenous territories equally effective in protecting biodiversity of the Colombian Guiana Shield? *Biological Conservation* 142,1411-1419

## **OTHER PUBLICATIONS**

1. Lundquist, C., K. A. Harhash, D. **Armenteras**, N. Chettri, J. Mwangi, ombe Mwamodenyi, V. Prydatko, S. Acebey Quiroga and A. Rasolohery, 2016: Building capacity for developing, interpreting and using scenarios and models. In IPBES, 2016: Methodological assessment of scenarios and models of biodiversity and ecosystem services [S. Ferrier, et al (eds.)], Secretariat of the Intergovernmental Platform for Biodiversity and Ecosystem Services, Bonn, Germany
2. D. **Armenteras**, Sandra Lavorel, Szabolcs Lengyel, CAs: Marc Metzger, Bob Scholes, Fernando Santos, Reinette Biggs, Ben ten Brink, Patricia Koleff, Klaus Henle, Wolfgang Cramer, Vania Proenca, Henrique Pereira, Rosario Gómez 2016. Chapter 2: IPBES assessments across scales. IPBES/4/INF/9
3. D. **Armenteras**, Tania González, Josep Maria Espelta, Javier Retana (eds) Degradación de bosques en Latino América. Síntesis conceptual, metodologías de evaluación y casos de estudio nacionales. Edited by Iberoredd, 01/2016; Cyted., ISBN: 9788415412363

4. Coordinating Lead Authors: **Armenteras, D.** & Finlayson, M. (2012) Part I: Assessment of the State and Trends of the Global Environment. Chapter 5: Biodiversity. Environment for the future we want. Global Environment Outlook - GEO5. Nairobi: UNEP
5. Coordinating Lead Authors: **Armenteras D.,** Singh .A (2010) Chapter 3. Links between environmental changes and human well-being in LAC. Global Environmental Outlook for Latin America and the Caribbean GEOLAC 2009, UNEP.
6. **Armenteras, D.** & Morales, M. (2010) Application of the ecosystem approach in integrated environmental assessments. Thematic Module of Volume 2 of the Training Manual on Integrated Environmental Assessment and Reporting. Published by UNEP
7. **Armenteras, D.** . Morales, M.( 2008). "Biodiversidad". En: Programa de Naciones Unidas para el Medio Ambiente, PNUMA (2008). Perspectivas del Medio Ambiente en la Amazonía, GEO Amazonía. Lima: Fondo Editorial de la Universidad del Pacífico.
8. Gómez, R. Galarza, E. Alonso, JC., **Armenteras, D.** Morales , M. & Souza, C. (2008). "Dinámicas en la Amazonia". En: Programa de Naciones Unidas para el Medio Ambiente, PNUMA (2008). Perspectivas del Medio Ambiente en la Amazonía, GEO Amazonía. Lima: Fondo Editorial de la Universidad del Pacífico.
9. Alonso, JC., **Armenteras, D.** Galarza, E, Gómez, R., Morales, M & Souza, C.( 2008). "Las huellas de la degradación ambiental". En: Programa de Naciones Unidas para el Medio Ambiente, PNUMA (2008). Perspectivas del Medio Ambiente en la Amazonía, GEO Amazonía. Lima: Fondo Editorial de la Universidad del Pacífico
10. Pereira, H M., Reyers, B, Watanabe, M, Bohensky, E, Foale, S, Palm, C, Espaldon, MV, **Armenteras, D,** Tapia, M, Rincon, A, Lee, M J., Patwardhan, A, and Gomes, I (2005) Condition and trends of ecosystem services and biodiversity. In: Ecosystems and Human Well-Being: multiscale assessments. Millennium Ecosystem Assessment Series, 4 . Island Press, Washington, USA, pp. 171-203.

## **SYNERGISTIC ACTIVITIES**

1. Participant of three Intergovernmental Platform on Biodiversity and Ecosystem Services-IPBES working groups: Deliverable 2a Assessment Guide (Coordinating Leading Author Scale Chapter), Deliverable 3c - 'Methodological Assessment of Scenarios and Modelling of Biodiversity and Ecosystem Services' (Leading Author Chapter 7) and Deliverable 2c-Global Assessment Chapter 5 Scenarios and pathways towards a sustainable future, 2014-2016
2. Exchange Visitor (NEXUS Fulbright) Conservation International, Ecosystem Modeling and Early Warning Systems, Betty & Gordon Moore Center for Science and Oceans, Arlington USA. July-August 2015.
3. Local representative of the Forest Landscape Ecology IUFRO Working Group (8.01.02) for the north of South America (Ecuador, Colombia, Venezuela, Guyana, Surinam and French Guyana), 2012-2015
4. Member of the Advisory Committee of the Sub Global Assessment Network, 2011- 2014
5. National Member of the Advisory Committee of the Environmental Program at the Administrative Department of Science, Technology, and Innovation -Colciencias- Colombia, 2011-2014.