Dr. Catalina Munteanu

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Professional Appointments

October 2020- present	Visiting Marie Skłodowska-Curie Researcher • Interdisciplinary Centre for Conservation Science, Zoology Department, Oxford University, UK. Research area: Shifting baselines syndrome; Advisor: Prof. E.J. Milner-Gulland
December 2018- present	Marie Skłodowska-Curie Fellow ● Conservation Biogeography Lab, Geography Department, Humboldt-University Berlin, Germany.
	Research area: Leveraging the potential of spy satellite data for ecology and conservation; Advisor: Prof. Tobias Kuemmerle
September 2017-	Maternity Leave ● 9/2017 – 11/2017 - Mutterschutz, 11/2017-11/2018 –
November 2018	Elternzeit
October 2016- September 2017	Postdoctoral researcher • Leibniz Institute of Agricultural Development in Transition Economies, Halle, Germany.
	Research area: Long term agricultural land use change in Kazakhstan; Advisor: PD. Dr. Daniel Müller
January 2012- September 2016	Research Assistant • Forest and Wildlife Ecology, University of Wisconsin, Madison, USA. Research area: Long-term land use trends and their legacies in the Carpathian Region of Eastern Europe; Advisor: Prof. Volker Radeloff;
	Thesis Defended: 2 May 2016; Degree conferred: 24 December 2016
September 2009- September 2011	Research Assistant ● Center for Mountain Studies, Univ. of Highlands and Islands, UK; Research area: Knowledge exchange in mountain areas (mountain.TRIP); Advisor: Prof. Martin Price
2007-2009	Project Consultancies ● WWF- Danubian-Carpathian Program, Romania Austrian Alpine Association, Innsbruck, Austria Nature Park Munţii Maramureşului, Vişeu de Sus, Romania

Education

January 2012December 2016 **Ph.D. in Forest and Wildlife Ecology •** *University of Wisconsin-Madison.* Thesis: Long-term land use trends and their legacies in the Carpathian Region of Eastern Europe; Advisor: Prof. Volker Raldeoff

Thesis was awarded "2016 Best PhD in Forestry Program 2016" (see Honors and Awards section)

September 2005June 2008

Magistra rerum naturalium • University of Innsbruck, Austria, Institute
of Geography. Thesis: Cultural landscapes in the Maramures Mountains,
Romania Advisers: Prof. Kurt Scharr and Prof. Clemens Geitner

September 2002June 2008

Diploma in Geography and Foreign Languages • Babeş-BolyaiUniversity, Cluj Napoca, Romania

Grants

2018-2020	European Commission, Horizon 2020 ● Marie Sklodowska-Curie Research Fellowship. Title: EcoSpy: Leveraging the potential of historical spy satellite photography for ecology and conservation. PI	170.000€
2014-2016	The National Aeronautics and Space Administration (NASA) ● Earth and Space Science (NESSF) Fellowship. Title: Long-Term Forest Dynamics in Mountain Regions Accounting for Topography, Land Use History and Management Regimes to Identify High Conservation-Value Ecosystems. PI	120.000€
2011 (declined)	Österreichische Akademie der Wissenschaften ● [DOC] Doctoral Fellowship. Title: Cultural landscapes in the Romanian Carpathians – a participatory approach to understanding patterns of change. PI	114.000€
2020	Humboldt University of Berlin ● Start-up funds for Researchj Grant Preparation. Title: Overcoming the Shifting Baseline Syndrome for Sustainable Action. PI	25.000€
2010	EU Regional Development Fund and Scottish Government • Knoweldge exchange funds. Title: Knowledge Transfer Partnership with the Cairngorms National Park Authority, Scotland. PI	12.000€
2018	University of Transilvania, Brasov ● Transilvania Fellowship for Young Researchers. Title: Assessing marmot population dynamics since 1960 using Corona, Google Earth and Landsat in Kazakhstan. PI	4.500€
2019-2020	Leibniz Institute of Freshwater Ecology and Inland Fisheries • Young Creatives Microprojects. Title: AquaSpy: Leveraging historical spy satellite imagery for long-term research in aquatic science. Co-PI	5.000€
2010	Edinburgh Beltane, Scotland; Wisconsin Ecology, USA ● Miscellaneous knowledge exchange and science communication grants	8.000€

Honors and Awards

2018	Transilvania Fellowship for Young Researchers ● University of Transilvania, Brasov, Romania
2016	Best PhD Award ● Forestry Program, University of Wisconsin Madison, USA
2016	Young Scientist Award ● Global Land Programme Open Science Meeting, China
2014	Best Student Paper Award ● Forum Carpaticum Conference, Poland
2014	Conservation Leaders for Tomorrow Scholarship ● Dundee, IL, USA

2008 Erasmus Intensive Programme Lifelong Learning Program • Institute

of Geography, University of Innsbruck, Austria

Teaching Experience

2021	Shifting Baselines Syndrome ● MSc, 4 contact hours (single occurrence), Humboldt University Berlin, 18 participants Responsibilities: course design, lecture, practical activities
2019	Scientific Writing ● <i>MSc</i> , 2 contact hours per week, Humboldt University Berlin, 26 participants
2017	Responsibilities: lead lecturer; course design, lecture, practical activities, Introduction to GIS and GPS • PhD, 2 contact hours per week, IAMO Leibniz Institute of Agricultural Development in Transition Economies, 15 participants Responsibilities: lead lecturer; course design, lecture, field data collection, practical activities.
2015/2016	practical activities Forest Biometry ● BSc, 4 contact hours per week, University of Wisconsin-Madison, 15 participants Responsibilities: teaching assistant, lecture, computer labs, field data collection
2014	Study project and practical course Carpathians • <i>BSc</i> , 1 week field course, Humboldt University Berlin, 24 Participants Responsibilities: <i>teaching assistant</i> , field data collection, mentoring
2009	Europe's socio-cultural borders - inherited perceptions and the modern landscapes • BSc, 2 week field course, University of Innsbruck, 25 participants Responsibilities: teaching assistant, field data collection, group mentoring, report evaluation
2006/2007/2008	Introduction to Geographical Information Systems ● BSc, 2 contact hours per week, University of Innsbruck, 25 participants

Invited lectures and workshops

5.06.2019	Historical spy satellites for ecology and conservation. German Research Center for Geosciences, Potsdam, Germany
30.03.2017	Not all is lost! Taking the long view to understand land use effects on biodiversity Humboldt University of Berlin, Germany
9.09.2016	19th century land use legacies and their conservation implications in the Carpathian Mountains Swiss Federal Research Institute for Forest, Snow and Landscape Research (WSL), Switzerland
26.05.2016	Land use legacies in the Carpathian Mountains School of Earth, Energy and Environmental Sciences, Stanford University, USA
13- 18.07.2015	Writing Scientific Papers The National Aeronautics and Space Administration (NASA) SCERIN 3 Land Use and Land Cover Change Training Workshop, Braşov, Romania
1.02.2014	Understanding where we're coming from and where we're going: Unearthing 200 years of land use history in the Carpathians and their importance to current land change Center for Russia, East Europe, and Central Asia (CREECA), University of Wisconsin-Madison, USA
16.10.2014	LCLUC in Carpathians during the last 200 years International NASA Land Cover Land Use Change (LCLUC) Regional Science Meeting in Central Europe, Sopron, Hungary
9.06.2014	Why past land use patters? Learning from the Carpathians. The National Aeronautics and Space Administration (NASA), SCERIN 2 Regional Meeting, Jagiellonian University, Kraków, Poland
14.5.2014	Historic and recent land cover changes in the Carpathians Environmental Remote Sensing and Geoinformatics, University of Trier, Germany
12.12.2013	Understanding Where We're Coming from and Where We're Going: Unearthing 200 Years of Land Use History in the Carpathians and their Importance to Current Land Change. Center for Russia, East Europe, and Central Asia (CREECA), University of Wisconsin, Madison, USA

Student and Research Mentorship

- 2021 Sofia Miguel, Menendez Pelayo International University (UIMP) & Spanish National Research Council (CSIC); MSc, Main supervisor Topic: Legacies of the Vietnam War bombing on contemporary land use and landscape fragmentation in Quang Tri Province, Vietnam
- 2021 Elisabeth Bauer, Humboldt University Berlin, Germany; BSc, Main supervisor

 Topic: Legacy effect of historical forestry on the distribution of the Ural Owl (Strix uralensis) in Romania
- 2020 Julia Mari Murata, Humboldt University Berlin, Germany; BSc, Main supervisor Topic: Investigating long-term drivers of saiga population changes in Kazakhstan
- 2020 Eleonore Zittoun, Trinity College Dublin, Ireland; MSc, Research project mentor Topic: Estimating historical grazing intensity from Cold War Satellite imagery
- 2016 Mihai Daniel Nita, Transilvania University Brasov; PhD, Fulbright project mentor at UW Madison-Wisconsin, USA

 Topic: Corona imagery for forest monitoring in Romania
- 2019 Philippe Rufin, Humboldt University Berlin; PhD Committee member Topic: A global to regional scale assessment of dam-induced agricultural change by means of remote sensing
- 2020 Stefan Suess, Humboldt University Berlin; PhD Committee member Topic: Mapping spatial and temporal transitions in shrublands with cover fractions from space

Teaching and Mentoring Training

- ProFiL: Professionalisation of Women in Research and Teaching:

 Mentoring Training Networking Technical University of Berlin,

 Germany; training, networking and mentoring for women on a professorship career path, 1 year program, ongoing
- 2021 **Overcoming Imposter Syndrome** Women in Natural Science Program by Dr.Cathy Sorbara, *Humboldt University Berlin, Germany*; 2 hours
- Developing a Growth Mindset

 Women in Natural Science Program by Dr. Sabine Blackmore, Humboldt University Berlin, Germany, 2 days
- 2020 Empowerment Through Emotional Intelligence

 Women in Natural Science Program by Dr. Cathy Sorbara, Humboldt University Berlin, Germany; 1h
- Finding balance: Reconciling career and personal life for researchers
 Women in Natural Science Program by Dr. Síofra McSherry, Humboldt University Berlin, Germany; 6h (1 day)

- 2019 **Media Training and Communication Mater Class** by Malcom Love, *BBC, British Council, Berlin, Germany*; 18h (2 days)
- Theory and methodology of assessment Babes-Bolyai University Cluj, Romania; 21h (1 semester)
- Theory and methodology of curriculum Babes-Bolyai University Cluj, Romania; 21h (1 semester)
- Theory and methodology of instruction Babes-Bolyai University Cluj, Romania; 21h (1 semester)
- 2003 Introduction to pedagogy Babes-Bolyai University Cluj, Romania; 21h (1 semester)
- 2002 **Educational psychology** Babes-Bolyai University Cluj, Romania; 56h (2 semester)

Peer-Reviewed Publications

H-Index: 13; Total Citations: 865; Total Peer-reviewed Publications: 18 (of which 8 first-authored); Source: Google Scholar, 27.3.2020

- Munteanu C, Kamp J, Nita MD, Klein N, Kramer BM, Muller D, Koshkina A, Prishepov AV, Kuemmerle T (2020). Cold War spy satellite images reveal delayed declines in a keystone steppe species in response to agriculture; Proceedings of the Royal Society B; 287:20192897. link
- Uvsh, D, Gelbach S, Potapov P, *Munteanu C,* Bragina E, Radeloff VC (2020) Correlates of forest-cover change in European Russia 1989-2012, Land Use Policy, 96: 104648. link
- Munteanu C, Pidgeon A, Radeloff V C (2018): Bird conservation in the Carpathian Ecoregion in light of long-term land use trends and conservation responsibility. Biodiversity and Conservation 27 (8), 2051-2068. link
- Nita MD, *Munteanu C*, Gutman G, Abrudan IV, Radeloff VC (2018) Widespread forest cutting in the aftermath of World War II captured by broad-scale historical Corona spy satellite photography, Remote Sensing of Environment, Vol 204, 322-332. <u>link</u>
- Lieskovský J, Kaim D, Balázs P, Boltižiar M, Chmiel M, Grabska E, Király G,Konkoly-Gyuró E, Kozak J, Antalová K, Kuchma T, Mackovčin P, Mojses M, *Munteanu C*, Ostafin K, Ostapowicz K, Shandra O, Stych P, Radeloff VC (2018), Historical land use dataset of the Carpathian region (1819–1980), Journal of Maps 14 (2), 644-651. link
- Munteanu C, Kuemmerle T, Boltiziar M, Halada L, Kaim D, Király G, Konkoly-Gyuró E, Kozak J, Lieskovsky J, Mojses M, Müller D, Ostafin K, Ostapowicz K, Radeloff VC (2017): 19th century land use legacies affect agricultural abandonment, Regional Environmental Change, 17 (8), 2209–2222. link
- Loran C, *Munteanu C*, Verburg P H, Schmatz D, Bürgi M, Zimmermann N (2017): Long-term change in drivers of forest cover dynamics: an analysis for Switzerland (1850-2000), Regional Environmental Change. Regional Environmental Change 17(8), 2223-2235. link

- Feurdean A, *Munteanu C*, Kuemmerle T, Nielsen AB, Hutchinson SM, Ruprecht E, Persoiu A, Parr K, Hickler T (2017) Effects of socio-political transformations on semi-natural grasslands in Transilvania (CE Europe), based on pollen and historical land survey. Regional Environmental Change. 17 (8), 2193–2207. <u>link</u>
- Butsic V, *Munteanu C*, Griffiths P, Knorn J, Radeloff V C, Lieskovský J, Müller D, Kuemmerle T (2016) The impact of protected areas on forest disturbance in the Carpathian Mountains 1985-2010. Conservation Biology, 31(3), 570-580. <u>link</u>
- Alix-Garcia J, *Munteanu C*, Zhao N, Potapov AV, Prishchepov AV, Radeloff VC, Krylov A, Bragina E (2016) Drivers of forest cover change in Eastern Europe and European Russia, 1985–2012, Land Use Policy 59, 284-297. link
- Munteanu C, Nita M-D, Abrudan I V., Radeloff VC (2016) Forest history is repeating itself, imposing strong legacies for Romanian forests and forestry. Forest Ecology and Management, 361, 179-193. link
- Kaim D, Kozak J, Kolecka N, Ziółkowska E, Ostafin K, Ostapowicz K, Gimmi U, *Munteanu C*, Radeloff V (2016): Broad scale forest cover reconstruction from historical topographic maps. Applied Geography, 67, 39-48. link
- Munteanu C, Kuemmerle T, Keuler NS, Müller D, Balázs P, Dobosz M, Griffiths P, Halada L, Kaim D, Király G, Konkoly-Gyuró E, Kozak J, Lieskovsky J, Ostafin K, Ostapowicz K, Sandra O, Radeloff VC (2015) Legacies of 19th century land use shape contemporary forest cover. Global Environmental Change, 34, 83-94. link
- Griffiths P, Kuemmerle T, Baumann M, Radeloff, VC, Abrudan, IV, Lieskovsky, J, *Munteanu C*, Ostapowicz K, Hostert P (2014) Forest disturbances, forest recover, and changes in forest types across the Carpathian ecoregion from 1985 to 2010 based on Landsat image composites. Remote Sensing of Environment 151, 72–88. link
- Munteanu C, Kuemmerle T, Boltiziar M, Butsic V, Gimmi U, Halada L, Kaim D, Király G, Konkoly-Gyuró E, Kozak J, Lieskovsky J, Mojses M, Müller D, Ostafin K, Ostapowicz K, Shandra O, Štych P, Walker S, Radeloff VC (2014) Forest and agricultural land change in the Carpathian region—A meta-analysis of long-term patterns and drivers of change. Land Use Policy 38, 685–697. link

Manuscripts under revision

Munteanu C, Nita MD, Senf C, Oeser J, Seidl R, Kuemmerle T (in review). Large tracts of high conservation value forests in Romania reveal new opportunities for Conservation; *Conservation Biology*

Book Chapters and Conference Proceedings

- Munteanu C, Radeloff V, Griffiths P, et al. (2017) Land change in the Carpathian Region before and after major institutional changes. In: Gutman G, Radeloff VC (eds) Land Use and Land Cover Change in Eastern Europe after the Collapse of Socialism. Springer 2016.
 link
- Borowski D, *Munteanu C* (2011) Biosphere Reserves in European Mountains: an Exploratory Survey. Biosphere Reserves in the Mountains of the World. MAB pp 35-40. <u>link</u>

Munteanu C, Geitner C, Scharr K (2008) Consequences of historical and modern landuse on cultural landscapes and biodiversity of the Maramureş Mountains. In: Gaceu L (ed) Journal of EcoAgriTourism, Proceeding of the International Conference BIOATLAS 2008. Transilvania University of Brasov, Romania, Brasov, pp 91–98.

Conference Presentations

- Munteanu C, Abrudan IV, Gutman G, Hostert P, Kamp J, Klein N, Koshkina A, Kraemer BM, Milner-Gulland EJ, Muller D, Nita MD, Prishchepov AV, Radeloff VC, Kuemmerle T (2020) The potential of Cold War Spy Satellite imagery for ecology and conservation, A Festival of Ecology Online Conference, British Ecological Society, 24-18.12.2020
- Munteanu C, Nita MD, Radeloff VC, Gutman G, Kuemmerle T (2019) Unlocking the potential of Cold War Spy Sattelite data for land change assessments, Global Land Programme Open Science Meeting, Bern, Switzerland, 24-26.04.2019
- **Munteanu C**, Müller D, Kuemmerle T, Radeloff V (2016) Land-use legacies from a century ago affect rates of contemporary land change, Global Land Programme Open Science Meeting, Beijing, China, 24-28.10.2016, [awarded Best Oral Presentation].
- Munteanu, C, Pidgeon A, Radeloff V (2016) Bird conservation responsibility of the Carpathian Mountains, North American Congress for Conservation Biology, Madison, Wisconsin, 18-20.07.2016
- *Munteanu, C*, Radeloff V (2015) Legacies of 19th century affect contemporary land cover, SCERIN-3 Capacity Building Workshop (CBW) Brasov, Romania 13-18.07.2015
- Munteanu, C, Kuemmerle, T, Boltiziar M, Gimmi U, Halada L, Kaim D, Király G, Konkoly-Gyuró E, Kozak J, Kysucká K, Lieskovsky J, Mackovčin J, Mojses M, Müller D, Ostafin K, Ostapowicz K, Shandra O, Radeloff V.C (2014) 200 years of land change in the Carpathian region. Re-thinking change trajectories and land use legacies. Global Land Project Open Science Meeting. Land Transformations: Between Global Challenges and Local Realities, Berlin 19-21.03.2014
- Kozak J., Gimmi U., Dobosz M., Kaim D., Kolecka N., Ostafin K., Ostapowicz K., Troll M., *Munteanu C.*, Radeloff V., (2013), Long-term land use and land cover changes in the Carpathians. Acta Biologica Cracoviensia 55, suppl. 1, 27-27. Biogeography of the Carpahtians: Evolution of Biodiversity in a Spatiotemporal Context., Kraków, Poland, 26-28.09.2013
- Munteanu, C., Radeloff, V.C., Kuemmerle, T., Potapov P., Baumann M., Griffiths P., Alcantara, C., Bragina, E., Clubert P. (2013): Broad scale LCLUC in Eastern Europe: patterns, drivers and effects, NASA Land-Cover/ Land Use Change Program, SCERIN Research Network Meeting, Prague, 17- 21.07.2013
- Munteanu, C; Boltižiar M, Gimmi, U; Halada L; Kaim D, Kiraly G, Konkoly-Gyuro, E; Kozak, J; Kuemmerle T; Lieskovsky J, Mojses, M; Nagy D, Ostafin K, Ostapowicz K, Shandra O; Troll, M, Radeloff, V (2012): A meta-analysis of drivers and patterns of land use change in the Carpathians and the Carpathian Basin In M. Boltižiar (Ed.), Forum Carparicum 2012 Conference Abstracts: From Data to Knowledge, From Knowledge to Action. Stara Lesna.
- Munteanu, C (2010) mountain.TRIP: Transforming Research Into Practice, FP7 EC funded project, SEEmore Networking Conference, Timisoara, Romania, 27.08.2010

Munteanu, C, Price M (2010) – Research to close the gap between science and practice as European Mountains face Global Change, UHI Research Conference, Moray College, Elgin, Scotland, 27-29.10.2010

Conference Posters

- Munteanu C, Kuemmerle T, Keuler NS, Müller D, Balázs P, Dobosz M, Griffiths P, Halada L, Kaim D, Király G, Konkoly-Gyuró E, Kozak J, Lieskovsky J, Ostafin K, Ostapowicz K, Sandra O, Radeloff VC (2015): Legacies of 19th century land use shape contemporary forest cover, Wisconsin Ecology Symposium, March 11-12, 2015
- Munteanu, C., Kuemmerle, T., Kozak, J., Halada L., Gimmi, U., Kiraly, G., Konkoly-Gyuro, E., Kaim D., Ostapowicz, K., Ostafin K., Lieskovsky J., Boltizar, M., Shandra O., Stych P., Griffiths P., Mueller, D., Alix-Garcia, J., Walker, S., Radeloff V.C. (2013): 250 years of land use history in the Carpathian Region. NASA Land-Cover/ Land-Use Change Program Science Team Meeting, Rockville, Maryland, 2-4.04.2013
- Geitner, C; *Munteanu, C*; Scharr K (2008) Driving Forces and Consequences of Land Use Change on Landscapes of the Maramureş Mountains (Romania), IALE 2008, Bonn, Deutschland, 10.2008
- Munteanu, C.; Geitner, C.; Scharr, K. (2008) Consequences of Historical and Modern Landuse on Cultural Landscapes and Biodiversity of the Maramureş Mountains, S4C Networking Workshop, Kraków, Poland, 05.2008

Media Coverage and Outreach Activities

- The New York Times It Spied on Soviet Atomic Bombs. Now It's Solving Ecological Mysteries. [press interview]
- 2020 **The Telegraph** Cold War Spy Satellite Images used to track ecological change [press interview]
- 2020 **The Scientist** Farming Associated with Long-Term Decline in Marmot Populations [press interview]
- 2020 **Science Magazine** Cold War satellites inadvertently tracked species declines coverage [press interview]
- New Scientist Cold war spy satellite images reveal long-term decline in biodiversity, [press interview]
- 2020 **BBC Public Radio** ◆ Cold War 'CORONA' satellite images find second life in ecology research [podcast]
- **FameLab** Winner of Regional Competition in Brandenburg & finalist for Germany [outreach talk]
- 2018 Assessing land-use change using spy-satellite photographs from the Cold War period, The Leibniz Institute for Agricultural Development in Transition Economics Annual Series [outreach article]
- 2016 **3-Minute Thesis Competition** University of Madison-Wisconsin [outreach talk]

- 2016 Land Use Legacies: What We Do in Life Echoes in Eternity, Edge Effects blog post: [outreach article]
- 2011 Mountain foods: set of brochures and workshop template on how to better market mountain food products [brochures]
- 2010 Interview on mountain.TRIP knowledge exchange project [interview]

Professional Associations and Service

S4C Science for the Carpathians Scientific Steering Committee, since 2018

Society for Conservation Biology, since 2016

Global Land Programme (GLP), since 2014

Forest and Wildlife Ecology Graduate Student Representative, UW Madison, 2014-2016

Center for Culture, History and Environment (CHE), UW Madison, Wisconsin, 2014-2016

Wisconsin Ecology – Graduate Student Organization, UW Madison, Wisconsin, 2013-2016

Novel Ecosystem IGERT Program, UW Madison, Wisconsin, 2012-2016

Scottish Royal Geographical Society, 2009 - 2012

Mountain Research Initiative European Network, since 2008

Manuscript Peer-reviewer

Ecosystems, Landscape Ecology, Biological Conservation, Land Use Policy, Regional, Environmental Change, Global Ecology and Biogeography, Landscape and Urban Planning, Mountain Research and Development, Land, Sustainability, Forests

Technical skills

Spatial analysis: ArcGIS, QGIS, R, SagaGIS, Guidos Image processing: AgiSoft Metashape, eCognition, ENVI

Statistical analysis: R

Language proficiency

English, German, Romanian

Spanish

Italian, French

Advanced (fluent in writing and speaking)
Intermediate (conversation, basic writing skills)

Beginner (basic conversation)